Annual Report
for the period
July 1, 2008 – June 30, 2009

DR. MARY L. GOOD
Dean
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Organizational Chart
As of July 1, 2009

Dean of the College
Dr. Mary L. Good

Administrative Assistant: Cathy Shank

Department Chairs
- Applied Science: Dr. Haydar Al-Shukri
- Computer Science: Dr. Srini Ramaswamy
- Construction Mgmt: Mr. Mike Tramel
- Engr. Technology: Dr. Mamdouh Bakr
- Information Science: Dr. Elizabeth Pierce
- Systems Engineering: Dr. Seshadri Mohan
- Graduate Institute of Technology: Dr. Keith Hudson

Exec. Director of Administration and Finance: Shawna Diaz
- Budget
- PAF's and Employee Files
- Grant Budget Reviews
- Secretarial Training for Operational Issues
- Immigration Issues
- Staff: (Michelle Yonkey)

Associate Dean
Dr. Russel Bruhn
- Secretaries & Tech Staff (Employment Issues)
- College Assessment Activities
- Accreditation Issues
- Intercollegiate Activities
- College Curricular Reviews

Asst. Dean for Academic Affairs
Dr. Mamdouh Bakr

Assistant Dean for External Affairs: Kelley Bass
- Corporate Relations
- Government Relations
- Grants / Contracts to the College (non-peer reviewed grants and all external contract negotiations)
- Community Outreach, including Economic Development, College Outreach Materials and Website
- Philanthropy and Assistance to University Development Office
- External Advisory Committees and Boards
- Staff: (Thomas Wallace 10 hours per week)

Asst. Dean for Academic Affairs & Recruitment: Katie Young
- Recruiting for High ACT Scholarship Students (including ASMHS)
- Retention, including Student Housing, Student Ambassadors, First Year "Learning Environment" Activities
- Academic Advising (especially freshmen, transfers and degree check-out)
- Articulation Agreements
- Databases: Contacts, Success Rates, Alumni, etc.
- Staff: (Jennifer Moody)

Director of Educational Outreach and Diversity: Vernard Henley
- Web-based Math Program (Outreach and Recruitment)
- General Recruiting and Coordination with University Recruiting
- Counselor Outreach
- Data Bases: All Student Contacts, Success Rates, etc.
- Summer Programs
- LR School District Outreach
- Staff: (Olivia Ross)
EXECUTIVE SUMMARY AND OVERALL HIGHLIGHTS

The new building that will house three departments in UALR’s Donaghey College of Engineering and Information Technology (EIT) literally took shape through the 2008-2009 academic year, and the progress of its construction served as a very visible and growing representation of the college’s mission: “Building Bright Futures.”

Ground was officially broken on the six-story, 115,000 square-foot building in July 2008, and by the end of June 2009, it was well along its way to completion, with the roof completed and large expanses of brick covering its exterior walls. An important milestone in the year of construction was the “topping out” ceremony held April 7, 2009, with Provost David Belcher addressing the crowd, spotlighting in particular five of the eight seniors from the Arkansas School for Mathematics, Science and the Arts in Hot Springs who will enroll in fall 2009 as EIT scholarship freshmen. Several local media outlets produced reports on the event.

The decision was made and funding was committed to complete the building’s third floor, which will be the second classroom floor, and to finish out the 206-seat auditorium. Monies appropriated by UALR Chancellor Joel Anderson made these important steps possible, and Arkansas Governor Mike Beebe also contributed another $1.5 million in state funds to allow this construction to be approved and commence.

The academic year also saw many important steps forward for EIT in “Building Bright Futures” in the areas of outreach, enrollment and curriculum growth, and a comprehensive external affairs program designed to increase awareness of the quality, breadth and scope of the college’s programs among key stakeholders, decision-makers and influencers in the business, academic and civic communities.
Outreach

*(See more detailed report in Outreach section.)*

Information procured from ACT shows that only 5.5 percent of graduating high school seniors who took the company's college entrance examination reported a strong interest in the fields addressed in EIT’s programs. Therefore, the college must focus on developing a pipeline of potential recruits who have the interest and aptitude to succeed in the college.

Vernard Henley, Director of Educational Outreach and Diversity, again managed a number of programs that furthered those goals. A key ongoing initiative is the Pre-College Diversity Engineering Program (PCDEP). Founded in 2007, PCDEP through Vernard’s leadership has been implemented at a number of schools through the formation of engineering clubs. The engineering clubs are sponsored by teachers who hold monthly meetings to encourage and promote engineering. Each club conducts activities and exercises tailored to the needs of the student members. Sponsors are encouraged to motivate their students to participate in engineering-related extracurricular activities as well as participate in the two mandatory events – Engineering Essay Contest and Engineering Olympics – sponsored by the PCDEP.

Two other highlights of EIT’s outreach program are the High School Research Program and Engineering Scholars Program, both of which bring high-achieving high school students to UALR for multi-week, residential programs.

The High School Research Program (HSRP) is a three-week residential summer program designed to provide high school students an opportunity to perform STEM-related research alongside faculty in a college setting. UALR faculty members serve as mentors for the students and provide unique individual learning opportunities that encourage scientific inquiry and promote the importance of conducting research. In addition, the residential program provides students with an opportunity to live on campus and acquire skill sets necessary to ensure successful matriculation.

The Engineering Scholars Program (ESP) is a two-week residential summer program designed to increase the number of students entering engineering programs in Arkansas universities through exposure to hands-on engineering projects, plant trips, and interaction with industry engineers. In addition, the ESP includes counseling and advising sessions to assist students in preparing for college. The exposure to engineering and counseling and advising sessions should help high school students make informed choices on appropriate course work during their high school years for pursuing careers in engineering.

Also, EIT served as the only host and UALR the only site in Arkansas for the Junior Engineering Technical Society’s (JETS) Tests of Engineering Aptitude, Mathematics and Science (TEAMS) Competition. Fourteen teams from 11 schools participated on February 17, 2009. This event was held during National Engineer’s Week. UALR was nationally recognized by the Junior Engineering Technical Society for having the largest year-over-year increase in the number of participating teams in the competition – a 250 percent increase from four teams in 2008.
EIT Growth

In a year that saw overall UALR enrollment remain fairly flat, compared to the year before, it was very notable that EIT’s enrollment was up 11 percent. Systems engineering, applied science, computer science and information science all showed impressive gains, and the fact enrollment in construction management and engineering technology enrollments was ostensibly flat was neither unwelcome nor surprising news.

Clearly, with the maturation of the construction management program and the impact of the economic downturn on the industry, growth there couldn’t be expected. And the stability of engineering technology was notable given the gains in systems engineering, proving the applicability of the ET program in terms of students’ interests and skills – and employers’ need for them in the workplace.

One of the brightest spots in terms of growth in students and stature was in the Information Quality (IQ) program, which is housed in the Information Science department. (More information is included in the Selected Departmental Successes section below.)

The Masters of Science degree in systems engineering was launched in fall 2008 with four students – that number swelling to nine students in the second semester. Initial steps were taken to seek the necessary approvals to establish two more important degree programs in EIT – a Ph.D. Integrated Computing and a Bachelors of Science in Construction Engineering. If all goes as planned, those programs will be launched in fall 2010.

Three faculty positions were filled, and in all cases the departments were successful in hiring their top choice in fields full of very qualified, impressive candidates:

- Amin Akhnoukh was hired and began work in the Construction Management program for the spring 2009 semester. He received his Ph.D. from the University of Nebraska-Lincoln in the Construction Systems and Civil Engineering departments. He was a research engineer with the Peter Kiewit Institute in high-strength concrete and had fellowships with the American Concrete Institute and the International Road Federation. He received his Master of Science in Civil Engineering from Kansas State University and his Bachelor of Civil Engineering from Cairo University in Cairo, Egypt.

- Dr. Nitin Agarwal was hired and will join the Information Science faculty in August 2009. He is set to receive his Ph.D. from Arizona State and has extensive research experience in social computing, knowledge extraction in social media, and Web 2.0. He is one of the authors of the soon-to-be-released book on web science, “Data Mining and Knowledge Discovery in Blogs.” He obtained his bachelor’s degree from Indian Institute of Information Technology in India.

- Dr. Lifeng Lai was hired and will join the Systems Engineering faculty in August 2009. He received his B.E. and M.E. degrees in Information Science and Electrical Engineering from Zhejiang University, Hangzhou, China in 2001 and 2004, respectively, and his Ph.D. degree in Electrical and Computer Engineering from Ohio State University in 2007. He has served most recently as a postdoctoral research associate in the Department of Electrical Engineering at Princeton University. He was a Distinguished University Fellow of Ohio State University from 2004 to 2007. His current research interests include Biometric Security Systems, Wireless Network Security, Sequential Analysis and Its Applications and Cooperative Communications. At UALR, he will teach and conduct research in the area of telecom, wireless, and security.
External Affairs

It was a busy and successful year for EIT corporate relations and other external affairs initiatives. Kelley Bass was hired as assistant dean for external affairs and he began work at EIT on July 14, 2008, replacing Joe Swaty.

Immediate goals included refining the makeup of the advisory boards that support each of EIT’s five undergraduate programs and putting in place a program to bring key industry stakeholders to UALR for presentations about EIT’s programs.

Relevant additions and subtractions were made to advisory councils, with each of the departments then holding meetings in October and April at the Bailey Center. The change in venue from ETAS was made to ease meeting logistics for attendees. Also, the meetings were held at 7:30 a.m. to allow executives to attend before ever going to their offices, and that change helped increase advisory council attendance by more than 50 percent over the previous academic year. Systems Engineering, Construction Management and Engineering Technology second-semester advisory council meetings each had more than 20 external attendees.

The EIT master presentation was honed to focus a bit more heavily on the students whose achievements have helped increase the quality and quantity of students successfully recruited to EIT. That presentation was utilized as Dr. Good hosted many prominent industry representatives throughout the year, helping spread the news about the good things happening at EIT. It is no overstatement to say that every external attendee expressed a combination of surprise and admiration over what they learned.

One of the most important meetings of the year occurred February 20, 2009, at an Engineering Breakfast attended by 17 senior executives representing area consulting engineering firms. The primary message: that EIT offered engineering degrees that prepared and qualified graduates to take the PE exam and become licensed engineers.

Other prominent visitors who came to campus to learn more about EIT and its programs:

- John Meyer, CEO of Acxiom
- Jeff Gardner, CEO of Windstream
- Jonathan Bates, CEO of Arkansas Children’s Hospital
- Mark Stodola, Mayor of Little Rock
- Todd Schurra, Plant Manager for LM Glasfiber
- Todd Cantrell, Plant Manager for 3M
- John Beasley, CEO and owner of BEI Precision
- Jerry and Mike Maulden, retired CEO and current director of external affairs, respectively, for Entergy

A more comprehensive internship placement program was enacted in spring 2009, which led to the greatest number of interns ever placed in relevant industry positions in summer 2009.
Companies that hired EIT interns included: Welspun, Falcon Jet, Jacobs Engineering, Kohler, SAIC, Acxiom and Windstream. Plus, Laura Lawson, a May 2009 systems engineering graduate, was asked by NASA’s Jet Propulsion Laboratory in Pasadena, Calif., to return for a second internship following her successful stint there in summer 2008, a virtually unprecedented occurrence.

Kelley Bass served as EIT’s liaison on many projects related to the construction of the new building, attending the weekly meetings that included representatives from Nabholz and Cromwell, the construction and architectural firms working on the building, and handling all relevant issues concerning the construction process.

He also approached Verizon Wireless after its merger with Alltel and subsequently arranged the company’s donation of approximately 170 Steelcase workstations to be used in research space on the sixth floor and temporary work quarters on the fourth floor, as well as in a variety of rooms on floors two and three. Estimated value of that equipment is more than $500,000 if current models of the same Steelcase furniture were purchased today.

Kelley is also leading the efforts to work with HP and Dell to procure cost-competitive bids on all the components of the computer system that will serve the new EIT building – with technical specifications and consulting provided by Jim Menth of the Information Science department.

Kelley is working with the UALR development team to plan and execute the EIT 10th anniversary celebration, which is scheduled for November 19, 2009, at the Jack Stephens Center. The event will tribute to Dr. Good and the faculty team she has assembled at EIT, and Kelley worked to secure former President Bill Clinton to serve as the keynote speaker.

Finally, Kelley represented EIT at many events, presenting to the Little Rock Engineers Club and Arkansas Broadband Council, while also attending various industry forums sponsored by the Little Rock Regional Chamber of Commerce and Arkansas Economic Development Council.

**Selected Departmental Successes**

This Annual Report chronicles accomplishments by each of the college’s six departments, as well as its support structure for recruitment, retention, and external affairs. Also included is the Annual Report of the Graduate Institute of Technology, a vital partner in supporting both EIT and CSAM.

For another consecutive year, EIT’s undergraduate enrollments increased and students declaring majors in the college increased. EIT had many departmental successes in the 2008-2009 academic year. All significant achievements are included in the departmental reports.

Three major successes are related to the graduate program in Information Quality (IQ), housed in the Information Science department:

- Rapid growth of the program continued in 2008-2009. The IQ program had 62 students in spring 2009 with 48 in the Masters of Science in IQ program and 14 in the Applied Science Ph.D. IQ program. To date the MSIQ program has graduated 18 students.
Student awards and activities (Continued)

- Research support for the IQ program is provided through the UALR Laboratory for Advanced Research in Entity Resolution and Information Quality (ERIQ). The most recent research development is an award of $1.6 million with Qbase, Inc. by the U.S. Air Force Research Laboratory (AFRL) for a project to develop “Information Quality Tools for Persistent Surveillance Data Sets.” The project started June 1, 2009 with six students and four faculty members participating in a 10-week research collaboration at Tec^Edge in Dayton, O. At Tec^Edge, the UALR team is interacting with faculty and students from other universities and with members of the AFRL research staff working on 10 research projects.

- In November 2008, the Steering Committee of the International Conference on Information Quality (ICIQ) announced that after 14 consecutive years of holding the conference at MIT, the conference would begin to rotate venues around the world. UALR was selected to host the ICIQ conference in 2010.

Several other highlights involved the Systems Engineering Department:

- The department gained approval for and implemented its Masters of Science program, enrolling nine students by the second semester.

- The new state-of-the-art Micro-Electro-Mechanical Systems (MEMS) laboratory has been completed at a cost of close to $500,000 and is being used by undergraduate, graduate, and faculty researchers.

- The department installed an anechoic chamber for testing new nanostructured antennas fabricated at UALR. The chamber includes positioning and control equipment, and its interior is covered with RF tiles to absorb signals, allowing for precise testing. A variety of tests can be conducted in the chamber including but not limited to: antenna testing, testing of specific absorption rate (SAR) for RF devices, and electromagnetic interference (EMI) testing. This will facilitate the characterization of new nano structured antennas to be fabricated for integration with wireless sensors.

In Computer Science,

- A High Performance Computing Cluster (HPC) was installed in partnership with the Systems Engineering Department in January 2009 with 512 cores, MATLAB parallelization software and a Wireless Sensor Networking (WSN) testbed. The WSN testbed allows for experimentation of a variety of algorithms, and the HPC cluster allows for data analysis.

- The department led the effort for UALR to receive the designation as a Center of Academic Excellence in Information Assurance Education (CAEIAE) from the National Security Agency in the summer of 2008.

In Applied Science:

- Student enrollment in the Applied Science program increased to 115 students (107 Ph.D. and 8 masters) in spring 2009 from 99 students (88 Ph.D. and 11 masters) in the Fall 2008 semester.

- Dr. Gary Anderson was the primary investigator on a $1.5 million NASA EPSCoR grant funded to pay for research to look for signs of life on Mars. Anderson led the team that also includes Dr. Charles Wu of Arkansas Tech University; Dr. Edmond Wilson of Harding University, and Dr. Constance Meadors, a recent UALR Ph.D. graduate now with Harding University. The team won for its proposal, “Mobile Surveying for Atmospheric and Near-Surface Gases of Biological Origin.” The proposed system could answer important science questions about the existence of life or its precursors in the solar system, atmospheric chemistry on Mars, and the presence and distribution of subsurface water on Mars.
In Construction Management:
- The University Plaza Construction Management Methods Laboratory is nearing completion. The classroom was used during the spring 2009 semester for several classes, and the wood laboratory was used by the bridge competition team and the methods classes.

In Engineering Technology:
- In response to recommendations given during accreditation, the department revised six courses and developed an instructional module to incorporate “Engineering Ethics” in the curriculum.

Selected Student Achievements
- The Construction Management Department competed for the second straight year in the ASC/TEXO Commercial Building Division Student Competition. The UALR team took second place, missed first place by one-half point, and defeated the team from Texas A&M University, one of the nation’s largest and most heralded construction management programs.
- Ashley Brown, a sophomore engineering technology major, was awarded an Arkansas NSF EPSCoR fellowship for research experience for undergraduates (SURF) for her project on the development of a “12 Volts, Solar Powered Portable Refrigerator.”
- Jason Robison and Laura Lawson spent summer 2008 in internships at the Jet Propulsion Laboratory in Pasadena, Calif. Their work involved dust participle mitigation from solar panels. Their internship was supported by Arkansas Space Grant Consortium. They were featured on the “Arkansans of the Week” segment by KATV, Channel 7.
- Systems Engineering capstone students carried out several significant projects including a project on "Robust Operations Computer," mentored by Dr. Nisanci and sponsored by GE Fanuc; "A Wireless Structural Health Monitoring System," mentored by Dr. Al-Rizzo and Dr. Huang, and "RFID Scanner for Autonomous Checkout" mentored by Dr. Iqbal.
- Eight systems engineering seniors took the Fundamentals of Engineering (FE) exam before graduating, and seven of the eight passed – 88 percent vs. the national pass rate of 77 percent.
- Eight EIT students were selected to be members of Who’s Who on University Campuses:
  - Christopher Black, Computer Science junior (Cabot)
  - Brent Coney, Information Science senior (Bryant)
  - Justin Davis, Construction Management junior (North Little Rock)
  - Garrett Fonner, Construction Management senior (Little Rock)
  - Asha Merrill, Information Science junior (Lonoke)
  - Jamia Moore, Information Science junior (Magnolia)
  - Andrew Shepherd, Computer Science junior (Sherwood)
  - Michael Sims, Systems Engineering junior (Booneville)

Dr. Mary L. Good, Dr. Alex Biris, and Dr. Haydar Al-Shukri with several award-winning students at the EIT Awards Ceremony in May, 2009.
Selected Faculty Achievements

- Dr. Hussain Al-Rizzo of the Systems Engineering Department won the UALR Faculty Excellence in Research, having been nominated for the university-wide award after winning the EIT Faculty Excellence Award in Research. Dr. Al-Rizzo has previously won the Ted and Virginia Bailey Foundation Faculty Excellence Award in Teaching. He was also promoted to the position of full professor.

- Jim Carr of Construction Management won the 2009 Associated Schools of Construction Excellence Award for Service. He also won the EIT Faculty Excellence Award in Public Service.

- Haiyan Xie of Construction Management won the EIT Faculty Excellence Award in Teaching.

- Dr. Guoliang Huang of Systems Engineering received the GIT Guy, Gladys, Guy, Jr. and Gaylord Northrop Young Researcher Award. He has published more than 30 international journal papers in his fields of specialty.


- Dr. Gary Anderson of Applied Science served as the Section Editor for Instrumentation for the IEEE Aerospace & Electronics Systems Magazine.

- Dr. Abhijit Bhattacharyya of Applied Science was awarded the Tan Chin Chuan Academic Exchange Fellowship by the Nanyang Technological University, Singapore.

- Dr. Alexandru Biris of Applied Science and the Nanotechnology Center served as managing editor and a member of the Editorial Board for the Particulate Science and Technology Journal. Dr. Biris also co-founded a private company, Orlumet LLC, that commercializes the technology he helped develop in the area of tissue engineering.

- Dr. Qingfang He of Applied Science received the NSF CAREER award, which honors scholars and university professors who are judged to likely become academic leaders in the future. The award has entered its fourth year. This year it includes $100,000 for research, a $6,000 supplemental fund for undergraduate research, and another $6,000 for graduate student summer support.

- Dr. Cang Ye of Applied Science was awarded a 2009 Office of Naval Research Summer Faculty Research Fellowship that supported his 10-week summer 2009 research at Space and Naval Warfare Systems Center in San Diego. Dr. Ye was one of the nine faculty fellows and the only roboticist hosted by SPAWAR in the summer.

- Dr. Remzi Seker of Computer Science continues to serve as an Associate Editor for Computers & Electrical Engineering, an Elsevier International Journal.

- Dr. Srinivasa Ramaswamy, chair of Computer Science, served as an Associate Editor for the IEEE Transactions on Systems Man and Cybernetics - Part C: Applications and Reviews.
- Dr. S. Midturi of Engineering Technology served as a panelist at the USA-India Engineering Education Conference in India from July 9-12, 2008 in Mysore, India. The topics included accountability and accreditation of engineering programs in India.

- Professor David Luneau of Engineering Technology received an off-campus duty assignment to visit a number of universities on the West Coast to explore means to enhance and develop senior projects in engineering and engineering technology in the “Solar Boat Competition” arena.

- John Talburt of Information Science was awarded the professional designation of Certified Data Management Professional (CDMP) at the Mastery Level with specialties in Data and Information Quality and IT Management by the Institute for Certification of Computing Professionals (ICCP) and the Data Management Association International (DAMA) in July 2008.

- Mihail E. Tudoreanu of Information Science received notice that his March 2007 paper “Using an interactive 3D force field for object displacement to facilitate target separation and distractor removal,” co-authored with Niklas Elmqvist, had received a best paper award from the International Journal of Virtual Reality.

- Richard Wang, University Professor of Information Quality and Co-Director of the UALR Laboratory for Advanced Research in Entity Resolution and Information Quality, was appointed the U.S. Army’s Chief Data Quality Officer in spring 2009.

**Curriculum Highlights**

See details in the departmental reports. Some highlights:

- The Information Science Department along with Computer Science and Systems Engineering have submitted a proposal to the UALR Graduate Council and ADHE for approval of a Ph.D. program that emphasizes the Computer Engineering, Computer Science, and Computer-Related Information fields, a program that would be launched in Fall 2010.

- Another new offering starting in Fall 2010 will be the bachelor’s of science in Construction Engineering, an option within Construction Management. Amin Akhnoukh was hired to lead that effort from the University of Nebraska, where he completed his Ph.D.

- Applied Science added two new graduate courses – the first in the area of Applied Bioscience and the second in the Material Science and Engineering area.

- The Information Science Department agreed to be the administrative home for the interdisciplinary Graduate Certificate in Technology Innovation.

- Construction Management developed a new, on-line “green” construction course that is offered campus-wide and helps with LEED points for the new EIT building
Overall EIT Grant Applications/Awards

a. Number of proposals submitted ........................................ 181
b. Total dollar amount requested in proposals ......................... $30,963,628
c. Number of Awards (proposals funded) ................................ 70
d. Total dollars awarded ..................................................... $7,682,381

Overall Public Service Activities

Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.

a. Lectures and presentations, discipline-based, to non-discipline related audiences .................................................... 42
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals) ................................. 6
c. Consultantships (paid) .................................................... 23
d. Consultantships (non-paid) ............................................... 17
e. Other (please add other categories of public service as needed) .... 414

Overall Research/Creative Activities

Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).

a. Books .......................................................... 3 books, 4 book chapters
b. Books (new editions) ...................................................... 0
c. Research articles in professional journals ............................ 118
d. Research notes in professional journals ................................. 9
e. Formal presentations at professional meeting ........................ 113
f. Discussants at professional meeting .................................... 37
g. Art exhibits .............................................................. 0
h. Theatre productions/musical productions ............................ 0
i. Other ........................................................................ 30
### Overall Personnel Changes

<table>
<thead>
<tr>
<th>CHANGE TYPE</th>
<th>NAME</th>
<th>DEPARTMENT</th>
<th>MOST RECENT TITLE / RANK</th>
<th>HIGHEST DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation</td>
<td>Tammie Cash</td>
<td>Dean's Office</td>
<td>Exec. Director of Administration and Finance</td>
<td>B.S.</td>
</tr>
<tr>
<td>Hired</td>
<td>Shawna Diaz</td>
<td>Dean's Office</td>
<td>Exec. Director of Administration and Finance</td>
<td>M.A.</td>
</tr>
<tr>
<td>Promoted</td>
<td>Hussain Al-Rizzo</td>
<td>Systems Engineering</td>
<td>Professor</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Hired</td>
<td>Lifeng Lai</td>
<td>Systems Engineering</td>
<td>Assistant Professor</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Hired</td>
<td>Mariya Khodakovskaya</td>
<td>Applied Science</td>
<td>Assistant Professor</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Retired</td>
<td>Malay Mazumder</td>
<td>Applied Science</td>
<td>Professor Emeritus</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Separation</td>
<td>R. Murat Demirer</td>
<td>Computer Sci/Bayrak research</td>
<td>Research Associate/Res Asst Professor</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Separation</td>
<td>Nasarolan Samaldi</td>
<td>Computer Sci/Bayrak research</td>
<td>Research Associate/Post Doc</td>
<td>Ph.D.</td>
</tr>
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<td>Separation</td>
<td>Suleyman Tek</td>
<td>Computer Sci/Bayrak research</td>
<td>Research Associate/Post Doc</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Hired</td>
<td>Julian Post</td>
<td>GIT</td>
<td>Research Associate/Instrumentation Specialist</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Separation</td>
<td>Qiang Wang</td>
<td>Applied Science/He research</td>
<td>Research Associate/Post Doc</td>
<td>Ph.D.</td>
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<tr>
<td>Hired</td>
<td>Hong Xu</td>
<td>Applied Science/He research</td>
<td>Research Associate/Post Doc</td>
<td>Ph.D.</td>
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<tr>
<td>Hired</td>
<td>Bo Liu</td>
<td>Nanotechnology Center</td>
<td>Temporary Post Doc</td>
<td>Ph.D.</td>
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<tr>
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<td>Lixi Yuan</td>
<td>Nanotechnology Center</td>
<td>Postdoctoral Fellow</td>
<td>Ph.D.</td>
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<td>Hired</td>
<td>Amin Akhnoukh</td>
<td>Construction Management</td>
<td>Assistant Professor</td>
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<tr>
<td>Resigned</td>
<td>Nancy Rea</td>
<td>Computer Science</td>
<td>Admin. Office Supervisor</td>
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<tr>
<td>Hired</td>
<td>Tong Jett</td>
<td>Computer Science</td>
<td>Admin. Office Supervisor</td>
<td>MBA</td>
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<td>Aaron Hoyt</td>
<td>Computer Science</td>
<td>Network Administrator</td>
<td>MBA</td>
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<tr>
<td>Resigned</td>
<td>Anthony Jones</td>
<td>Engineering Technology</td>
<td>Research Associate</td>
<td>BS</td>
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<tr>
<td>Hired</td>
<td>Curt Moody</td>
<td>Engineering Technology</td>
<td>Research Associate</td>
<td>BBA</td>
</tr>
<tr>
<td>Promotion</td>
<td>Daniel Berleant</td>
<td>Information Science</td>
<td>Professor</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Tenure</td>
<td>Elizabeth Pierce</td>
<td>Information Science</td>
<td>Associate Professor</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Hired</td>
<td>Nitin Agarwal</td>
<td>Information Science</td>
<td>Assistant Professor</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Non Renewal</td>
<td>Stephanie Harvey</td>
<td>Information Science</td>
<td>Instructor</td>
<td>MBA</td>
</tr>
<tr>
<td>Non Renewal</td>
<td>Marico Howe</td>
<td>Information Science</td>
<td>Instructor</td>
<td>MS</td>
</tr>
</tbody>
</table>
The recruitment process for the Fall 2009 semester began by defining the target student population as students with an ACT score of 26 or above with an interest in STEM programs. During the 2008-2009 academic year, approximately 2,500 student names, addresses, phone numbers, and e-mails were collected via referrals from current students; purchased ACT lists; and “interest cards” distributed during EIT events, school visits, and college fairs.

The team visited college recruitment fairs throughout Arkansas during September, October, and November 2008, making special efforts to recruit those students who had taken calculus or pre-calculus. Also, contact information for our targeted population was purchased from ACT after building queries to return only academically prepared students with an interest in STEM fields. These queries focused on qualified students in Arkansas, Memphis, and selected areas of Texas.

Each student then received a letter, email, or a phone call offering the chance to visit EIT and supplying information about programs and scholarships. Students with ACT scores of 26 or higher, and students with very high GPAs, were invited to attend one of three scheduled recruiting days with their parents to learn more about EIT’s programs and scholarship opportunities.

Recruiting Days
The EIT recruiting team hosted high school seniors who fit the target educational achievement parameters and their parents at two recruiting days – Saturday, November 15; and Saturday, Jan. 31, 2009. The days began in Dickinson Auditorium with Assistant Dean Kelley Bass giving the group an EIT overview before turning it over to EIT scholars who explained the specifics about the undergraduate programs in which they are majoring. Next the group went to the ETAS building, where they split into three teams and rotated between a trio of demonstrations: the Virtual Reality Center; 2) a robotics demonstration; 3) a bridge-building exercise.

After all students and parents had experienced the three demonstrations, the group walked across campus and toured the apartments in South Hall, where the EIT scholarship students live. After getting a taste of their potential next home away from home, the students and parents boarded a Little Rock Tours luxury coach for the short ride downtown to the Copper Grill, the upscale restaurant on the first floor of the 300 Third tower. There they were met by and teamed with select EIT faculty, EIT student ambassadors and industry representatives from Windstream, Acxiom, Hawker Beechcraft, Aristotle, Alltel (now Verizon Wireless), Nabholz Construction, Fidelity and Southwest Power Pool.

Following the three-course meal at Copper Grill, the group re-boarded the bus and headed down Third Street to Acxiom’s corporate headquarters. There, they were greeted by Acxiom
college recruiting leader Allison Nicholas before again hearing from Kelley Bass, who detailed the progress on the new EIT building, which these students would have the chance to experience as freshmen. Next, they listened as a group of EIT students held a roundtable discussion on the internships they had experienced, a session moderated by Vernard Henley, EIT’s director of educational outreach and diversity.

During the entirety of the activities at Acxiom, Katie Young, assistant dean for academic affairs and recruitment, was pulling aside each student with his or her parents and making on-the-spot scholarship offers. And the best news of the very successful recruiting days was the success rate on scholarship offer acceptance. Sixteen of the 19 students who were offered scholarships at the November recruiting day accepted; and all 14 students who received offers at the January recruiting day signed on the dotted line and will join EIT as freshmen in August 2009. This 90 percent acceptance rate led to the cancellation of the recruiting day scheduled for February.

EIT CyberScholar Orientation/Registration

EIT hosted orientation for the 33 of the 50 fall 2009 CyberScholars Class of 2013 on May 14, 2008. Parents were permitted, but were encouraged to allow the students to participate independently to foster autonomy. The goals for the day-long orientation included 1) identification/selection of major, 2) advising (including concurrent credit/AP credit/IB credit evaluation), 3) registration, 4) housing assignments/roommate selection. Lunch was held at Patio Pizza, and students “speed-dated” to find roommates. Housing leases were signed once roommates were identified.

Students concluded the EIT Orientation with a copy of their Fall 2009 schedule, their student ID, their signed housing lease in hand, and the security of having already met their future roommates.

Fall 2008 Cyberscholar Freshman Class

The CyberScholar Class of 2012, which consisted of 75 students, received a number of enrichment opportunities designed to increase community and enhance persistence.

- Expanded orientation via the PEAW 1124 Leadership Seminar: Topics addressed in the one-credit hour class include time management, budgeting, communication, group work, and project management.
- Service/Study time: Scholars were required to perform 10 hours of Community Service per week. Most students opted to fulfill this requirement by spending study time in the ETAS 204 lab. Non-profit service, professional development, and time spent with tutors satisfied this requirement as well.
- Living Community: Scholars were required to live in the Commons South Apartments or with their parents for their freshman year with upperclassmen serving as mentors and tutors. Three of the four floors were entirely populated by CyberScholars.
- Learning Community: Freshmen had shared schedules in which many students had the majority of their classes together.
- Intrusive Advising: Students identified as “at-risk” were called in for individual counseling. Such students were required to submit accountability statements at semester as well as their plan for correction.
Fall 2008 Cyberscholar Freshman Class (Continued)

Forty-four of these students – or 59 percent – successfully completed at least 24 credit hours during the fall 2008 and Spring 2009 semesters. It is expected that 8-10 of the students who failed to renew their scholarships will return to EIT programs and self-pay. Data indicates that of the 41 percent who did not meet renewal requirements, GPA was a better predictor of success than ACT score. Of the 28 students who lost their scholarships, three changed majors, 10 didn’t meet GPA requirements after the first semester, and 15 did not complete the required 24 hours the second semester. Professors confirmed that many of these students had weak class attendance as well. An online faculty referral system was implemented in Fall 2008 to identify at-risk students earlier in the semester when intervention is most effective.

Fall 2009 Cyberscholar Freshman Class

The CyberScholar Class of 2013 will consist of 50 students from across the state, which the largest number coming from the Arkansas School for Math, Sciences and the Arts in Hot Springs. Here is the breakdown of their high schools:

<table>
<thead>
<tr>
<th>School</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASMSA</td>
<td>7</td>
</tr>
<tr>
<td>Beebe</td>
<td>1</td>
</tr>
<tr>
<td>Benton</td>
<td>2</td>
</tr>
<tr>
<td>Bruno-Pyatt</td>
<td>1</td>
</tr>
<tr>
<td>Bryant</td>
<td>3</td>
</tr>
<tr>
<td>Cabot</td>
<td>3</td>
</tr>
<tr>
<td>Dewitt</td>
<td>1</td>
</tr>
<tr>
<td>Dumas</td>
<td>1</td>
</tr>
<tr>
<td>England</td>
<td>1</td>
</tr>
<tr>
<td>Fort Smith Southside</td>
<td>2</td>
</tr>
<tr>
<td>Greenwood</td>
<td>1</td>
</tr>
<tr>
<td>Home schooled</td>
<td>1</td>
</tr>
<tr>
<td>Hot Springs High</td>
<td>2</td>
</tr>
<tr>
<td>Hot Springs Lakeside</td>
<td>4</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>1</td>
</tr>
<tr>
<td>LitSA Academy</td>
<td>1</td>
</tr>
<tr>
<td>Lonoke</td>
<td>1</td>
</tr>
<tr>
<td>Little Rock Catholic</td>
<td>1</td>
</tr>
<tr>
<td>Little Rock Mills</td>
<td>2</td>
</tr>
<tr>
<td>Little Rock Parkview</td>
<td>1</td>
</tr>
<tr>
<td>Mammoth Spring</td>
<td>1</td>
</tr>
<tr>
<td>Mayflower</td>
<td>2</td>
</tr>
<tr>
<td>McCrory</td>
<td>1</td>
</tr>
<tr>
<td>Nettleton</td>
<td>1</td>
</tr>
<tr>
<td>North Little Rock High</td>
<td>1</td>
</tr>
<tr>
<td>North Pulaski High</td>
<td>1</td>
</tr>
<tr>
<td>Pulaski Academy</td>
<td>1</td>
</tr>
<tr>
<td>Texarkana Texas High</td>
<td>2</td>
</tr>
<tr>
<td>Warren</td>
<td>2</td>
</tr>
<tr>
<td>Watson Chapel</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>50</td>
</tr>
</tbody>
</table>

The EIT CyberScholars Class of 2013 is preliminarily distributed by major as follows:

<table>
<thead>
<tr>
<th>Major</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Management</td>
<td>2</td>
</tr>
<tr>
<td>Computer Science</td>
<td>15</td>
</tr>
<tr>
<td>Information Science</td>
<td>8</td>
</tr>
<tr>
<td>Systems Engineering (undecided)</td>
<td>8</td>
</tr>
<tr>
<td>Systems Engineering (computer)</td>
<td>7</td>
</tr>
<tr>
<td>Systems Engineering (electrical)</td>
<td>2</td>
</tr>
<tr>
<td>Systems Engineering (mechanical)</td>
<td>8</td>
</tr>
</tbody>
</table>
OUTREACH ACTIVITIES FOR MIDDLE SCHOOL AND HIGH SCHOOL STUDENTS

EXXONMOBIL BERNARD HARRIS SUMMER SCIENCE CAMP

UALR was the only university in Arkansas – and one of only 30 in the nation – to receive a grant to host the ExxonMobil Bernard Harris Summer Science Camp, which brought 48 students who had just completed fifth, sixth and seventh grades to campus for a two-week residential program.

EIT administered the $78,000 award to offer the free academic program designed by The Harris Foundation, whose mission is “taking an active role in shaping education in students entering middle school grades.” More than 175 applications were received, with 48 high-achieving students from around Arkansas – 24 girls and 24 boys – selected for the two week camp July 5-17.

Harris, the first African American to walk in space, is founder and president of the Harris Foundation and is the board of directors for the National Math and Science Initiative dedicated to improving science and math performance among American students. He came to UALR on July 7 and had dinner with the campers before appearing July 8 at Stella Boyle Smith Concert Hall to oversee a “Raft Rally” competition in which the campers created a “raft” from two pieces of aluminum foil and four plastic straws and then saw which raft could hold the most number of pennies while remaining afloat.

HIGH SCHOOL RESEARCH PROGRAM

The High School Research Program (HSRP) is a three-week residential summer program designed to provide high school students an opportunity to perform STEM-related research alongside faculty in a college setting. UALR faculty serve as mentors for the students and provide unique individual learning opportunities that encourage scientific inquiry and promote the importance of conducting research. In addition, the residential program provides students with an opportunity to live on campus and acquire skill sets necessary to ensure successful matriculation.

Students were selected based on their academic merit, teacher’s recommendations, and their expressed written desire to participate in the program. Fourteen of the 15 who applied to the program were accepted (93% acceptance rate). Eleven students (9 male and 2 female) enrolled in and completed the program.

Almost two-thirds (64%) of the accepted students had a high school GPA of 3.50 or greater. All, but two of the accepted students had a high school GPA of at least 3.15. Forty percent of the applicants (6 of 15) were from the Arkansas School for Mathematics, Sciences & the Arts (ASMSA). All ASMSA students were accepted, and five of the students enrolled in the program.
High School Research Program (Continued)

The distribution of the composite ACT scores for the enrolled students (8) who supplied such scores:

<table>
<thead>
<tr>
<th>Composite Score Range</th>
<th>Below 22</th>
<th>22 - 24</th>
<th>25 – 27</th>
<th>28 – 30</th>
<th>Above 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Enrolled Students</td>
<td>25%</td>
<td>0%</td>
<td>25%</td>
<td>0%</td>
<td>50%</td>
</tr>
</tbody>
</table>

This map illustrates the areas of the state from which the program drew applicants.

A list of student-faculty mentor assignments is shown below.

<table>
<thead>
<tr>
<th>Student</th>
<th>Faculty Mentor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Anthony</td>
<td>Dr. Alex Biris</td>
</tr>
<tr>
<td>Karan Batra</td>
<td>Dr. Srini Ramaswamy &amp; Dr. Kenji Yoshigoe</td>
</tr>
<tr>
<td>Jake Berry</td>
<td>Dr. Steve Minsker &amp; Dr. Srini Ramaswamy</td>
</tr>
<tr>
<td>Jeremy Davis</td>
<td>Dr. Sean Geoghegan</td>
</tr>
<tr>
<td>Shelton Hale</td>
<td>Dr. Srini Ramaswamy &amp; Dr. Mihail Tudoreanu</td>
</tr>
<tr>
<td>Helio Liu</td>
<td>Dr. R.B. Lenin &amp; Alexandre Impriele</td>
</tr>
<tr>
<td>Priyanka Murali</td>
<td>Dr. Srini Ramaswamy</td>
</tr>
<tr>
<td>Andrew Seel</td>
<td>Dr. Cang Ye</td>
</tr>
<tr>
<td>Stephen Sivils</td>
<td>Dr. Mihail Tudoreanu</td>
</tr>
<tr>
<td>Jesse Thomason</td>
<td>Dr. Srini Ramaswamy &amp; Dr. Sean Geoghegan</td>
</tr>
<tr>
<td>Megan Trett</td>
<td>Dr. Srini Ramaswamy &amp; Dr. Jennifer Perkins</td>
</tr>
</tbody>
</table>
ENGINEERING SCHOLARS PROGRAM

The Engineering Scholars Program (ESP) is a two-week residential summer program designed to increase the number of students entering engineering programs in Arkansas universities through exposure to hands-on engineering projects, plant trips, and interaction with industry engineers. In addition, the ESP includes counseling and advising sessions to assist students in preparing for college. The exposure to engineering and counseling and advising sessions should help high school students make informed choices on appropriate coursework during their high school years for pursuing careers in engineering.

Students were selected based on their academic merit, teachers’ recommendations, and expressed written desire to participate in the program. Eighteen of the 26 students who applied to the program were accepted (69% acceptance rate). Seventeen students (13 male and 4 female) enrolled in the program (94% enrollment rate) and all successfully completed the program.

Eighty-three percent of the accepted students had a high school GPA of 3.0 or greater. Fifty-six percent of the accepted students had a high school GPA of 3.3 or greater. Applications were received from various areas of Arkansas. Only one applicant was from out of state (Oklahoma), and he was accepted and enrolled in the program.

The below map illustrates the areas of the state from which the program drew applicants and participants.

![Arkansas Locality Map for Applicants and Participants](map.png)

- Applicants
- Accepted Students
- Participants

Note: Does not include student participant from Norman, OK
CLASSROOM VISITS

School accountability concerns are virtually making this type of recruitment effort obsolete. Many teachers are reluctant and face increased scrutiny should they elect to utilize classroom instructional time to provide colleges an opportunity to speak and recruit their students. EIT contacted fewer than 200 students at seven Arkansas schools using this method. A large majority of the students (170) were contacted through existing outreach activities that provided a conduit to meet with the students or through special student assemblies that were conducted during the regular school day specifically for the purpose of college recruitment.

With accountability issues being a major concern for most school districts, classroom visits without any specific ties to the school’s curriculum will become difficult to schedule. However, those same accountability issues can be used to develop outreach events that can lead to increased access to prospective students. EIT has a variety of outreach programs and events that provide unique opportunities to gain access to students and their teachers.

LAB TOURS

More than 330 students visited EIT and took part in tours of the college’s labs. The content of the tours varied according to the amount of time teachers allocated. Students were also afforded tours of the campus and opportunities to meet faculty and discuss academic goals.

JETS TEAMS COMPETITION

EIT served as the only host and UALR the only site in Arkansas for the Junior Engineering Technical Society’s (JETS) Tests of Engineering Aptitude, Mathematics and Science (TEAMS) Competition. Fourteen teams from 11 schools participated on February 17, 2009. This event was held during National Engineer’s Week. UALR was nationally recognized by the Junior Engineering Technical Society for having the largest year-over-year increase in the number of participating teams in the competition – a 250 percent increase from four teams in 2008.

Teachers identified students who would comprise their schools’ teams. Ninety-two students brought textbooks, manuals, and calculators to UALR to solve actual engineering problems that were part of the two-part, three hour test.

After registration, teachers were provided with coaching materials and sample problems that are aligned with their curriculum. The format of the competition is amenable to educators since schools compete only against schools with similar admission standards, senior class size, and student team composition (seniors or no seniors). Students work in teams of up to eight and collaborate to derive their answers. The top-scoring teams from across the nation compete for national honors. Participating schools in the 2009 JETS TEAMS Competition included:

- Arkansas School for Mathematics, Sciences & the Arts (ASMSA)
- Bald Knob High School
- Bauxite High School
- Bryant High School
- eSTEM Charter High School
Highland High School
Hope High School
J.A. Fair High School
Little Rock Central High School
Pulaski Academy
River Valley Technical Center

Results from the 2009 JETS TEAMS competition are shown below. Little Rock Central High School, Highland High School, and the Arkansas School for Mathematics, Sciences & the Arts had scores high enough to be considered for national honors.

- Division 1 – River Valley Technical Center
- Division 2 – Arkansas School for Mathematics, Science & the Arts
- Division 3 – Highland High School
- Division 5 – J. A. Fair High School (A team)
- Division 9 – Little Rock Central High School
- State Champions - ASMSA

National honors:

- Varsity (team included at least one senior)
  - 10th place, Division 9 – Little Rock Central High School
  - 32nd place, Division 3 – Highland High School
  - 39th place, Division 2 – ASMSA

- Junior Varsity (no seniors)
  - 3rd place, Division 2, Junior Varsity – ASMSA

NSBE ARKANSAS ALUMNI PARTNERSHIP

EIT’s partnership with the Arkansas Alumni Chapter of the National Society of Black Engineers (NSBE) was strengthened through a series of successful events hosted at UALR. More than 35 high school students attended two half-day sessions designed to generate interest in engineering. On February 21, 2009, an “Introduction to Engineering” seminar was held. More than 30 high school students and parents attended the half-day session to learn about engineering, view corporate and university information booths, and hear presentations about how to prepare for a career in engineering.
NSBE ARKANSAS ALUMNI PARTNERSHIP (Continued)

On April 25, 2009, the technical seminar was held. More than 20 high school students and parents listened to presentations about resume writing, interviewing skills, and the application process. The seminar also included tours of selected EIT labs. Participating students took part in an engineering team contest to conclude the seminar.

REGIONAL SCIENCE AND ENGINEERING FAIR AWARDS

To encourage and recognize Arkansas high school students’ efforts to pursue scientific research in the fields of systems engineering, computer science and information science, EIT created two awards to be given at each of the Intel International Science and Engineering Fair (ISEF) affiliated regional science and engineering fairs in the state of Arkansas.

The Excellence in the Computing and Information Sciences Award provided a $100 savings bond to the student whose project best utilized computer science or information science applications to improve the quality of life for humans or animals. Similarly, the Excellence in Engineering Award provided a $100 savings bond to the student whose project best used engineering concepts to improve the quality of life for humans or animals. In addition, the teacher sponsoring the student winner of the Excellence in Engineering Award also received a $100 grant to use to assist in obtaining instructional science materials for his/her classroom.

Faculty and staff served as judges at each of the regional science fairs and presented the awards at each fair’s awards ceremony. Awardees for the 2009 EIT Regional Science and Engineering Fair Awards.

Students
- Eric Burns – Annie Camp Junior High School
- Aaron McCormick – L.A. Chaffin Jr. High School
- Mark Okimoto – ASMSA
- David Sweere – Academics Plus Charter School
- Jesse Thomason – ASMSA

Teachers
- Terry Overbey – L.A. Chaffin Jr. High School
- Dr. Jon Ruehle - ASMSA

PRE-COLLEGE DIVERSITY ENGINEERING PROGRAM

The Pre-College Diversity Engineering Program (PCDEP) was founded in 2007 primarily to increase the number of historically underrepresented students in grades six through 12 who are prepared to pursue engineering degrees. In addition, the PCDEP is an economical alternative to the Southeastern Consortium for Minorities in Engineering (SECME) program.

Initiated by EIT, the Pre-College Diversity Engineering Program is implemented at various schools – including a large number from the Little Rock School District – through the formation of engineering clubs. The engineering clubs are sponsored by teachers who hold monthly
meetings to encourage and promote engineering. Each club conducts activities and exercises tailored to the needs of the student members.

Sponsors are encouraged to motivate their students to participate in engineering-related extracurricular activities as well as participate in the two mandatory events – Engineering Essay Contest and Engineering Olympics – sponsored by the PCDP.

There are more than 130 students registered in the Pre-College Diversity Engineering Program at the following schools:

- Dunbar Middle School
- J.A. Fair High School
- KIPP Delta Collegiate School
- Little Rock Central High School
- Mann Middle School
- Parkview High School
- Pulaski Heights Middle School

ENGINEERING ESSAY CONTEST

The Engineering Essay Contest promotes the development of reading, writing, comprehension and research skills of PCDEP participants. Registered PCDEP students wrote an essay about an engineering-related subject selected from a broad range of general topics. Students compete in four distinct competition levels that are determined by grade level.

First- through third-place winners receive $150, $100, and $50 savings bonds, respectively. The results for the Engineering Essay Contest:

**Level I (6th and 7th Grades):**
- 1st Place: Deborah Rookey – Mann Middle School: “Engineering and Mass Transportation”

**Level II (8th Grade):**
- No winners

**Level III (9th and 10th Grades):**
- 1st Place: Austin Klais - J.A. Fair High School: “How Engineering has Advanced Our Ability to Keep Fresh Water Supplies”

**Level IV (11th and 12th Grades):**
- No winners

ENGINEERING OLYMPICS

The Engineering Olympics, the second mandatory event, is designed to introduce students to engineering through competitive team events and exercises. Participating schools receive all materials necessary to compete in the Engineering Olympics at no charge. Schools electing to
Engineering Olympics (Continued)

participate in the Engineering Olympics that are not members of the PCDEP are required to pay an entry fee. Each Engineering Olympic team consists of no more than 10 students, and each student is required to participate in at least one event. The Junior Division Olympiad is for middle school students. High school students compete in the Senior Division Olympiad.

The Junior Division Olympiad was held February 18, 2009 and had more than 75 students participating (an increase of more than 85 percent from 2008). Almost 50 high school students competed in the Senior Division Olympiad on February 25, 2009. Due to the large amount of interest in his event, schools participating in the PCDEP were permitted to have multiple teams.

In the Engineering Olympics, teams receive points for first through sixth place in each of the three events. Both Olympiads included a Critical Thinking Problems event in which teams of up to three students try to solve all of the problems correctly in the shortest amount of time.

The other two events in the Junior Division Olympiad were the Rubber Band Buggy Race and the Egg Drop Competition. In the Rubber Band Buggy Race, students designed and built a lightweight and fast rubber band-powered buggy that is able to travel 50 feet. Team speeds were adjusted higher for being lightweight, and each team had to correctly calculate their buggy’s speed from feet per second to miles per hour within four minutes. In the Egg Drop Competition, students placed a raw egg inside a pre-fabricated device and dropped the device from a height of approximately 45 feet without breaking the egg. The device had to be designed within prescribed size and weight limits.

In the Senior Olympiad, the other two events were the Quick-Stop Racer Competition and CO2 Dragster Contest. In the Quick-Stop Racer Competition, students designed, built, and calibrated the braking system of a wooden car so it could stop in a prescribed distance. In the CO2 Dragster Contest, students were given specifications to design and build a fast, lightweight balsa wood dragster and calculate its speed in miles per hour. Students had four minutes to calculate the speed after being given their dragster’s time.

The results from the Engineering Olympics:

**Junior Division Engineering Olympics**

- Rubber Band Buggy Race:
  - Gold medal – Hot Springs Middle School
  - Silver medal – Pulaski Heights Middle School Team #1
  - Bronze medal – Dunbar Middle School Team #2
- Critical Thinking Problems:
  - Gold medal – Pulaski Heights Middle School Team #1
  - Silver medal – Hot Springs Middle School
  - Bronze medal – Horace Mann Middle School Team #1
Egg Drop Competition:
- Gold medal – Horace Mann Middle School Team #1
- Silver medal – Horace Mann Middle School Team #2
- Bronze medal – Hot Springs Middle School

Overall winner:
- Hot Springs Middle School

Senior Division Engineering Olympics

CO2 Dragster Contest:
- Gold medal – Bryant High School
- Silver medal – KIPP Delta Collegiate High School
- Bronze medal – Little Rock Central High School

Critical Thinking Problems:
- Gold medal – Little Rock Central High School
- Silver medal – Bryant High School

Quick-Stop Racer Competition:
- Gold medal – Little Rock Central High School
- Silver medal – Bryant High School
- Bronze medal – KIPP Delta Collegiate High School

Overall winner:
- Little Rock Central High School and Bryant High School (tie)
Department of
Applied Science
University of Arkansas at Little Rock

Annual Report
for the period
July 1, 2008 – June 30, 2009

DR. HAYDAR AL-SHUKRI
Chairman
Student enrollment in the Applied Science Program increased to 115 students (107 Ph.D. and 8 master’s) in the Spring 2009 semester from 99 students (88 Ph.D. and 11 master’s) in the Fall 2008 semester. Eight students were awarded their doctorate degree and four students received their master’s of science degree. During the academic year, 44 new students enrolled in the Applied Science program.

The department was awarded $907,797 of externally supported grants to continue scientific achievement and student education. Also, the department requested $7,967,485 by submitting 21 proposals for external funding.

The department faculty collectively published 38 journal articles and 56 papers/abstracts for conference participation. Dr. Malay Mazumder retired January 1, 2008. Dr. Mariya Khodakovskaya started her appointment on July 1, 2008, as new Assistant Professor for Applied Science in the field of Plant Biology.

Student Achievements

A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

Achievements

Eight students were awarded the Doctorate of Philosophy degree:


Student Achievements (continued)


Four students were awarded the Master’s degree:

- Mr. Adeyemi Fowe, graduated in May 2009. Dissertation title: “Stochastic Routing Algorithms an Application to ATIS.” Dr. Yupo Chan, Major Professor.

Awards

- One Ph.D. and one Master’s student received the M.K. Testerman award for excellence in research: Ms. Enkeleda Dervishi and Mr. Adeyemi Fowe.
- One Ph.D. and one Master’s student received the department award for the Most Outstanding First Year Graduate Student: Mr. Rui Zhu and Ms. Aveen Rasol.
- One student received the Presentation/Publication Award: Ms. Meena Mahmood.
- Graduate Research Forum Winners:

<table>
<thead>
<tr>
<th>Science Room I</th>
<th>Science Room II</th>
<th>Science Room III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Place: Matthew Allan Thomas</td>
<td>1st Place: Hom Kandel</td>
<td>1st Place: Wisam Khudhayer</td>
</tr>
<tr>
<td>2nd Place: Vimal Subramanian</td>
<td>2nd Place: Mehmet Cansizoglu</td>
<td></td>
</tr>
<tr>
<td>3rd Place: Shaymaa Jabir</td>
<td>3rd Place: Murat Al</td>
<td>3rd Place: Erich Peterson</td>
</tr>
</tbody>
</table>
Faculty Achievements

A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

The faculty of the Applied Science department conducted about 70 collaborative activities with other universities, state/local government, and the private sector.

Dr. Haydar Al-Shukri

- Reappointed as the Department Chair for a second four-year term. He continues the appointment of the Earthquake Center Director.
- Continues his collaboration with Iraqi universities. A collaborative agreement was signed between UALR and the University of Duhok.
- He and his research team published two peer-reviewed papers and three conference publications.
- His NASA/EPSCoR ($750,000) and the Space Grant ($45,000) projects were renewed.
- Two new projects (DeepSix ($142,549) and DOI ($500,000) were funded.
- Recruited 41 sponsored graduate students and expects the addition of about 10 to 15 more.
- Installed seven-element seismic array in Enola, AR, to monitor induced seismicity related to oil shale operation.
- Recruited three PhD students to the geophysics group.
- Gave numerous invited talks and news media interviews related to the seismic activity in the state.

Dr. Gary T. Anderson

- Supervised one Ph.D. student, one M.S. student and one undergraduate student in 2008.
- Published two papers in the areas of robotics and parallel programming into distributed computing.
- Served as the Section Editor for Instrumentation for the IEEE Aerospace & Electronics Systems Magazine.
- Member of the editorial review board for the Springer/Kluwer Reference Bioengineering Techniques and Applications.
- Served on the program committee for the IEEE Systems Man and Cybernetics Society conference.
- Was a reviewer for 11 journals and conferences.
- Served as a member of the Steering Committee at the Arkansas Fulbright Association.
Faculty Achievements (continued)

Dr. Abhijit Bhattacharyya

- His research group in Smart Materials and MEMS capped another successful year of collaboration with Los Alamos National Laboratory in New Mexico. This activity resulted in a publication accepted in Acta Materialia, a top international journal.
- Two of his graduate students, Julian Post and Bo Liu, finished their Ph.D.
- His graduate student, Mike Wolverton, will finish his doctoral research as a resident researcher in Los Alamos National Laboratory, Los Alamos, New Mexico, funded by a Department of Energy fellowship.
- His group continues to be very productive in publishing journal papers, and he continues to be an active reviewer for several journals.
- Was accepted by the American Society of Mechanical Engineers as an ABET evaluator.
- Had an active role as the graduate coordinator of the Applied Science graduate program.
- Was awarded the Tan Chin Chuan Academic Exchange Fellowship by the Nanyang Technological University, Singapore (June-July, 2008; could not be availed due to personal reasons).

Dr. Alexandru S. Biris

- Continues to serve as the Chief Scientist of the UALR Nanotechnology Center.
- Main research interests are in the area of Nanotechnology with a focus on the growth of high-quality carbon nanostructures and their applications in nanocomposite materials, medicine and clean energy sources such as solar radiation and hydrogen as a potential future energy carrier.
- Managing Editor and member of the Editorial Board for the Particulate Science and Technology Journal.
- Co-founded a private company, Orlumet LLC, that commercializes the technology developed by Dr. Biris at UALR/Nanotechnology Center in the area of tissue engineering.
- His graduate student, Enkeleda Dervishi, finished her Ph.D.
- Received funding from DOE to develop organic solar panels with carbon nanotubes.
- Is a Co-PI on a NASA-funded project.
- Advises three Ph.D. and six undergraduate students along with two post-doctoral fellows.
- His group’s research was presented at conferences such as MRS, ACS, IEEE, Electrostatics Society of America, and published in prestigious journals such as Carbon, Chemical Physics Letters, Chemistry of Materials, Advanced Functional Materials, etc.
Dr. Qingfang He

- Received the NSF CAREER award, which honors scholars and university professors who are judged to likely become academic leaders in the future. The award has entered its fourth year. This year it includes $100,000 for research, a $6,000 supplemental fund for undergraduate research, and another $6,000 for graduate student summer support.
- Participated in the NSF-EPSCoR program on plant-based bioproduction.
- His group, which includes one postdoctoral associate, two Ph.D. Students and one master’s student, are tackling issues important to agriculture, environment and bioenergy.

Dr. Tansel Karabacak

- Studying nanostructured metal hydrides for hydrogen storage applications.
- Investigating fabrication and properties of nanostructured electrodes for energy conversion and storage applications such as photovoltaics, fuel cells, and batteries.
- Investigating nanostructured compound materials (e.g. oxides, nitrides, sulfides) for applications including sensors and energy conversion systems.
- Investigating growth dynamics and properties of nanostructures by glancing angle deposition.
- Studying the morphological growth front evolution of thin films during deposition and etching.
- Investigating network dynamics during thin film growth.
- Has been selected for 2010 Edition of Marquis Who's Who in America.
- Published seven journal and two conference papers.
- Attended two international and three regional conferences, and presented/co-authored 15 oral presentations and posters.
- Submitted 15 grant proposals to the federal agencies (NSF, NASA, and DOE). Total dollar amounts of these proposals were about $18 million, of which $15 million was UALR’s portion and about $3.6 million was Dr. Karabacak’s portion. In FY2009, he has been serving in one DOE grant, and also in three ASGC/NASA grants.
- Was involved in several collaborative projects with faculty at UALR, Arkansas State University, Rensselaer Polytechnic University, University of Nevada at Reno, Rochester Institute of Technology, University of New Hampshire, Los Alamos National Laboratories, Argonne National Laboratories, Technology University of Eindhoven (Netherlands), Sabanci University (Turkey), Nevsehir University (Turkey), and Leibniz Institute for Surface Modification (Germany).
- Developed and proposed the Micro- and Nano-Fabrication course as a Candidacy Exam Course under the candidacy subject “Materials Engineering” of “Engineering Science and Systems” emphasis area. This became the first candidacy course ever listed under the long-sought Materials Engineering candidacy subject.
- Served as an organizing committee member and chair for the Glancing Angle Deposition Session in Thin Film Division of AVS 55th International Symposium.
- Established contacts with two companies (one in Arkansas), and nine program managers from federal funding agencies.
Faculty Achievements (continued)

Dr. Mariya Khodakovskaya

- Established new laboratory for research in area of Plant Molecular Biology/Plant Biotechnology
- Supervised one Ph.D. student
- Submitted grant proposals to the NSF-EPSCoR, ASGC/NASA, USDA. Total dollar amount of these proposals were $1,480,667, of which $1,222,667 was Dr. Khodakovskaya’s portion.
- Received Collaborative Research Grant from Arkansas Space Grant Consortium
- Received two NSF-EPSCoR P3 Grants (one as PI and one as Co-PI).
- Received UALR “Kathleen Thomsen Hall” Award
- Submitted two papers for publication
- Submitted one patent application
- Developed new course in “Genetic Engineering”
- Served in an NSF Review Panel
- Served as an organizing committee member of third BioNanoTox Research Conference
- Served as member of five dissertation committees for graduate students of UALR and ASU
- Established number of collaborative projects with faculty of UALR, state and national organizations
- Participated in Faculty Exchange Program between UALR and University of Graz (Austria)

Dr. Andrew Wright

- Mentored a new student, Jeremy Diaz.
- He had first “hard-core” robotics journal article published.
- Served as chair of Ad Hoc Integrated Energy Science and Engineering committee that delivered draft curricular proposal to department.
- Continued work in formalizing novel (and perhaps revolutionary) control algorithm (Mode Selection Logic). Successfully tested feedback control Mode Selection Diagram on Control and Sensor System (CASSY).
- Put together (along with Tansel and Qingfang) “Bioproduction, Storage, Usage” team to compete for NSF EPSCoR and DOE EPSCoR
Dr. Cang Ye

- Renewed his NASA EPSCoR Research Infrastructure Development Grant to investigate and mitigate the effects of lunar dust on robotic exploration.
- Was awarded 2009 Office of Naval Research Summer Faculty Research Fellowship that supports his 10-week research at Space and Naval Warfare Systems Center in San Diego. Dr. Ye is one of the nine faculty fellows and the only roboticist hosted by SPAWAR this summer.
- DEPSCoR pre-proposal selected for national competition.
- Published two peer-reviewed papers; submitted two papers.

Curriculum

*Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.*

The following curriculum activities were conducted during the academic year:

- Two new graduate courses were approved – the first in the area of Applied Bioscience and the second in the Material Science and Engineering area.
- The Candidacy Examination areas were updated by including regular courses and adding discipline-specific options to all emphasis areas.
- The department suspended all courses that were not offered during the last four years.
- We are working on a new direction for the department through the developing of a new Ph.D./MS emphasis area with the goal of expanding it to an undergraduate program. Currently there are two proposals the faculty are in the process of integrating. The first one is in the filed of Material Science and Engineering, and the second is in Integrated Energy Science and Engineering.

Grant Applications/Awards

*Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)*

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>a. Number of proposals submitted</td>
<td>21</td>
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<tr>
<td>b. Total dollar amount requested in proposals</td>
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<td>c. Number of Awards (proposals funded)</td>
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<tr>
<td>d. Total dollars awarded</td>
<td>$907,797</td>
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Public Service

Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.

a. Lectures and presentations, discipline-based, to non-discipline related audiences 24
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals) 5
c. Consultantships (paid) 0
d. Consultantships (non-paid) 0
e. Other (please add other categories of public service as needed): 51

Contact with Possible Funding Agencies 51

Research/Creative Activities

Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).

a. Books 0
b. Books (new editions) 0
c. Research articles in professional journals 38
d. Research notes in professional journals 0
e. Formal presentations at professional meeting 56
f. Discussants at professional meeting 2
g. Art exhibits 0
h. Theatre productions/musical productions 0
i. Other 0
Information Technology

*Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.*

Faculty information, including research interests and personal web links, were updated on the Applied Science Department website. Also, the Graduate Student Handbook was made available on the homepage in a PDF version for current and potential students to review.

Recruitment and Retention

*Summarize recruitment and retention efforts during the past year*

The department of Applied Science had successful recruiting and retention efforts during the past academic year with 44 new students (41 Ph.D. and three master’s) were enrolled in the program for the reporting year. Also, the program was successful in recruiting international students who are fully supported by their governments or international funding agencies to continue their graduate education in the United States. Trips were conducted to France, Norway, Sweden, Austria, and other countries to recruit such students. Forty-one Iraqi students (fully supported by the Iraqi Ministry of High Education) are on campus, and we anticipate the addition of up to 15 more students by the fall.

Personnel Changes

*Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).*

<table>
<thead>
<tr>
<th>Change Type</th>
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<th>Highest Degree</th>
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<td>Assistant Professor</td>
<td>PhD</td>
</tr>
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<td>Retired</td>
<td>Malay Mazumder</td>
<td>Applied Science</td>
<td>University Professor</td>
<td>PhD</td>
</tr>
</tbody>
</table>

*Other personnel changes. Use this section for personnel changes not covered above which you feel should be included in the annual report.*
Department of
Computer Science
University of Arkansas at Little Rock

Annual Report
for the period
July 1, 2008 – June 30, 2009

DR. SRINI RAMASWAMY
Chairman
DEPARTMENT OF COMPUTER SCIENCE

UALR Provost’s Annual Report

July 1, 2008 – June 30, 2009

Summary of Highlights

This text should be an overview of the entire year for your unit. This text will be used in the final Academic Affairs report; please use complete sentences.

The 2008-2009 academic year was another progressive one for the department and its faculty. We received some competitive research grants and also saw moderate increases in our undergraduate and graduate enrollment. Our focus on undergraduate research has started to pay dividends, and several students participated and received awards at UALR’s undergraduate research expo.

The department led the effort for UALR to receive the designation as a Center of Academic Excellence in Information Assurance Education (CAEIAE) from the National Security Agency in June 2008. More than half of our faculty continue as active participants on large federal grants and have sustained significantly active international collaborations. We continue to build our international partnerships, and are exploring joint efforts with research universities in Europe and India.

Student Achievements

A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

On average our students continue to do well. The top score one of our graduating students achieved in the ETS Major Field Test (MFT) was 164, two of our students ranked in the top 12 percent nationwide, and our students had an average score of 151. We have fully implemented the new undergraduate curriculum. We also are fine-tuning our ABET assessment and our evaluation processes and instruments. The program continues to be popular among Arkansas students, especially the game option.

The following department level awards were presented to the following students:

- Most Promising PhD Research Student: Jiang Bian
- Most Promising Master’s Research Student: Engin Mendi
Student Achievements (continued)

- Ph.D. Academic Achievement Award: Sithu Sudarsan
- Masters Academic Achievement Award: Stephen Nelson
- Service Award: Technical Support: Lisa Landers
- ACM Club and The .net Group: Robbie Hunt
- Undergraduate Academic Achievement Awards:
  - Senior: Robert Gipson
  - Junior: Alexandra Anghelescu
  - Sophomore: Summer Hall
  - Freshman: Christen Dodson and Larry Beachler
- Undergraduate Research Recognition Awards:
  - High Performance Computing: Alexandra Anghelescu
  - Robotics: Andy Shepherd
  - Infrastructures: Stephen Kozij
  - Information Assurance/Security: John Cannatella

Faculty Achievements

A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

- Six Computer Science faculty members -- Drs. Chiang (2), Geoghegan (1), Milanova (2), Ramaswamy(3), Seker (3) and Yoshigoe (3) -- are either PIs, co-PIs or active senior investigators and participants on several National Science Foundation (NSF) grants.
- Dr. Milanova is active on a DHS and NIH INBRE grant.
- A combined total of more than 75 (and more than 60 unique) articles were published by the department’s faculty including eight journal publications and 14 collaborative publications.
- Five of our faculty are active on international grants and collaborations: Drs. Bayrack, Geoghegan, Milanova, Ramaswamy, and Seker.
- Dr. Ramaswamy was elected as Commissioner to the Computing Accrediting Commission of ABET.
- Dr. Seker continues to serve as an Associate Editor for Computers & Electrical Engineering, an Elsevier International Journal, and Dr. Ramaswamy serves as an Associate Editor for the IEEE Transactions on Systems Man and Cybernetics - Part C: Applications and Reviews.
Curriculum

Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.

- CPSC had a successful ABET reaccreditation visit in September 2007 with an Interim Report due in June 2009.
- CPSC faculty members have reviewed and updated the CPSC MS program as well as done several undergraduate curricular revisions.
- CPSC, IFSC and SYEN are pursuing the PhD program in Integrated Computing, which would begin in Fall 2010.

Grant Applications/Awards

Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)

a. Number of proposals submitted 68
b. Total dollar amount requested in proposals $3,000,000
c. Number of Awards (proposals funded) 14
d. Total dollars awarded $1,800,000

Public Service

Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.

a. Lectures and presentations, discipline-based, to non-discipline related audiences > 5 to HS students & teachers
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals) 0
c. Consultantships (paid) 5
d. Consultantships (non-paid) 5
e. Other (please add other categories of public service as needed):
Research/Creative Activities

Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).

a. Books (Book Chapters) 2
b. Books (new editions) 0
c. Research articles in professional journals 17
d. Research notes in professional journals 6
e. Formal presentations at professional meeting 8
f. Discussants at professional meeting 32
g. Art exhibits 0
h. Theatre productions/musical productions 0
i. Other 0

Information Technology

Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.

- Upgrade of DKSN 501, 508 and Ross 404 in Summer 2008.
- High Performance Computing Lab established in ETAS 305.
- Wireless Sensor Network test bed set up in DKSN 206

Recruitment and Retention

Summarize recruitment and retention efforts during the past year.

Collectively our faculty members have participated in more than 10 recruitment events (individually or as part of the EIT effort) and have visited more than 6 schools or colleges.

Personnel Changes

Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).

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<tr>
<td>Resigned</td>
<td>Nancy Rea</td>
<td>CPSC</td>
<td>Admin. Officer Supervisor</td>
<td>n/a</td>
</tr>
<tr>
<td>Hired</td>
<td>Tong Jett</td>
<td>CPSC</td>
<td>Admin. Officer Supervisor</td>
<td>MBA</td>
</tr>
</tbody>
</table>

Other personnel changes. Use this section for personnel changes not covered above which you feel should be included in the annual report.

None.
Department of Construction Management
University of Arkansas at Little Rock

Annual Report
for the period
July 1, 2008 – June 30, 2009

MICHAEL TRAMEL
Chairman
Summary of Highlights

*This text should be an overview of the entire year for your unit. This text will be used in the final Academic Affairs report; please use complete sentences.*

With more than 200 declared majors, the Construction Management Department continues to be one of the 10 largest departments on campus. This year the Department’s new student enrollment was the lowest in several years with only 70 new students entering – 46 in the Fall 2008 semester and 24 in the Spring 2009 semester. The annual graduation numbers were also down with only 56 for the academic year – 23 in the Fall 2008 semester and 33 in the Spring 2009 semester. It appears the large group of students who entered the program several years ago has graduated, and enrollment numbers and graduation numbers have started to reflect normal projections.

Due to economic factors, graduates are finding local employment with smaller specialty contractors instead of larger general contractors. The entry-level salaries, bonus incentive, vehicle allowance, and fringe benefit package continue to be equal to the national average for the construction industry.

Dean Good funded a new faculty member for the proposed Construction Engineering program. Amin Akhnoukh was hired after receiving his Ph.D. from the University of Nebraska-Lincoln in the Construction Systems Department and Civil Engineering. He was a research engineer with the Peter Kiewit Institute in high-strength concrete and had fellowships with the American Concrete Institute and the International Road Federation. He received his Master of Science in Civil Engineering from Kansas State University and his Bachelor of Civil Engineering from Cairo University in Cairo, Egypt. Dean Good also provided $45,000 for concrete research equipment to allow Dr. Akhnoukh to conduct research with rice hulls for high-strength concrete. The research has the potential to replace fly ash as an admixture for “green” concrete. The new high-strength concrete laboratory will be located in part of the ETAS high-bay area.

The summer classes had a total of 118 students enrolled in nine classes. This was the first summer that CNMG 3333 Statics and Strengths of Materials and CNMG 3322 Concrete Construction were offered. These two classes are on the critical path for graduation, and CNMG 3333 has the highest failure rate within the program’s curriculum. The summer offering should relieve the bottleneck this course traditionally creates.
Summary of Highlights (continued)

For the third year in a row, the Provost’s Assessment Advisory Group gave the Construction Management Department an award for Excellence in Assessment and provided a $500 assessment grant.

For the second straight year the Construction Management Department was the first academic unit on campus to have 100 percent of its faculty and staff donate to Campus Campaign.

The Construction Management Advisory Council – co-chaired by Bill Hannah, CEO of Nabholz Construction, and Ernie Cline, President of May Construction – continues to be recognized as one of the most active and supportive councils within EIT. This was the first year scholarship funds were lower than the previous year with a total of $56,975. The Department increased the number of private scholarships to 23 with the addition of the Martin Borcherdt Endowed Scholarship funded by the Board of Directors of ASCO Hardware and Thomas Carl Ferris Construction Management Endowed Scholarship funded by Peggy Mitchell-Ferris. The American Subcontractor Association has started the paperwork for a new annually funded scholarship.

The University Plaza Construction Management Methods Laboratory is nearing completion. The classroom was used during the Spring 2009 semester for several classes, and the wood laboratory was used by the bridge competition team and the methods classes.

In December 2008, the Department held its third Annual Awards dinner. This year Mike O’Dea was scheduled to be honored, but he died last year before this could happen. The Department has decided to name the University Plaza Mall Methods Laboratory in honor of him for recognition of converting the old ETCN program to the new Construction Management Program and for getting the program accredited in record time. Kiewit Southern Co. was honored for recruiting and support to the program along with several graduating seniors for academic excellence.

The Associated Builders and Contractors of Arkansas requested that the Construction Management Department faculty be the judges for the 2009 ABC Excellence in Construction Awards. Faculty members reviewed more than 30 company project portfolios and graded each one based on their division criteria.

Student Achievements

A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

- Graduating seniors are required to take the American Institute of Constructors’ Certified Professional Constructor associate level exam. This past year 84 percent of UALR students passed the exam, compared to a national pass of about 50 percent.
- The 2008 Excellence Awards for Academic Scholarship were given to Danielle Alsbrook, Jarrod Hale, Clayton King, Amanda Skillern, and William Keller.
The Construction Management Department competed for the second straight year in the ASC/TEXO Commercial Building Division Student Competition. The UALR team took second place and missed first place by one-half point. Nine teams competed: UALR, John Brown University, Louisiana State University, Oklahoma State University, Texas A&M University, Texas Tech University, University of Louisiana-Monroe, University of North Texas, and University of Oklahoma. The team consisted of Trevor Smith (captain), Josh Davenport, Kim Lewis, Justin Mack, Everett Smith, and Lance Wright. Mike Tramel and Eric Fritschie coached the team. The competition problem was the $55 million expansion of the Cotton Bowl. The team had 16 hours to prepare a guaranteed maximum price estimate, detailed schedule, site utilization plan, pre-construction services, general conditions cost, safety program, construction contingencies price, company organization and phase plan. The phase plan required the project to be closed down for the Texas State Fair and the Cotton Bowl game. This created major scheduling problems and public access problems for the site utilization plan. The students were required to do a 20-minute presentation and then answer questions from the judges for 10 minutes. Charter Construction sponsored the competition, and the judges consisted of the Cotton Bowl project architect, project manager, project superintendent, and estimator. The team experienced projector problems with the furnished equipment and immediately set up the team travel projector and continued its presentation. The judges were impressed that the team was able to complete their setup within the five minutes allowed. One team was eliminated from the competition due to equipment failures. During the debriefing the judges commented on several skills the UALR team used in its presentation. Oklahoma State University took first place and Texas A&M finished third. UALR can be proud of taking second place against some of the largest and most established construction management programs in the region.

Students built nine dog houses for NAHB auction fund raiser for ASPCA.

Brian Adair was awarded a NASA Space Work Study Grant to assist Dr. Akhnoukh with self-consolidating concrete research.

Sigma Lambda Chi International Construction Honor Society had the largest induction in history with 17 new candidates.

### Faculty Achievements

A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

- **Jim Carr**
  - 2009 EIT Faculty Excellence Award for Service
  - 2009 ASC Outstanding Educator Award for Region 5

- **Haiyan Xie**
  - 2009 EIT Faculty Excellence Award for Teaching

- **John Woodard**
  - Elected Vice President of the Board of Directors of the Arkansas American Concrete Institute

- **Mark Squires**
  - One of the organizers for the “Sharefest” community service project
Curriculum

Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.

- Developed a new on-line “green” construction course that is offered campus-wide and helps with LEED points for the new EIT building
- The EIT Art core was changed from two credit hours to three credit hours, which effectively added one more credit hour to the curriculum. A decision was made to remove CNMG 4196 a service learning course in order to maintain total hours
- Replaced MGMT 3352, an MIS course, with STAT 2350, an introduction to statistical methods
- Made structural steel construction a required course instead of an elective
- Replaced MGMT 4391 employment law with MGMT 4372 construction business management
- Incorporated bricklaying with sand and lime mortar mix for methods classes
- Decided to allow two Ds in construction management courses to align with the state law allowing two Ds in transfer credit
- Reduced the total number of credit hours required for the degree from 130 to 127

Grant Applications/Awards

Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)

a. Number of proposals submitted 14
b. Total dollar amount requested in proposals $ 649,800
c. Number of Awards (proposals funded) 8
d. Total dollars awarded $ 67,800

- Arkansas Contractors Licensing Board Award funded $31,000
- Akhnoukh, A., NASA Space Grant funded $6,500
- Akhnoukh, A., Mack Blackwell Research Center $50,000 not funded
- Akhnoukh, A., Mack Blackwell Research Center $40,000 not funded
- Akhnoukh, A., jointly with UAF for the National Cooperative Highway Research Program, $152,000 pending decision June 2009
- Carr, J., National Housing Endowments $100,000 not funded
- Carr, J., NAHB funded $6,000
- Squires, M., Forest Product Society funded $1,950
- Tramel, J., LEA Funds $14,200
- Tramel, J., AGC funded $2,000
- Tramel, J., ASC/TEXO Award funded $750
- Xie, H., ACRP, $150,000 not funded
- Xie, H., Chinese Chemical Industry, $90,000 pending
- Xie, H., Scheduling Research, May Construction $5,400 funded
Public Service

Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.

a. Lectures and presentations, discipline-based, to non-discipline related audiences 1

b. Essays or articles in popular or semi-popular publications (in contrast to professional journals)

c. Consultantships (paid) 13

d. Consultantships (non-paid)

e. Other (please add other categories of public service as needed):

   Professional, University and Community Service 57

   Professional Development 8

   Professional Associations, Memberships, Certifications, and Registrations 87

Lectures and presentations, discipline-based, to non-discipline related audiences

- Residentail Green Building, Arkansas Appraisal Institute, Little Rock, AR

Consultantships (paid)

Carr, J.

- Arkansas Home Builders Association, Green Buildings Jonesboro and Little Rock
- Arkansas Home Builders Association, Estimating, Little Rock
- Northwest Louisiana Home Builders Association, Off Site Project Management and Green Building
- Austin, TX Home Builders Association, Building Technology Systems
- Oklahoma Home Builders Association, Green Building and Management
- Legal research for Johanson & Fairless
Public Service (continued)

Ray, C.
- RTH Commercial Construction, Subcontract consultant
- Legal Principles, Austin, TX
- Documentation, Anaheim, CA and St. Louis, MO
- Subcontract Clauses, Kansas City, MO

Tramel, M.
- Arkansas Construction Education Foundation taught superintendent classes: Motivation, Leadership Traits, Decision Grid, Management Styles, Margin Formula, Project Closeout, and Contract Red Flag Clauses

Woodard, J.
- Performed study of using client owned well gas as CoGen fuel to convert paper plants from local utilities to self contained energy resource
- Performed boiler studies to improve temperature control methods for Hughes Tool Company

Professional, University, and Community Service

Blacklock, J.
- Charter Faculty Advisor for the Forest Product Society student chapter
- Faculty sponsor for the National Timber Bridge Design Competition team
- University Fringe Benefits Committee, Member
- University Library Committee, Member
- College Promotion and Tenure Committee, Member
- College Graduate Curriculum Committee, Member

Carr, J.
- EIT Assembly Secretary
- Attended the Arkansas Home Builders Association Mid-year and Annual Meetings
- Attended the American Council for Construction Education Annual and Mid-year meetings
- Attended the Associated Schools of Construction Annual Meeting.
- Attended the National Association of Home Builders Annual Meeting
- Attended the Arkansas Green Building Meeting
- NAHB National Board of Directors, Member
- NAHB Education Board, Stakeholder
- NAHB Health and Safety Committee, Member
- NAHB Faculty Advisory Board, Member
- Arkansas HBA Board of Directors, Member
- Arkansas HBA Education Committee, Co-Chair
- Arkansas HBA Associates Council, Member
- HBA of Greater Little Rock Board of Directors, Member
- HBA of Greater Little Rock Associates Council, Member
- HBA of Greater Little Rock Education Committee, Member
- University Distance Education Advisory Committee, Member
- University Athletic Committee, Chair
- College Retention and Recruitment Committee, Member
- College Taskforce on Distant Education, Member
- Department Scholarship Committee, Chair
- Riverfest Volunteer
- Judge for the Building Arkansas Magazine of the year
- Safety manager for the Extreme Makeover project
- Judge for the Tulsa Home Builders Parade of Homes

Ray, C.
- Tenure and Promotion Committee, Chair
- EIT Assembly Vice President

Tramel, M.
- ASC/OUOIN Regional meeting
- ASC/AGC Regional Student Competition and AGC Regional Meeting
- Attended the Associated Schools of Construction Annual Meeting.
- ASC/OUOIN Regional meeting and attended two presentations
- CSI’s Certified Construction Contract Administrators curriculum, taught five courses: Communications, Project Delivery, Quality, Claims and Disputes, & Modifications
- Hosted ACEF’s 2009 Central Graduation Ceremony and was one of the guest speakers.
- American Institute of Constructors, Constructor, CPC’s Associate Level Exam Administrator
- International Code Council, Code Compliance Certification Exam Administrator and Contractor Certification Exam Administrator
- Local Education Administrator for Arkansas Workforce Education training funds for the Arkansas Construction Education Foundation, Central Arkansas Joint Apprenticeship
Public Service (continued)

- Committee, and the Little Rock Electrical Joint Apprenticeship and Training Committee
- Charter Faculty advisor for Sigma Lambda Chi, the International Honor Society for Leaders in Construction
- Faculty coach for the ASC/TEXO Commercial Division Student Competition Team
- University Undergraduate Council, Member
- University Environmental Health and Safety Committee, Member
- College Undergraduate Curriculum Committee, Chair
- Faculty Senator
- Faculty Senate Library Committee, Member
- UALR Core Pilot Program, Member

Woodard, J.

- Professional Design engineer for Children International and the Construction Management Department. Does PE Stamped calculations and drawings.

Xie, H.

- Undergraduate Council, member
- EIT Policy and Personnel Advisory Committee, Secretary
- EIT Awards Committee, Chair
- EIT Task Force on Research Clusters, member
- EIT Task Force on Research Infrastructure, member
- Departmental Microsoft MSDN administrator

Lectures and presentations, discipline-based, to non-discipline related audiences

- Residential Green Building, Arkansas Appraisal Institute, Little Rock, AR
- Licensed Professional Engineer in 11 states: Alabama, Arkansas, Georgia, Kansas, Kentucky, Michigan, Mississippi, Louisiana, Oklahoma, Tennessee, Wisconsin
- Tau Beta Pi Engineering Honor Society, member
- Phi Kappa Phi Honor Society, member
- Sigma Xi, The Scientific Research Society, member

Xie, H.

- National Association of Home Builders, member
- Sigma Lambda Chi, the International Honor Society for Construction, Delta IV Chapter (SLC)
- Visiting Professor of Xi’an University of Architecture and Technology, Xi’an, Shaanxi, China
Research/Creative Activities

Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).

a. Books 0
b. Books (new editions) 0
c. Research articles in professional journals 2
d. Research notes in professional journals 0
e. Formal presentations at professional meeting 3
f. Discussants at professional meeting 0
g. Art exhibits 0
h. Theatre productions/musical productions 0
i. Other 4

Research articles in professional journals

- Akhnoukh, A., & Xie, H., (pending) “Welded Wire Reinforcement versus Random Steel Fibers in Precast/Pre-stressed Ultra-high Performance Concrete I-Girders”

Formal presentations at professional meeting

- Carr, J., “Fatalities in Residential Construction.” The Proceedings of the 44th Annual Conference of the Associated Schools of Construction
- Xie, H. & Carr, J., “Implementing Online Delivery Methods for Construction Materials and Methods Classes,” The Proceedings of the 12th International Conference on Computing Civil and Building Engineering, Beijing, China

Other

Carr, J.
- Trenching Safety. This is a manual with an accompanying video on safe practices

Ray, C.
Information Technology

Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.

The Construction Management Department continues to update and utilize technology in nearly every course in the curriculum and was the first department in the college to offer online courses. A new online course on “green” construction was offered campus-wide and as part of the LEED requirements for the new EIT building. Three new total stations and data collectors were acquired for the surveying course. New estimating and control software was added to the senior capstone course to mirror industry trends.

Recruitment and Retention

Summarize recruitment and retention efforts during the past year.

The Construction Management Department continues to be the largest academic unit in the college, and recruitment of entering freshman has increased through the efforts of the Dean's office, faculty, and industry organizations.

Personnel Changes

Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).

<table>
<thead>
<tr>
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<td>Amin Akhnoukh</td>
<td>Construction Management</td>
<td>Assistant Professor</td>
<td>PhD</td>
</tr>
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</table>

Other personnel changes. Use this section for personnel changes not covered above which you feel should be included in the annual report.

Xie, H. was promoted to Associate Professor and awarded tenure.
Department of Engineering Technology
University of Arkansas at Little Rock

Annual Report
for the period
July 1, 2008 – June 30, 2009

DR. MAMDOUH BAKR
Chairman
Summary of Highlights

This text should be an overview of the entire year for your unit. This text will be used in the final Academic Affairs report; please use complete sentences.

Because engineering technology is an applied engineering program, the department maintains a reasonable balance between teaching and students’ professional development on one hand, and research and public service on the other. The faculty efforts, therefore, cover a wide spectrum of activities with a strong emphasis on teaching, laboratory development, and research in the application of scientific and engineering knowledge to industry and societal problems. The department faculty, most of whom have many years of experience at UALR, provide instruction and active participation in laboratory activities in addition to having the skill and ability to manage their classes in an urban university environment. In response to recommendations given during accreditation, the department revised six courses and developed an instructional module to incorporate “Engineering Ethics” in the curriculum. In addition, with systems engineering sharing lab facilities with engineering technology, the department regularly engages in major laboratory development and upgrades. The department has maintained a steady or increasing enrollment despite the growth in systems engineering. This has been the result of responding to transfer students’ inquiries, emphasizing retention, as well as gaining feedback from graduates, employers and the department Advisory Council. The emphasis on undergraduate research in the form of capstone projects has generated a number of research projects with significant contribution to the application of solar power, student conceived projects, and joint projects with local industry. The department has also been actively involved in considering and evaluating joint research projects with UAMS. None has so far borne fruit; however, the potential of future success is high.

Student Achievements

A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

**Academic Achievement Awards:**

The following students in the Electronics and Computers Engineering Technology program, were honored for their academic achievement:

- Freshman Award: Roy Depriest
- Sophomore Award: Sara Castleberry
- Junior Award: Carson Harper
- Senior Award: Mathew Sheleby
**Student Achievements (continued)**

The following students in the Mechanical Engineering Technology Program were honored for their academic achievement:

- Freshman Award: Juleah Smith
- Sophomore Award: Juan Martinez
- Junior award: Phillip Schmidt
- Senior Award: Doug Lewis

The following student team was recognized for successfully completing the best all-around Senior Project in the Mechanical Program in the previous year. The project is entitled “Planning of Plastic Parts Production Work Cell.” Besides the individual recognition, the project team was also recognized with a plaque honoring their achievement among prior years’ winners, and the plaque is displayed in the department office. The team members are Eric Brock, Bradley Doom, Danny Glover, and James McCullough.

- Anthony Jones was honored for his senior project, “Design of a Human-Powered Hydrofoil,” in the 2008 Undergraduate Research poster session at the Donaghey Student Center.
- Ashley Brown, a sophomore, was awarded an Arkansas NSF EPSCoR fellowship for research experience for undergraduates (SURF) for her project on the development of a “12 Volts, Solar Powered Portable Refrigerator.”

**Student Presentations at the Industrial Advisory Council meetings:**

- Meeting of October 2008: “Planning an Improved System for Internal Assembly of Aircraft” by Tim Kennedy
- Meeting of April 2009: “DFM analysis, and construction of a prototype for a human powered hydrofoil” by Doug Lewis

**Faculty Achievements**

*A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.*

- Professor David Luneau is working with The Nature Conservancy and the Cornell Laboratory of Ornithology on the ivory-billed woodpecker search project. He provides technical support, primarily in the area of remote camera technology, for the project. He is a member of the ivory-billed woodpecker species recovery team.

He also serves as the Technical Manager and Vice-Chair of the Steering Committee for Solar Splash, an international, intercollegiate solar and electric boat regatta. This
involves maintaining the web site, traveling to the competition site, and managing the technical aspects of the event.

He has recently received the approval for an off-campus duty assignment to visit a number of universities on the West Coast to explore means to enhance and develop senior projects in engineering and engineering technology in the “Solar Boat Competition” arena.

- Dr. S. Midturi served as a panelist at the USA-India Engineering Education Conference in India July 9-12, 2008 in Mysore, India. The topics included accountability and accreditation of engineering programs in India. He is reviewer of the Journal of Engineering Technology. He also visited Northeastern University in Boston, MA to evaluate the MET program as an MET Evaluator for ABET in November 2008.

- Dr. H. Patangia is the faculty adviser for the student chapter of the IEEE at UALR. He is also the campus representative of the American Society of Engineering Education (ASEE).

- Dr. S. Pidugu is the faculty adviser of the student chapter of the American Society of Mechanical Engineers (ASME) at UALR.

- Prof. G. Tebbetts chairs the “admission and transfer of credit” committee, which plays a major role in resolving issues related to the admission of transfer students.

Curriculum

Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.

The following courses were revised to incorporate an Engineering Ethics component in the AS and BS degrees curriculum for both the Electronics and Computer and the Mechanical programs. The changes were made to satisfy the program accreditation requirements. The revised courses are: ECET 1302, 2169, 4370, ETME 2117, 4187 and 4387.

We developed instructional modules on “Ethics in Engineering” to be incorporated in the courses listed previously.

“Case study,” or “project-based experiential learning,” methods were broadly applied across the curriculum, particularly in the upper-level courses, as a more effective means of teaching advanced course material.

Senior projects were planned to serve as a vehicle for undergraduate research and to provide service to the university and to industry. Projects solicited from industry or proposed by students are screened to fit the curriculum requirements and to provide tangible value to the university and industry.

Dr. S. Midturi introduced a new course in Vibration Engineering (SYEN5399) offered at the undergraduate/graduate level.

The college received preliminary approval from the Undergraduate Council, with the help of
Curriculum (continued)

the department and college faculty, to revise the EIT core, which would allow the college to offer its own “Engineering Ethics” course, thus providing more efficient means to satisfy the accreditation requirements.

Equipment was installed in Electronics labs, and a technician was trained in the operation of the Circuit board lab.

Equipment was acquired and lab experiments were developed in the Mechanical labs for:

1. Rankine Steam Cycle
2. Gas Turbine Cycle
3. Saturation pressure and throttling calorimeter
4. Combined Convection and Radiation Heat Transfer
5. Wind Tunnel with experiments for air flow around a cylinder, and an aerofoil

Grant Applications/Awards
Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)

a. Number of proposals submitted 3
b. Total dollar amount requested in proposals $ 430,126
c. Number of Awards (proposals funded) 1
d. Total dollars awarded $ 60,126

Public Service
Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.

a. Lectures and presentations, discipline-based, to non-discipline related audiences 2
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals) 0
c. Consultantships (paid) 0
d. Consultantships (non-paid) 1
e. Other (please add other categories of public service as needed):
Public Service - Other (continued)

- The department completed the following two technical projects for local industry during the spring of 2008. The projects were undertaken as senior projects in the Mechanical Engineering Technology program.
  1. “Plastic Parts Production Workcell” for George Fischer Sloane Corp, and
  2. “Analysis, Design and Development of a Multi-Station Testing Machine, to Leak-Test Special Fiberglass Connectors” for Smith Fibercast Corp.

- Select senior projects were presented and their potential for commercial development was discussed with company management at Global Manufacturing Corp., Little Rock, AR

- Department programs and projects were presented at a luncheon meeting of the Central Arkansas chapter of the National Society of Professional Engineers

- A stand-alone solar powered street light to be installed on-campus in the Coleman Creek area was construction and bench tested for demonstration and field testing.

- Prof. David Luneau and Dr. Steve Manhart judged the science fair at the Lisa Academy.

- Dr. Steve Manhart acted as an outside reviewer for the tenure on promotion of a faculty member at Purdue-IU engineering program.

  He was a session chair at the 2008 ASEE Gulf-Southwest Annual Conference for the session titled “Innovative Technology for Engineering Education.”

  He was also a member of the Technical Program Committee for the 2009 IEEE Power Electronics Specialists Conference (PESC ’09).

Research/Creative Activities
Inclue only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).

a. Books 0
b. Books (new editions) 0
c. Research articles in professional journals 2
d. Research notes in professional journals 1
e. Formal presentations at professional meeting 6
f. Discussants at professional meeting 0
g. Art exhibits 0
h. Theatre productions/musical productions 0
i. Other 1
Information Technology

*Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.*

Transferred course material to PowerPoint slides, with the addition of a soundtrack, which is incorporated in Web CT, to allow students to review lecture material prior to course exams (ETME 2317: Manufacturing Processes).

Used an Internet connection for the transfer of design files between UALR and Paul Beck, a senior deployed with the National Guard in Iraq, so he can complete the second phase of his Senior Project.

Introduced MatLab software tutorial in the “Applied Transform Method” course to provide students with an improved background for follow-up courses, and to meet employer expectations.

Recruitment and Retention

*Summarize recruitment and retention efforts during the past year*

**Recruitment:**

- Visited a number of high schools to present the department programs to juniors and seniors.
- Participated in Pulaski Technical College transfer day.
- Participated in supporting campus visits of high school and middle school student groups by providing laboratory demonstrations and short lectures on Engineering Technology and Engineering.
- Participated with Pulaski Technical College in an education resource awareness presentation, recruiting and advising session for Falcon Jet employees at the company headquarters in Little Rock.
- Engaged the department’s Advisory Council in student recruitment at their own organizations by informing them about the current programs in the department and their training value to their organizations.
- Performed assessment and continuous improvement of the instructional and laboratory components of the “introduction to engineering technology course,” which introduces engineering technology to college freshmen.

**Retention:**

Developed the “Progression Model” to monitor the flow of students in the program. This has been helpful in tracking student progress, in the aggregate and individually. The results are used to provide feedback to the faculty to identify and correct elements in the program or the curriculum to help improve student flow in the program and to improve graduation rates.
Personnel Changes

Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).

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<td>Curt Moody</td>
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<td>Research Associate</td>
<td>BA</td>
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</table>

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Department of
Information Science
University of Arkansas at Little Rock

Annual Report
for the period
July 1, 2008 – June 30, 2009

Dr. Elizabeth Pierce
Chairman
The Information Science Department at UALR is home to four programs. This past year its personnel consisted of nine full-time faculty (including the chair), four instructors, two technical specialists, and three administrative secretaries. All four programs were very productive this year.

**Information Science Program:** The Bachelor of Science in Information Science (IFSC) combines the techniques and concepts of computer science with those of information management to produce graduates who are qualified for professional positions in the computer-related information field. Students learn the basic concepts and techniques for designing better information products, creating more efficient and effective information systems, evaluating the quality and security of data stores, and anticipating new forms and technologies for information. Graduates find positions as analysts (e.g., information security, web services, and programming), database administrators, network administrators, and solution developers.

A major milestone this year was the August 2008 ABET letter announcing that the Information Science Undergraduate Program had been accredited by the Computing Accreditation Committee (CAC) on Information Systems. Since that time the Department has been working hard to strengthen its assessment program so it will receive a positive review upon submission of its ABET Interim Report due July 1, 2009. In October 2008, the Department received a “best of the best” Assessment Expo Poster Exhibit award for its incorporation of student learning outcomes assessment into its curriculum decision-making and development.

During 2008-2009, the Information Science Program made significant progress in reaching its strategic objective of making the web a core component of the curriculum. In addition to offering required courses such as IFSC 1310 Internet Technologies and electives such as IFSC 4350 E-Commerce, faculty taught two special topics, one on Advanced Web Technologies and the other on developing rich Internet Applications. The Advanced Web Technologies class was particularly successful, attracting 20 students. We plan to turn this special topic into a regularly scheduled elective next year and also have plans to develop additional web-centric courses. Our efforts in this area will be further strengthened by the addition of Dr. Nitin Agarwal, a talented new Assistant Professor who is rapidly making a name for himself in social computing and the blogosphere. Dr. Agarwal will be joining the Department on August 17, 2009.
Summary of Highlights (Continued)

In keeping with the movement of the undergraduate curriculum toward web-based information systems, IFSC seniors completed four capstone projects, each incorporating web elements. One team worked on a web analytics project for UALR Web Services. A second team worked on a web application for UALR’s Office of Community Engagement. A third team worked on investigating web applications for the non-profit group HIPPY USA, and the fourth group worked on a project for the Arkansas GIS Office that used web access to facilitate the group’s work. Also in 2008-2009, the program graduated 11 students with another more than 80 majors actively taking IFSC classes. Ongoing priorities will include further strengthening the major’s enrollment figures through more high school outreach and college recruiting.

**IT Minor:** The Information Technology Minor (IT Minor) is designed for students in majors that do not offer an intensive computing component. IT Minor students learn essential technical, business and communication skills for solving real-life problems and for working productively in a team environment. The knowledge base for the IT Minor consists of three six-credit courses.

- **ITEC 3610 Introduction to Information Technology and Applications** – Introduces students to the IT industry and knowledge-based tools.
- **ITEC 3650 Guided Applications in Information Technology and Industry Processes** – Focuses on broad application of IT such as spreadsheets, database management, programming, and Internet applications.
- **ITEC 4610 Project Development and Portfolio Defense** – Provides students with a practical field-based capstone experience.

During the 2008-2009 academic year, 12 students completed the IT Minor program. Second-year students in the IT Minor program completed database projects and designed websites for the following non-profit clients: Arkansas Health Care Access Foundation, Arkansas Food Policy Council, Women and Children First, and Little Rock Sister Cities Commission. Capstone IT Minor students worked on database and website projects with a variety of corporate and campus partners including Beebe Tennis Association, Arkansas Concrete Products, Synanomet, and the Governor’s Quality Award.

The IT Minor is also offered in two other versions: 1) a non-credit IT Certificate Program designed for working professionals to enhance their computer skills, and 2) a Cyber Teacher Certificate designed for Little Rock School District teachers in grades K-12 to enhance their IT skills. During Fall 2008, 12 participants from both private industry and the academic community enrolled in the non-credit IT Certificate program, where they learned word processing, spreadsheet applications, database management, web page design, as well as receiving interpersonal skills training. During Summer 2008, 12 teachers from the Little Rock School District completed the six-week, 12 credit hours IT course that prepares “teacher leaders” to instruct colleagues and students in technology. To date the Cyber Teacher Program has equipped 181 participants with the necessary IT skills to be 21st century teachers.

**Information Quality Program:** The Information Quality (IQ) Program at UALR prepares students to pursue careers such as Data Quality Manager, Data Quality Analyst, Data Quality Consultant, and Data Quality System Developer, as well as enabling students to pursue doctoral-level
graduate studies in preparation for information quality research and instructional roles. The focus of the IQ curriculum is on the concepts, principles, tools, models, and techniques that are essential for information quality definition, measurement, analysis, and improvement. The program has made significant progress in all three of its areas of focus: Academic Programs, Research and Professional Service, and Economic Development.

**Academic Programs:** The original UALR Information Quality Graduate Program started in Fall 2006 with 25 students enrolled in the Master of Science in Information Quality (MSIQ). An Information Quality Track was added to the Applied Science PhD program in 2008. The total spring 2009 enrollment was 62 students with 48 in the MSIQ program and 14 in the Applied Science PhD IQ program. To date the MSIQ program has graduated 18 students.

The IQ Program is unique in that it can simultaneously support both distance as well as local students through a blended classroom experience that integrates the live classroom with a virtual (webinar) classroom. This new approach helped to earn the MSIQ degree a place on the Top 29 Ranked Best Buys for Online Graduate Degrees in Computer Science & Information Technology from GetEducated.com.

**Research and Professional Service:** The IQ Graduate Program continues to gain recognition. In November 2008, the Steering Committee of the International Conference on Information Quality (ICIQ) announced that after 14 consecutive years of holding the conference at MIT, the conference would begin to rotate venues around the world. UALR was selected to host the ICIQ conference in 2010. Dr. Elizabeth Pierce serves on the editorial board of the ACM Journal of Data and Information Quality, and Dr. John Talburt (Graduate Coordinator for the IQ Program) is serving as a Technical Advisor to the Board of Directors of the International Association of Data and Information Quality (IAIDQ). Dr. Talburt and Dr. Pierce are both members of IAIDQ working group on Information Quality Certification, and Dr. Pierce and her students have published reports on joint IAIDQ-UALR Industry surveys on Data Governance and IQ and another on Salaries for IQ Roles in industry. The program’s website (http://ualr.edu/eit/iq) has been re-designed to include information on all of the IQ graduate programs.

Research support for the UALR IQ Graduate Program is provided through the UALR Laboratory for Advanced Research in Entity Resolution and Information Quality (ERIQ). The most recent research development is an award of $1.6 million with Qbase, Inc. by the U.S. Air Force Research Laboratory (AFRL) for a project to develop “Information Quality Tools for Persistent Surveillance Data Sets.” The project started June 1, 2009 with six students and four faculty members participating in a 10-week research collaboration at Tec^Edge in Dayton, Ohio. At Tec^Edge, the UALR team is interacting with faculty and students from other universities and with members of the AFRL research staff working on 10 research projects. The AFRL project is providing support for 14 students in the UALR IQ Graduate Program. The ERIQ Lab also recently signed an agreement with Infoglide Software to work together with the goal of advancing the field of entity resolution, information quality, and analysis software and methodology.

**Economic Development:** The UALR IQ Graduate Program is also providing an impetus for new business in the area of information quality. Two students have formed their own information quality consulting companies, Information & Process Quality, LLC, and HI! IQ, LLC. Another student in the program who owns and operates a successful software development company
Summary of Highlights (Continued)

is now undertaking the development and marketing of a new software product aimed at automating statistical process control in non-manufacturing lines of business. Perhaps the most significant is the incubation of a new company, Black Oak Partners, LLC, by the UALR IQ Graduate program. In this case, the principals of the company are not students but executives who left a local company to build a new company around information quality with assistance from EIT. Black Oak has already had some successful consulting engagements and is now in the process of capital formation and further business plan development around Data Asset Management.

Bioinformatics Program: Researchers in Bioinformatics investigate, develop, and apply computational tools and approaches for analyzing and thus expanding the use of biological, medical, behavioral, and health data. The UALR Bioinformatics Program, housed in the Information Science Department, supports an undergraduate minor, a Master's degree, and a PhD degree, the latter two in collaboration with the University of Arkansas for Medical Sciences (UAMS). By the end of Summer 2009, the Bioinformatics Program will have graduated 14 MS and 5 PhD students. The program receives approximately 30 applications per year, and a number of PhD students now have externally supported graduate assistantships at UALR, UAMS, and the National Center for Toxicological Research (NCTR).

This past year, the MidSouth Bioinformatics Center at UALR made some major additions to its server hardware and now supports more than 60 users working on 80-plus projects thanks in part to the National Institutes of Health's (NIH) IDeA Network for Biomedical Research Excellence (INBRE) grant. These facilities permit researchers, faculty members, and students to use state-of-the-art software and computing platforms and allow national and international users to use locally-developed, bioinformatics software over the web. In addition, faculty and students associated with the NIH INBRE grant produced four books, eight journal articles, four conference papers, five local posters, six local presentations, four regional posters, four regional presentations, four national/international posters, and five national/international presentations. During 2008-2009, the MidSouth Bioinformatics Center hosted a number of workshops, symposia, and outreach activities that have been attended by many students, faculty and researchers.

These events include:

- Linux/Apache/MySQL/Perl (LAMP) Boot Camp (Fall 2008)
- Bioinformatics Graduate Student Orientation (Fall 2008)
- Catalyst Web Development Seminar (Fall 2008)
- ARBIOS Picnic (Fall 2008)
- Perl Module Authoring Seminar (Fall 2008)
- Oklahoma Supercomputing Symposium (Fall 2008)
- Undergraduate Research Symposium (Fall 2008)
- Scripting Workshop (Fall 2009)
- NCTR ArrayTrack Workshop (Spring 2009)
- Perl Users Group (Spring 2009)
- Pulaski Academy Science Fair Mentoring (Spring 2008 – Spring 2009)
- Central High Science Fair Mentoring (Spring 2008 – Spring 2009)
- Central High Science Fair Judging (Spring 2009)
- MidSouth Computational Biology and Bioinformatics Society Annual Conference (Spring 2009)
- R Workshop (Spring 2009)
- UALR Graduate Student Research Forum Judging (Spring 2009)
- Linux File Handling Workshop (Spring 2009)
- Scripting Workshop (Spring 2009)
- NCBI eUtils Workshop (Spring 2009)

Through a combination of financial support by the INBRE and the dedicated support of many faculty and students, the bioinformatics graduate program and the outreach activities of the MidSouth Bioinformatics Center have grown significantly, both qualitatively and quantitatively. This past year, the Bioinformatics Program has become more involved in regional and national outreach efforts:

(a) Dr. Jennings has been instrumental in forming a new national Network of IDeA-funded Core Laboratories group (www.niclweb.org) that may affiliate with the Association of Biomolecular Resource Facilities (www.abrf.org).

(b) Dr. Jennings was invited to attend the Clinical and Translational Informatics Networking Meeting in February 2009.

(c) Dr. Jennings conducted a bioinformatics education workshop at the University of Tennessee/Oak Ridge National Lab/Kentucky Bioinformatics Summit in Pikeville, TN, in March 2009.

(d) Dr. Jennings was invited to Jackson State University in April 2009 to help prepare a strategic plan for the bioinformatics program at the university and work with the program director on a budget for their RCMI program.

(e) Drs. Jennings and Berleant have been active in the Great Plains Network Bioinformatics and Computational Biology Group.

(f) Dr. Jennings is helping to reestablish the Bioinformatics Workshop on Education at the annual conference of the International Society for Computational Biology this summer in Stockholm (and serves on this international organization’s Education and Affiliates/Special Interest Group Committees).

(g) Arkansans continue to be the backbone behind the MidSouth Computational Biology and Bioinformatics Society providing technical/web support and a strong representation on the Board (currently three of 10 ten Board members plus two ex-officio Past-Presidents serve on the Board).
Student Achievements

A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

The Donaghey College of Engineering and Information Technology Awards Ceremony was held May 15, 2009 at the Acxiom River Market Building in downtown Little Rock. At that event, the following students were recognized.

Information Science

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<td>JaMia N. Moore (iQ)</td>
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<td>Londraies D. Thomas (iQ)</td>
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<td>Amber N. Goins (Junior)</td>
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<tr>
<td>James R. Canada</td>
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<td>Mark E. Brown</td>
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<td>Karan B. Topiwala</td>
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<td>Amber B. Farmer</td>
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<tr>
<td></td>
<td></td>
<td>Bradley A. Klais</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chris B. Means</td>
</tr>
</tbody>
</table>

IT Minor

- Aaron Van Laan received the Outstanding Student Award for the IT Minor program.

Information Quality

- Kenneth E. Benson, Outstanding MSIQ Graduate
- Uklit Osatis, Outstanding MSIQ Graduate
- Neal Gibson, Outstanding Academic Achievement, Applied Science PhD Information Quality Emphasis

Bioinformatics

- Shafi Al-Meher, Academic Excellence Award
- Stephanie Byrum, Outstanding Research Award, Graduating PhD Student.

Other Notable Student Accomplishments

- On May 6, 2009, Ken Benson, Neal Gibson, Uklit Osatis, and Okukayode Issac Osesina in the Master of Science in Information Quality program were inducted into the Zeta Chapter of Alpha Epsilon Lambda (AEL), the National Honor Society of Graduate and Professional School Students.
Michael Bauer, Bioinformatics Program, received a NISBRE $1,000 Travel Award for Outstanding Student Poster (Aug. 2008).

Stephanie Byrum, Bioinformatics Program, received two travel awards: a NISBRE $1,000 Travel Award for Outstanding Student Poster (Aug. 2008) and a UAMS $600 Travel Award for the ASBMR 30th Annual Meeting (Feb. 2009).

Shweta S. Chavan, Bioinformatics Program, received a NSF/UAMS Travel Fellowship for the Sixth Annual Rocky Mountain Bioinformatics Conference (Jan. 2009).

Horacio Gomez-Acevedo, Bioinformatics Program, received an Arkansas Children's Hospital University Medical Group Young Investigator Award (Aug. 2008).

Minho Chae, Bioinformatics Program, received a $2,000 UAMS Graduate Student Award (May 2009).

Faculty Achievements

A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

The following faculty earned these distinctions during 2008-2009.

- Stephanie Harvey received the ATLE (Academy for Teaching & Learning Excellence) Distinguished Teaching Fellowship Award in April 2009.
- Marico Howe completed her Master of Science in Bioinformatics.
- Steve Jennings received a NIH NCRR full travel award to attend the NCRR Clinical and Translational Informatics Networking Meeting in February 2009.
- Elizabeth Pierce received the “Decade of Service Award” at the opening session of the International Conference on Information Quality (ICIQ) at MIT on November 15, 2008.
- John Talburt was awarded the professional designation of Certified Data Management Professional (CDMP) at the Mastery Level with specialties in Data and Information Quality and IT Management by the Institute for Certification of Computing Professionals (ICCP) and the Data Management Association International (DAMA) in July 2008.
- Mihail E. Tudoreanu in 2008 received notice that his March 2007 paper co-authored with Niklas Elmqvist on “Using an interactive 3D force field for object displacement to facilitate target separation and distractor removal” had received a best paper award from the International Journal of Virtual Reality.
- Richard Wang, University Professor of Information Quality and Co-Director of the UALR Laboratory for Advanced Research in Entity Resolution and Information Quality, was appointed the U.S. Army’s Chief Data Quality Officer in Spring 2009.
Curriculum

Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.

This year the Information Science Department focused on curriculum initiatives for its graduate programs. The 2008-2009 course revisions/proposals that have been generated and that are now working their way through the UALR curriculum process include:

- **Program/Course Revision Proposals for the Information Quality Program**
  - Course revision proposals were drafted to revise the prerequisites for the 7000-level courses (IFSC 7325, IFSC 7330, INFQ 7303, and INFQ 7318).
  - A program revision proposal was submitted to update the set of core classes for the Graduate Certificate and the Master of Science in Information Quality to bring the curriculum in line with the latest recommendations from the International Association of Information and Data Quality.
  - A course revision proposal was submitted to update INFQ 7320 Database Systems to better address database and information architecture concepts.

- **New Program Proposal for a Graduate Certificate in Technology Innovation**
  - The Information Science Department agreed to be the administrative home for the interdisciplinary Graduate Certificate in Technology Innovation.

- **New Program Proposal for the Integrated Computing Doctoral Degree**
  - The Information Science Department along with Computer Science and Systems Engineering are drafting a proposal to submit to the UALR Graduate Council and ADHE for approval of a PhD program that emphasizes the Computer Engineering, Computer Science, and Computer-Related Information fields.

Grant Applications/Awards

*Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)*

- **a. Number of proposals submitted**
  10

- **b. Total dollar amount requested in proposals**
  $2,122,944

- **c. Number of Awards (proposals funded)**
  5

- **d. Total dollars awarded**
  $1,263,058

See Appendix 1 for a listing of Information Science faculty’s grant proposals submitted and awarded.
Public Service

Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.

a. Lectures and presentations, discipline-based, to non-discipline related audiences 2
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals) 1
c. Consultantships (paid) 2
d. Consultantships (non-paid) 4
e. Other (please add other categories of public service as needed): 176

See Appendix 3 for a listing of Information Science faculty’s public service activities.

Research/Creative Activities

Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).

a. Books 3
b. Books (new editions) 0
c. Research articles in professional journals 9
d. Research notes in professional journals 0
e. Formal presentations at professional meeting 12
f. Discussants at professional meeting 0
g. Art exhibits 0
h. Theatre productions/musical productions 0
i. Other: Research Articles in Refereed Proceedings 11
   Other: Articles in Industry Publications 2
   Other: Book Chapters 8
   Other: Poster Presentations 2
   Other: Abstracts 1

See Appendix 2 for a listing of Information Science faculty’s research/creative activities.
Information Technology

*Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.*

As part of its commitment to maintain current technology in its classrooms and faculty offices, the Information Science Department completed the following upgrades this past year.

- Thanks to funding from the EIT College, ETAS 208 and ETAS 354 were outfitted with a custom audio system designed by Jay Stanley & Associates. The new sound system significantly improves the quality of webcasting by allowing all course participants (both in-classroom and remote) to clearly hear and speak to each other.

- In addition to servicing existing hardware, new Dell computing equipment was purchased to replace several outdated machines. New Dell desktops were purchased for IFSC Administrative Staff (Natalie Rego and Ebony Briley). For faculty, Dr. Talburt received a Dell docking station, Dr. Dagtas received a Dell laptop, Dr. Wu received a Dell desktop, and Dr. Xu and Dr. Tudoreanu received upgrades to their existing PCs.

- A Power Module-APC Symmetra 4-16kVA was purchased for the server room.

- Plans are underway to purchase a replacement color printer for the office.

- 30 additional copies of Adobe Create Web Suite Standard Edition 4.0 were purchased to ensure students could complete their web assignments in the ETAS 204 Student Lab.

- DKS1 101/102 will receive six new workstations to replace broken equipment, ensuring that these rooms will be fully equipped to support the needs of both the IT Minor and IFSC web classes.

Recruitment and Retention

*Summarize recruitment and retention efforts during the past year.*

Recruiting remains an ongoing priority for all the programs in the Information Science Department. At the undergraduate level, efforts have been made to improve the advising experience for students, upgrade the curriculum, and to pay more attention to the job placement of graduates. Faculty have also participated in recruiting efforts such as formulating marketing strategies and speaking at major fairs, classrooms, and other campus venues to promote the various IFSC programs. For the coming year, these efforts will need to be intensified along with generating some new initiatives among the faculty to offer summer programs targeting high school students who are prospective IFSC recruits. At the graduate level, pursuing highly visible research projects and industry partnerships have proven critical to generating the type of positive exposure needed to attract prospective students to the Information Quality and Bioinformatics graduate programs.
Personnel Changes

Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).

<table>
<thead>
<tr>
<th>Change Type</th>
<th>Name</th>
<th>Department</th>
<th>Most Recent Title / Rank</th>
<th>Highest Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion</td>
<td>Daniel Berleant</td>
<td>Information Science</td>
<td>Professor</td>
<td>PhD</td>
</tr>
<tr>
<td>Tenure</td>
<td>Elizabeth Pierce</td>
<td>Information Science</td>
<td>Associate Professor</td>
<td>PhD</td>
</tr>
<tr>
<td>Non Renewal</td>
<td>Stephanie Harvey</td>
<td>Information Science</td>
<td>Instructor</td>
<td>MBA</td>
</tr>
<tr>
<td>Non Renewal</td>
<td>Marico Howe</td>
<td>Information Science</td>
<td>Instructor</td>
<td>MS</td>
</tr>
</tbody>
</table>

Other personnel changes. Use this section for personnel changes not covered above which you feel should be included in the annual report.

Natalie Rego joined the department in June 2008. She is an Administrative Assistant II for the Information Quality Program.
Department of Systems Engineering
University of Arkansas at Little Rock

Annual Report for the period
July 1, 2008 – June 30, 2009

Dr. Seshadri Mohan
Chairman
Summary of Highlights

This text should be an overview of the entire year for your unit. This text will be used in the final Academic Affairs report; please use complete sentences.

Introduction

The Systems Engineering Department in 2008-2009 continued its growth in multiple ways – a search for a faculty member with specialization in telecom, computers, or electrical was initiated; substantial funding was received from the National Science Foundation for the second year of the NSF EPSCOR program; faculty publications and new proposal activities grew substantially; the Master’s of Science in Systems Engineering program was successfully started in fall 2008; new laboratory infrastructure was added in electrical and mechanical engineering, and faculty and students gained college- and university-wide recognition. The mechanical and electrical emphasis options continued to attract students and produce more graduates who will meet the continued needs of Central Arkansas companies. The new freshman experience course, SYEN 1310 Introduction to Systems Engineering, continued to meet its goal of increasing student retention and freshman enrollment by providing valuable hands-on laboratory experience.

The Graduate Certificate Program introduced in Fall 2006 and the Master’s program have enrolled a collective 11 students. The programs provide professionals and engineers an effective knowledge of systems engineering principles and methodologies for effective design of real-world systems -- their production, deployment, reliable operation, maintenance, refinement, and retirement within a given set of cost and time constraints. Additionally, both programs offer students one of four specialization tracks.

The Department’s new state-of-the-art Micro-Electro-Mechanical Systems (MEMS) laboratory has been completed at a cost of close to $500,000 and is being used by undergraduate, graduate, and faculty researchers. A MEMS course is scheduled to be offered in spring 2010. Applications of MEMS technology have been growing quickly in areas such as automotive, telecommunications, biomedical, consumer appliances, and military applications. The laboratory provides undergraduate students hands-on experiences in fabricating MEMS chips that can be used in a variety of applications, as sensors or as actuators.

In the area of assessment, the department has been preparing an ABET Self-Study Report, and an ABET team will visit the department in fall 2009. The department is well prepared for
Summary of Highlights (continued)

the visit and to secure reaccreditation for another six years. For the second straight time, the department was recognized with a “Best Assessment Practice” certificate for its work presented at the University Assessment Expo 2008.

The department welcomes new faculty member Dr. Lifeng Lai, who will begin his term in fall 2009 to teach and conduct research in the area of telecom, wireless, and security. His hiring was the result of a search led by a committee chaired by Dr. Nisanci. More than 180 applications were received during the search process, which spanned fall 2008 to spring 2009. The department faculty supported the search by actively participating in the selection process to recruit an outstanding candidate in the area of telecom/wireless.

Dr. Iqbal, who chaired the Curriculum Committee, and Dr. Chan, who chaired the college graduate curriculum committee, did outstanding work in helping create new CCFs and in clearing many pending CCFs.

The Department received a multimillion-dollar award from the National Science Foundation to conduct cutting-edge research in wireless telecommunications. UALR is partnering with the University of Arkansas at Fayetteville and Arkansas State University to create a new three-campus research initiative aimed at converting research discoveries into commercially viable products and dramatically advancing Arkansas’s knowledge- and technology-based economy. This project is part of the Arkansas ASSET (Advancing and Supporting Science, Engineering and Technology) Initiative and has advanced two years into research, resulting in many significant publications and collaborative efforts between the three universities.

Dr. Seshadri Mohan continues to serve as the campus’ principal lead for the project and works with a team of researchers that includes Dr. Hussain Al-Rizzo, Dr. Radu Babiceanu, Dr. Guoliang Huang, all from Systems Engineering Department, and Dr. Srini Ramaswamy, Chair, Computer Science Department, Dr. Remzi Seker, and Dr. Kenji Yoshioe, all from the Computer Science Department. The team includes two Ph.D. students, Daniel Rucker and Subramanian Vimalathithan, and two post-doctoral researchers, Dr. Lenin Rathinaswamy and Dr. Chitaranjan Singh.

Infrastructure acquired through the proceeds of NSF EPSCOR funding include:

Anechoic Chamber
- The department installed an anechoic chamber for testing new nanostructured antennas fabricated at UALR. The chamber includes positioning and control equipment, and its interior is covered with RF tiles to absorb signals, allowing for precise testing. A variety of tests can be conducted in the chamber including but not limited to: antenna testing, testing of specific absorption rate (SAR) for RF devices, and electromagnetic interference (EMI) testing. This will facilitate the characterization of new nano structured antennas to be fabricated for integration with wireless sensors.

High Performance Computing (HPC) Cluster
- A High Performance Computing Cluster was installed in January 2009 with 512 cores, MATLAB parallelization software and a Wireless Sensor Networking (WSN) testbed. The WSN testbed allows for experimentation of a variety of algorithms, and the HPC cluster allows for data analysis.
Other significant awards include a U.S. Air Force Research Lab grant of $120,000 awarded to Dr. Huang for “Development of meta-composite materials with negative mass density.” Another project, “A new smart system for bridge structural health monitoring,” with Dr. Huang as the PI and Dr. Kim as the Co-PI, received its second year of funding ($42,000) from the Korean Institute of Geosciences and Mineral Resources.

Significant outreach efforts were carried out last academic year. Dr. Mohan secured funding from ASTA and the Winthrop Rockefeller Foundation for a project titled “Engineering Scholars Program,” in which 17 high school students were trained in several disciplines of engineering by Systems Engineering Department faculty. The two-week residential program was highly rated by the students.

Another outreach effort involved the establishment of UALR as a hub for BEST robotics. Dr. Jing Zhang received funding from ASTA to establish the hub and to mentor high school teams in their robotics projects and to help them participate in a statewide competition.

An ongoing exchange program with City University of Hong Kong has attracted five students who took advantage of the program to enroll in courses at CUHK.

Systems Engineering undergraduate students conducted research under the direction of faculty members. Specifically, Dr. Jing Zhang successfully secured an award from ASTA (as part of Arkansas NSF EPSCOR ASSET Project) for mentoring a proposal by senior Laura Lawson.

In the coming academic year, the department plans to:

- Ensure the Systems Engineering program is re-accredited by ABET
- Successfully integrate two new faculty members into the department through adequate mentoring and allocation of resources
- Ensure the continued growth of all four emphasis options
- Successfully complete the MEMS laboratory
- Provide adequate support to faculty so they continue to excel in teaching and research
- Upgrade existing laboratory facilities to allow faculty to offer state-of-the-art engineering education
- Aggressively recruit new students
- Ensure the graduate certificate program and Master’s in Systems Engineering continue to grow
- Facilitate new research using wireless infrastructure -- anechoic chamber and Multiple Input and Multiple Output (MIMO) -- acquired using proceeds of NSF EPSCOR grant
- Significantly increase number of proposals submitted to support funded research
- Implement continuous program improvement
- Ensure the departmental website is kept updated
Student Achievements

A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

- Laura Lawson, a senior from Star City, was awarded an Arkansas NSF EPSCoR fellowship for an undergraduate research experience. The funding came from the Arkansas ASSET Initiative Grant from Arkansas NSF EPSCoR managed by the Arkansas Science & Technology Authority.
- Laura Lawson also received the 2009 Top EIT Bachelor’s of Science Student Award, as well as the university’s best graduating senior award.
- Jason Robison and Laura Lawson spent summer 2008 in internships at the Jet Propulsion Laboratory in Pasadena, California, that involved dust participle mitigation from solar panels. Their internship was supported by Arkansas Space Grant Consortium. They were featured on the “Arkansans of the Week” by KATV Channel 7, a segment that can be viewed at: http://www.katv.com/news/stories/0608/530005_video.html?ref=newsstory
- Sasha Babenko worked as an intern at Molex HPC, a high-performance cable unit of Molex Inc.
- Dalton Ramey pursued an engineering internship at Hawker Beechcraft.
- Justin Lieber pursued summer study and internship at Washington Center in 2008 summer under the direction of Dr. Sherwin.

The following students were recognized for their outstanding achievements:

- Outstanding Freshman: Jesus Luongo Lizana
- Outstanding Freshman: Jean Felix Ganishuri
- Outstanding Freshman: Jimmy Shyaka
- Outstanding Freshman: Jean de Dieu Mutangana
- Outstanding Freshman: Jean Luc Umwungeri
- Outstanding Freshman: Valens Nteziyaremye
- Outstanding First Year Student: Noor Jabur
- Outstanding Sophomore: Christina Dunlap
- Outstanding Sophomore: Noor Al-Qadhi
- Outstanding Junior: Heather Keathley
- Outstanding Senior: Brandon Ballard
- Service to SYEN Department and EIT College: Isabel Farrell
- Service to SYEN Department: Adam Mcelderry
- Service to SYEN Student Community: Sunny Raheem

Systems Engineering Capstone students carried out several significant projects including a project on “Robust Operations Computer,” mentored by Dr. Nisanci and sponsored by GE Fanuc;
“A Wireless Structural Health Monitoring System,” mentored by Dr. Al-Rizzo and Dr. Huang, and “RFID Scanner for Autonomous Checkout” mentored by Dr. Iqbal. The capstone students also collaborated with the College of Business and entered “A Wireless Structural Health Monitoring System” in the Governor’s Cup competition. The team reached the semi-finals, a significant accomplishment. This gave the team substantial experience in working on multi-disciplinary projects and an ability to function on multi-disciplinary teams.

Systems Engineering graduates have gone on to accept high-profile jobs or pursue graduate studies. Some who will attend graduate school include:

- Ameer Al-Alawi (Class of 2009) was accepted into the master’s of science program in Telecom Policy Management at Oxford University, UK.
- Chris Wyatt (Class of 2008) was accepted into the master’s of science in aerospace engineering program at Georgia Tech.
- Brandon Ballard (Class of 2009) was accepted with full scholarship into the Ph.D. program in mechanical engineering at the University of Arkansas at Fayetteville.
- Jacob Bock (Class of 2009) was accepted into the master’s of science program in electrical engineering at the University of Illinois at Urbana Champaign.

Systems Engineering students are encouraged to take the Fundamentals of Engineering (FE) exam in their senior year. The exam is offered by National Council of Examiners for Engineering and Surveying (NCEES). An FE preparation course by Dr. Jovanovic has been offered regularly since 2007. Each year, the number of students taking the FE exam, and the percentage of students who pass, are documented. Systems Engineering students who have successfully passed the FE exam include: Bill Grant, Tony Garr, Jeremy Diaz, David Yarbrough, and Chris Wyatt, which represents a 100 percent pass rate for those students with mechanical option who took the FE exam. (Students who took the exam in spring 2009 have not yet learned the results.)

Engineering graduates can sit for the Professional Engineering license exam after passing the FE exam and completing three years’ internship/work experience. To date, one of the graduates (Bill Grant, Class of 2007) has passed the PE exam, and he obtained the PE license from the State of Arkansas in 2008.

Faculty Achievements

A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

- Special congratulations are due to Dr. Hussain Al-Rizzo, who won the EIT Faculty Excellence Award in Research as well as the University Faculty Excellence Award in Research. Dr. Al-Rizzo has previously won the Ted and Virginia Bailey Foundation Faculty Excellence Award in Teaching.
- Dr. Al-Rizzo was promoted to the position of full professor.
- Dr. Guoliang Huang received GIT Guy, Gladys, Guy, Jr. and Gaylord Northrop Young Researcher Award. He has published more than 30 international journal papers in these fields.
Faculty Achievements (continued)

- Dr. Huang received a $120,000 grant from Air Force Research Lab.
- Dr. Chan received funding from the Winthrop Rockefeller Foundation, which allowed him to organize and conduct a “Transportation Logistics” workshop. Participants attended came from institutions and industries inside and outside Arkansas.
- Dr. Mohan and his co-researchers received their second-year grant from NSF EPSCOR for continuing the project titled “Infrastructure for Wireless, Nano-, Bio-, Info-Tech Sensors and Systems.”
- Dr. Mohan received IEEE Region 5 Outstanding Educator Runner-Up Certificate and Award.
- Dr. Jung Kim co-authored the paper “The segmental transmission line: its design and implementation,” presented at the ICES 2008 conference held in Prague, Czech Republic, Sept 21-24, 2008 that received the “Best Paper Award.”
- Dr. Iqbal successfully secured the Professional Engineering (PE) Licensure.
- Dr. Zhang received a grant from ASTA for implementing a HUB at UALR for the BEST Robotics Program to mentor and oversee high school students preparation and participation in a statewide robotics competition.

Curriculum

Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.

The following courses have been added to the bachelor’s and/or master’s programs.

New courses approved:
- SYEN 4322/5322 modeling transportation systems
- SYEN 4342/5342 linear programming and network flows
- SYEN 4352/5352 spatial time series
- SYEN 4362/5362 neural networks and adaptive systems

Also approved in fall 2008:
- SYEN 7190 SYEN seminar
SYEN 7300 SYEN grad project
SYEN 8100-8600 SYEN MS thesis
SYEN 7399 SYEN special topics
SYEN 7332 advanced operating systems
SYEN 7342 network and combinatorial optimization.

A number of course improvements have been implemented and reported in the 2009 ABET Self Study Report, a sample of which appears below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Contributing to this PO</th>
<th>Observation (Plan for improvement as documented by the course instructor in the end of the semester course objective evaluation)</th>
<th>Action taken by the instructor at course level or decided at the departmental level</th>
<th>Results obtained (Improvements observed as a result of implementation)</th>
<th>ABET Program Outcomes Impacted</th>
</tr>
</thead>
</table>
| SYEN 4385 Capstone I | 1. Improve oral communication abilities.  
2. Assign project earlier in the semester. | 1. Several opportunities were created in order to enhance the oral communication abilities of the students. These included:  
- Individual student presentations of proposals to select the project topic using “PowerPoint.”  
- Group presentation of project plan using “Microsoft Project.”  
- Weekly group presentations of progress reports using “PowerPoint.”  
- Monthly group presentations of progress reports to sponsor(s).  
- End-of-semester group presentations of final reports,  
- Group presentations to college and departmental advisory boards  
- End-of-year group presentations and demonstrations to the college/university faculty and students and sponsor(s).  
- Multiple group presentations at national competition(s) depending on the topic(s) and requirements. For example, ASEE Baja competition required multiple presentations and demonstrations.  
2. The project topics are assigned before the middle of the first semester. | 1. The students became more confident and organized presenters.  
2. The planning of the project starts earlier, which helps the project teams make significant progress before the end of the first semester. | A, C, G |
| SYEN 4386 Capstone II | 1. Further testing the final product.  
2. Provide strict guidelines to students to prepare the project proposal and deliver it on time. | 1. Testing of the final product became an important activity in project planning and necessary time and resources are allocated.  
2. Lectures were prepared and delivered to introduce project management concepts and Microsoft Project. In addition to homework assignments to get the students familiar with the project management tools, the project teams were required to prepare detailed project plans using Microsoft Project. Format requirements for progress, end-of-semester, and final reports were prepared and provided at the beginning of the class. The importance of adhering to these formats was stressed regularly throughout the course. The progress reports were prepared so they would be integrated into the final report without major overhauls or rewriting. This required strict adherence to the format requirements and continual feedback through the progress reports. | 1. Sufficient time is reserved for the final testing of the product. In the ASEE Baja competition, UALR’s vehicle was one of the few vehicles that survived the entire competition, although this was the first time UALR participated in this competition.  
2. These efforts significantly contributed reports being uniform and closely following the project/ course timeline. | B, G |
Grant Applications/Awards

*Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)*

a. Number of proposals submitted 46
b. Total dollar amount requested in proposals $14,503,273
c. Number of Awards (proposals funded) 13
d. Total dollars awarded $1,083,600

Public Service

*Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.*

a. Lectures and presentations, discipline-based, to non-discipline related audiences 0
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals) 0
c. Consultantships (paid) 1
d. Consultantships (non-paid) 3
e. Other (please add other categories of public service as needed):
   
   Presentation to Local Organizations 1
   National (e.g., NSF) Panels 2
   Track/Session/Panel Chair 4
   Technical Program Committees/Program Advisor 8
   Co-Op/Student Exchange Program Advisor 2
Research/Creative Activities

*Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Count</th>
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<tbody>
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<td>a. Books</td>
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</tr>
<tr>
<td>b. Books (new editions)</td>
<td>0</td>
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<tr>
<td>c. Research articles in professional journals</td>
<td>27</td>
</tr>
<tr>
<td>d. Research notes in professional journals</td>
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</tr>
<tr>
<td>e. Formal presentations at professional meeting</td>
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</tr>
<tr>
<td>f. Discussants at professional meeting</td>
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</tr>
<tr>
<td>g. Art exhibits</td>
<td>0</td>
</tr>
<tr>
<td>h. Theatre productions/musical productions</td>
<td>0</td>
</tr>
<tr>
<td>i. Other</td>
<td>0</td>
</tr>
</tbody>
</table>

Information Technology

*Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.*

- An anechoic chamber has been installed with funding from NSF EPSCOR.
- New computers were acquired for teaching and research purposes.

Recruitment and Retention

*Summarize recruitment and retention efforts during the past year*

- New SYEN 1310 Introduction to Systems Engineering class enhanced retention
- Chair/designated faculty member(s)/participated in all college recruiting weekend activities
- Visited schools
- Served as science fair judges
- Supervised undergraduate research
- Mentored/authored SURF proposals
- Encouraged pursuit of co-op and internships
- Organized and conducted an “Engineering Scholars Program” for high school students; 17 students participated in the program
- Mentored students that participated in the exchange program with City University of Hong Kong
Personnel Changes

Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).

<table>
<thead>
<tr>
<th>Change Type</th>
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</tbody>
</table>

Other personnel changes. Use this section for personnel changes not covered above which you feel should be included in the annual report.
Graduate Institute of Technology
University of Arkansas at Little Rock

Annual Report
for the period
July 1, 2008 – June 30, 2009

Dr. Keith Hudson
Chairman
Summary of Highlights

This text should be an overview of the entire year for your unit. This text will be used in the final Academic Affairs report; please use complete sentences.

Research, Grants, and Contracts: GIT has continued to fulfill its role in assisting faculty with its proposal preparation and working closely with the Dean’s Office and ORSP. Each grant or contract proposal from Science or Engineering at UALR passes through GIT for a facilities usage review and review of GA/RA requests. Dr. Hudson assists proposal writers with suggested changes to increase their selection chances, based on our exposure to science and engineering area funding agencies and our experience working with them. We also work to ensure that we are abreast of current funding trends in these areas at the funding agencies. GIT continues to provide accounting assistance to certain grants and contracts, usually from Applied Science and GIT faculty members. Missy Hill, Assistant to the Director, attended National Council of University Research Administrator training, Fundamentals of Sponsored Project Administration.

Grants Administration and Sponsorship: The Graduate Institute has continued administering and sponsoring several statewide programs as well as certain inter-college activities. Positioned as a separate organization, GIT provides a stable and interdisciplinary base for these programs. These include:

- NASA Space Grant and EPSCoR Programs – in its 18th year of activities in Arkansas, NASA Space Grant continues to fund aerospace related activities at 16 Arkansas campuses, plus has established ties with several industries in the state involved in aerospace activities. The Institute also administers two NASA EPSCoR Research Grants for Arkansas.

- NSF Internet II – We continue to administer researcher access to Internet II. Many of the developing projects in EIT will utilize this bandwidth and are made possible in fact by this project. The availability of this bandwidth will continue to have a major impact on UALR for many years. We work closely with Computing Services in this area, and are looking to the future Lambda Rail/Internet II/AR E-Corridor.

- Earthquake Center – The Arkansas Earthquake Center is a major service and research unit within GIT. Bringing faculty together from EIT and CSAM, and working in several areas of the state, the Earthquake Center may get more media coverage than any single unit in the two colleges. Its service to the community and state has received statewide and regional attention, and continues to prove indispensable in the event of a major earthquake or seismic event.
Summary of Highlights (Continued)

- STRIVE Program – GIT sponsors the STRIVE Program for educators to gain hands-on experience in real science and engineering activities, both in industrial settings and in some academic research labs. This grassroots activity provides good exposure for UALR to the community.

- NSF-EPSCoR – UALR is concluding our second year of work as part of a team on an award from ASTA and NSF including BioProduction and NanoSensor Projects. The three year project will bring $3,392,505 to UALR. We have purchased a number of new instruments and look for more to come in year three. The UALR teams are awaiting the arrival of new personnel to carry out the project for the final year. We are working with ASTA on the 2010 proposal submission.

Major Equipment Support: GIT provides support in several ways to maintaining a host of major equipment for science and engineering training and research. Units such as the AFM, NMR, MS, SEM, LC-MS, GC-MS, TGA/SDTA, Structural Test Equipment, and the DNA Facility require constant maintenance and a high level of skill to run. Drs. Ali and Post of the Institute’s research staff work with these and other instruments, keeping them calibrated, maintained, and at top efficiency. Dr. Julian Post was hired to replace Dr. Ma. The GIT maintenance account serves as a primary source of funding for the cryogenic gases necessary to keep the NMR running as well as the primary source of funding when instruments are in need of maintenance and repair. Increasing expenses in the research support area will prevent GIT from continuing to provide the same level of support for the current instrument inventory without an increase in our maintenance budget. We are fortunate to have some funds in the Major Equipment Repair Fund. This year we repaired the LS6500 Multi Purpose Scintilation Counter, DNA Sequencer, Atomic Absorption Spectrometer, Oscilloscopes, UV6000 Detector, Beckman 340 pH/Temp/ Mv meter, LC/MS, Microscope with UV/VIS digital capture, Growth Chamber, and Confocal Microscope.

Computer Facilities: GIT supports several computational capabilities in addition to our work with the high-speed Internet. GIT provides:

- Advanced UNIX Lab - We have replaced some of the single-core AMD machines with dual-core Intel machines, and increased RAM on all 64-bit machines to better accommodate memory-hungry scientific applications. These machines continue to be used by student and faculty researchers within GIT and from Chemistry, Physics, Computer Science, Applied Science and the Nanotechnology Center. These computers can operate as a cluster, with both MPICH2 and Open MPI environments. While these machines normally run Linux for long-running compute jobs, some of them can be booted into Windows for training purposes or when a research application requires it.

- Shared Memory Computing - for applications that require massive memory within a single machine - GIT maintains several machines for high-speed numeric computing, or “number crunching.” Our dual Opteron (2 x 1.4GHz) machine, which had been heavily used by students and faculty from Chemistry and Computer Science, has been replaced by a Dell machine with eight 2.4GHz Opteron CPU cores and 32GB of RAM. The lab Athlon64 machines mentioned above continue to be used as compute nodes as their speed and memory increase. While both EIT and CSAM colleges make use of these
resources, the science users (Chemistry and Physics) are especially enhanced in their computational research by having these machines present on campus. Falling memory prices will enable us to move to 64GB and beyond in these machines.

- Distributed Memory Computing - for applications that lend themselves to having tasks and data split among a number of machines - GIT and Computer Science have installed the 64 node cluster (8-core, 16GB of RAM). It is the first system on campus to use the high-speed, low-latency Infiniband interconnect for MPI message passing in the applications that will run on it. We continue to expect that this cluster will enable scientific and engineering users to make great leaps in their computational teaching and research. We have added additional users during the year and we will be broadening the sets of applications available to current and future users. UALR and UA/ Fayetteville have plans to collaborate on some projects, taking advantage of clusters on both campuses, and over time we will be involved in regional and national computing grids.

- Access Grid Studio - GIT works with the Systems Engineering Department to run and maintain the Access Grid, an advanced telecommunications tool for virtual meetings. UALR is one of only a small number of universities with this advanced capability.

- Virtual Reality Center - the Virtual Reality Center finished its sixth year on line. GIT is heavily involved with EIT/Systems Engineering to make this advanced concept lab a major success. The SGI 3400 super-mini computer also provides some support for other applications in science and engineering.

The Institute maintains a staff of Computational Specialists, who support and focus on science and engineering advanced computing activities. Albert Everett, Jason Kratz, Rubben Johnson, and Ken Kalb work closely with Computing Services as well as the various CSAM and EIT programs that use their talents. UNIX/Linux (Albert Everett), Windows NT and 2000 (Jason Kratz and Rubben Johnson), and Windows 95/98 (Ken Kalb), and Apple Macintosh support are all available. GIT may offer selected short courses again with these staff members in place. Also, GIT supports video and general networking, especially in the ETAS Building. They also maintain the functionality of the various teaching, research and student computer labs, including the IS Labs, Engineering Teaching Labs, and the Advanced UNIX lab.

Renovation of Facilities: GIT has become active in the area of renovations of facilities to other uses, particularly certain ETAS spaces converted to either office or engineering laboratory activities. In this role, staffers Bill Sipes and Ray Wallace work in coordination with the Construction Management Program and Physical Plant to meet the needs of EIT departments and programs. GIT now does major projects for CSAM departments and programs. Projects have included:

- Technology classrooms, for both IT and IS, plus other users.
- Research Lab space conversion (changing the use and activities supported)
- Furniture Redistribution as items have become available
- Office and meeting room construction projects (IT, IS, and modifications)

This year, the staffers continued renovation efforts in ETAS with the Nanotechnology laboratories, as their function is assigned. They are also working to renovate several areas in the University Plaza shopping center. One set of areas are for EIT. Another set is with Tom Walker on the innovation part of his activities, which has become part of the University incubation studies.
Summary of Highlights (Continued)

Other project oversight and/or work included installation of three growth chambers in SCLB 364; the HPCC project in ETAS 305; new Physics labs in PHY 140/104A; computer lab in ES 104/104A/104B; electronic lab in ETAS 204; motor lab in ETAS Annex; installation of two fume hoods in FH 519; new compressed air unit in SCLB 471; additional electronic outlets in ETAS 205; installation of an overhead door for Construction Management in the Plaza area; and the new radiation storage facility in ETAS 577.

Technical Support, Machine and Electronics Shops: A more traditional support activity is the presence of the GIT Machine and Electronics Shops, and their staff. The Professional Fabrication and Model Shop continues to keep busy turning out items as specified by faculty researchers, including experimental instrumentation and apparatus, robot and other special project parts, and also certain parts and items for industry prototypes. Steve Wells continues to work in the Fabrication Shop conducting machining, tooling, design and fabrication activities. The GIT Educational Shops continue to support teaching activities of Engineering Technology and also Systems Engineering, as well as the senior design and independent study projects of students. Armand Tomany continues work in the Ed Shop Tech position. The student shop continues to be open for use by faculty, staff, and students and recently received an upgrade with the acquisition of a new mill and lathe. This will allow shop capacity to match the growing enrollment of students. The GIT Electronics Shop, located in the ETAS annex area, functions with Howard Burris in the technician role. Doug Wilson supervises this shop. All shops day-to-day operations, planning, work load, etc. are handled by Ben Gilbert, Shops Supervisor.

Graduate Assistantships and Post-Doctoral Assistance: Another area of traditional GIT support has been the awarding of Graduate Assistantships. GIT now maintains a pool of some 47 GAs; 23 from GIT funds, 19 from EIT, and five more from a combination of Graduate School and college lecturer funds. This year, GIT awarded GA roles to support students in each of the Applied Science emphasis areas, and assigned most of them to teaching or lab assistant duties. Some are still being assigned as RAs to assist new faculty in getting their labs going (start-up) or to meet contractual obligations in grant matching. Using departments include:

- Applied Science
- Bioinformatics
- Systems Engineering
- Chemistry
- Computer Science
- Physics
- Engineering Technology
- Information Science
- Biology
- Mathematics
- GIT
This year, GIT provided $45,000 in match to grants to help pay salary of Post-Doctoral Researchers on the campus. Using departments include Applied Science, Computer Science, Biology, and Physics.

Other highlights:

- Hazardous Waste Disposal. GIT has been able to make arrangements to dispose of all wastes to date, with a major disposal in 2002 and several smaller disposals, most recently in April 2008. We dispose immediately of high-level hazards and store others. GIT continues to work with waste disposal; however, primary responsibility has been turned over to the Physical Plant Safety Office, as approved at the February 2009 budget hearing. GIT had expended all funds available for waste, and Physical Plant Director David Millay had requested that his operation take over responsibility for these functions, including future funding.

- Radiation Safety Office. The current procedures have been in place four years, and our license has been renewed. RSO activities are running smoothly. In January 2006, Chase Environmental disposed of almost all radioactive sources not in use and all radiation activities wastes. We are maintaining service at this reduced level. The Radiation Safety Office moved the source storage room and created a new waste handling and radiation preparation area on fifth floor ETAS (ETAS 577 and 577A). This change also increases the safety of our usage of radiation and gets waste disposal out of the last for long term decay. This also finally gives us one suite with ALL RSO function equipment, sources, waste, and safety items in one central area. NOTE: the current UALR RSO license expires in February 2010. Nawab Ali and I will have to put a major amount of time rewriting the document and getting approval from Arkansas Department of Health, Radiation Control.

Student Achievements
A list of important student achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

As part of our mission, we operate as a support unit for the science/math/technology academic programs and students.

Faculty Achievements
A list of important faculty achievements and awards in your unit. This text will be used in the final Academic Affairs report; please use a list format.

- Assistant Director Doug Wilson continues to bring significant support to UALR for his areas of expertise including fetal monitoring work with UAMS (NIH-sponsored) and also signal processing and other electronics-based work. He is working on grant proposals as the PI and continues publishing efforts and mentoring of students. He is working with Dr. Curtis Lowery to develop a biomedical product for use in the labor and delivery area. He had three articles published.

- Dr. Julian Post provided support for the major Chemical Instrumentation, teaches for the Physics Department, and performs research projects. He is the faculty mentor for
Faculty Achievements (Continued)

- Dr. Post was approved for the new title of Research Assistant Professor, as of July 1, 2009.

- Dr. Nawab Ali does a fine job in keeping the biotechnology equipment in good working order, including the SEM facility. He manages the DNA facility. He is also involved with the university IRB committee and serves as the Assistant Radiation Safety Officer. He had four papers, seven abstracts, and two chapters published.

- Hanan Mahdi was promoted to a Research Associate Professor, working on grants in the Earthquake Center. Dr. Mahdi plays an important role as co-PI on the NASA-EPSCoR Research grant funded in August 2007. She had two articles published and received a Certificate of Appreciation from the LISA Academy for judging its science fair.

- Nancy Marley continues as a Research Associate Professor in Chemistry. Dr. Marley is 100 percent grant funded from DOE and Oak Ridge National Laboratories. She had nine articles published and served on a number of graduate committees.

- Rajesh Sharma continued as a Research Assistant Professor until May 26, 2009 and will continue as a Visiting Assistant Professor at UALR. He had 13 articles published. Dr. Sharma joined the faculty at Arkansas State University as an Assistant Professor to begin a new degree program in Renewable Energy Technology.

- Ganesh Kanarapady continues as a Research Assistant Professor working on grants in the Nanotechnology Center. He had two articles published.

- GIT worked to place several Post-Doctoral Fellows and Research Professors on lines in in the past year as 100 percent grant funded personnel.

Curriculum

*Detail program additions, deletions, and revisions; steps taken to strengthen the academic program; etc.*

As part of our mission, we operate as a support unit for the science/math/technology academic programs and students.

Grant Applications/Awards

*Please provide the numbers indicated. (The ORSP monthly report is a convenient source of information.)*

- **a.** Number of proposals submitted 19
- **b.** Total dollar amount requested in proposals $4.2 million
- **c.** Number of Awards (proposals funded) 15
- **d.** Total dollars awarded $2.5 million
Public Service

Please provide the numbers indicated. Public Service is defined as the application of a faculty member’s discipline-based knowledge and skills to the problems of people and groups in society.

a. Lectures and presentations, discipline-based, to non-discipline related audiences 8
b. Essays or articles in popular or semi-popular publications (in contrast to professional journals) 0
c. Consultantships (paid) 2
d. Consultantships (non-paid) 4
e. Other (please add other categories of public service as needed):
   Science Fair mentoring and/or judging 3

Hudson:
   • EPSCoR Committee, Chair, State of Arkansas 5
   • AR Space Grant Consortium, Chair
   • NASA EPSCoR TAC, Chair, State of Arkansas
   • National EPSCoR Coalition, Member Board of Directors
   • Arkansas Aerospace Education Center, Member Board of Directors

Mahdi:
   • AR Governor’s Earthquake Advisory Council 2
   • AR Pre-Disaster Mitigation Advisory Council

Wilson:
   • AR State Highway and Transportation Department Advisory Council 1

Research/Creative Activities

Include only items which have been published or presented since the last annual report. Works in progress should be included in the annual report of the year actually published (a, b, c, or d) or completed (e, f, g, h, or i).

a. Books 2
b. Books (new editions) 0
c. Research articles in professional journals 23
d. Research notes in professional journals 1
e. Formal presentations at professional meeting 5
f. Discussants at professional meeting 1
g. Art exhibits 0
h. Theatre productions/musical productions 0
i. Other 1
Information Technology

*Detail efforts to integrate technology into the curriculum; significant acquisitions, etc.*

We assist CSAM and EIT, but have none of our own.

Recruitment and Retention

*Summarize recruitment and retention efforts during the past year.*

GiT has contact with many of the Applied Science PhD program students from both the Science and Engineering Colleges. GiT faculties attend and judge science fairs for local schools and at the annual regional and state competition. Dr. Julian Post also participated in the UALR Children’s International College Prep Program.

Personnel Changes

*Please list instructional and research personnel (non-classified), by name, and provide information as indicated. (Omit lecturers and adjunct faculty unless one of these titles is used for full-time employees).*

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*Other personnel changes. Use this section for personnel changes not covered above which you feel should be included in the annual report.*

Olivia Harris became the new GiT Administrative Secretary in May 2008, after the death of long-time UALR employee Billie Kays.
Appendix

College Advisory Councils
NATIONAL ADVISORY COUNCIL

Ruth Greenstein  
Vice President, Finance and Administration, General Counsel  
Institute for Defense Analyses  
4850 Mark Center Drive  
Alexandria, Virginia 22311-1882

Dr. Per-Kristian Halvorsen  
Chief Technology Innovation Officer  
Intuit, Inc.  
Mountain View, California

Wayne C. Johnson  
Independent Consultant/Former VP of Worldwide University Relations for HP  
62 Montvale Road  
Weston, MA 02493

Roger Liska  
Department Chair & Professor  
Construction Science and Management  
Clemson University  
Clemson, South Carolina

Dr. Bob Lucky  
Chair / Technological Advisory Board / Federal Communications Commission  
Board of Trustees / ANSER Corporation for national defense in Washington, D.C.  
Member / Laboratory Operations Board / Secretary of Energy  
Former Head of Research for Telcordia Technologies, Fairhaven, New Jersey

Dr. Graham R. Mitchell  
Professor of Practice  
Rauch Business Center  
Lehigh University  
Bethlehem, Pennsylvania

Patrick Pelch  
Senior Engineer  
Anuvu Incorporated / Fuel Cell Powered Vehicles  
Sacramento, California

Dr. Maxine Savitz  
Former Deputy Assistant Secretary for Conservation, U.S. Dept. of Energy and Program Manager for Research Applied to National Needs / National Science Foundation  
Consultant / The Washington Advisory Group  
Los Angeles, California

Jim Womble  
Former Senior Executive at Acxiom Corporation  
Little Rock, AR
## EIT Computer Science Advisory Council

**Chair Haley Wilson / QualChoice**

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# Engineering Tech Advisory Council

Chair Mike Hill, DeCrane Aerospace

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### Information Science Advisory Council
#### Chair Mary Hunt, Fidelity

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*Information Technology Advisory Council has meshed w/Info Sci. Adv. Council*
## Systems Engineering Advisory Council

**Chair Dave Myerski, Alltel**

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# Mechanical Engineering Advisory Council

**Chair Jim Engstrom / Engstrom & Associates**

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Appendix

Department of Computer Science

Detailed Information
APPENDIX

Computer Science Assessment Implementation

Deans, please provide the following information for your college or school as an appendix to your annual report:

a. Describe college/school procedures for implementing assessment, including the college-level review process.

Our plans are reported to the college PAAG team, which reviews the documents accordingly.

b. List activities undertaken to encourage good assessment practice within your college/school.

Planned assessment instruments, evaluation and data collection processes are in place in the department. Dr. Chiang was recruited as the ABET Assessment Data collection and coordination person for Computer Science, which addresses one of the weaknesses in our 2007 visit. With the data we are submitting an ABET Interim Report in June 2009.

c. Identify the strongest assessment program in your college/school.

Construction Management, Engineering Technology and Computer Science have strong assessment and evaluation plans

d. Identify the programs that need the most help with assessment and your plans to assist them.

e. Account for spending of assessment funds. Include any additional college/school funds allocated for assessment.

We were provided adequate funds for planning and participating in assessment-related activities.
Appendix

Department of Engineering Technology

Detailed Information
APPENDIX

Engineering Technology Assessment Implementation

Deans, please provide the following information for your college or school as an appendix to your annual report:

a. Describe college/school procedures for implementing assessment, including the college-level review process.

b. List activities undertaken to encourage good assessment practice within your college/school.

The Engineering Technology department adopted an improved course assessment tool to help diagnose deficiencies, from the student perspective, at the course level that provides quicker feedback and timely corrective action.

c. Identify the strongest assessment program in your college/school.

d. Identify the programs that need the most help with assessment and your plans to assist them.

e. Account for spending of assessment funds. Include any additional college/school funds allocated for assessment.

Grant Application/Awards (Cont.)

- A Protocol for Damage Detection and Maintenance of Bridge Structures: A Research Problem Statement, $180,000, AR Highway & Transportation Dept, Not Funded (By Dr. S. Midturi)
- “An Automated Travel Time Prediction System (ATTPS), Pre-proposal, $190,000, AHTD. Not Approved, Aug. 2008, by Dr. H. Patangia

Public Service (Cont.)

Lectures and Presentations:

- “Technology Application in the Search for the Ivory Billed Woodpecker,” by David Luneau
- “Large Strain Behavior of Nano Gold films on Thick PDMS Substrates,” by S. Midturi, presented at the UAF, on April 19, 2008.
Consulting:

“Consulting Work on Computer Applications and Computer Networking,” nonpaid consulting to maintain the church computers, by David Luneau

Research and Creative Activities (Cont.)

Published Papers:


Conference Papers:

- S. Midturi, “Fostering Undergraduate Engineering Research in a Public University,” ASEE Conference in Memphis, TN.
- H. Patangia, “A Project Based Learning Approach to Optoelectronics,” in Proc. ASEE 7th Global Colloquium on Engineering Education, October 2008, Cape Town, South Africa


Research in-Progress:

“Development of a Prototype Smoke Alarm Shut-Off System.” This work was funded by Mr. H. Shirlee, a private inventor, through a UALR grant of $41,243. All deliverables of the grant were made on schedule. The grant contract was extended to conclude on December 31, 2009. Work continues with the sponsor to incorporate new features and to obtain additional patent protections. PI, Dr. Steve Menhart.
Appendix

Department of Information Science

Detailed Information
Information Science

Appendix 1 – List of Proposals Submitted and Awards

Proposals Submitted 2008-2009

- **Berleant, J. D. et al.** NSF Grant: Collaborative Research – A Web Based System for Modeling and Predicting Neurodevelopment Across Mammalian Species, Submitted August 2009, $331,124 (Pending).


- **Pierce, E. et al.**, HP Innovation Grant for Higher Education: Advancing Network Technology and Management Education: Connecting Classrooms to Careers,” Submitted March 2009, $250,000 equipment/training package. (Denied).

- **Talburt, J. (PI) and Berleant, J.D. (CO-PI)**, NIH (Subcontract through UAMS): Arkansas Clinical Translational Science Institute, Submitted Nov. 2008, UALR budget is $565,153 for 5 years with first year allocated for $109,121. (Pending).

- **Tudoreanu, M. E.** NSF Grant: Integrating Information Quality in Visual Data Analytics, Submitted April 2009, $169,641. (Denied)

Proposals Submitted and Awarded During 2008-2009

- **Berleant, Dan (CO-PI)**, EPSCoR P3 Center Collaborative Seed Grant Program: Enabling Crop Deregulation with Software – A Prototype, Awarded Spring 2009 $42,487

- **Talburt, John** (PI), DOD Grant: Information Quality Tools for Persistent Surveillance Data Sets,” Submitted to the DOD in February 2008 in collaboration with Qbase Corp in Dayton, Ohio. First-year funding $1.6 million ($960,000 to UALR), Awarded Spring 2009 $960,000

- **Talburt, John** (PI) and **Wu, Ningning** (CO-PI), AR Dept. of Ed. Grant: Proof-of-Concept for an Open-System, Entity Resolution Engine to Support Longitudinal Studies in Education, Awarded May 2009 $125,000

- **Wigand, Rolf** (PI), NSF Grant: Communication and Coordination In Virtual Organizations and Teams, Awarded Fall 2008 $95,571

- **Xu, Xiaowei** (PI), Acxiom Grant: Network Clustering Algorithms, Awarded for 2008-2009 $40,000

On-Going Awards

- **Jennings, S. F. (Director)**, NIH/NCRR: Arkansas IDeA Network of Biomedical Research Exellent (INBRE), Approximately $350, 000 per year, total of $1.5 million over four years.

- **Jennings, S.F. (PI)**, NSF EPSCoR Grant through ASU on Efficient Algorithms for Protein Structure Prediction and Applications in RTB Binding Occupancy Predictions ($68,000 subcontract, second of two years)
- **Jennings, S.F. (PI),** UAMS: College of Medicine Bioinformatics Graduate Assistantships, open-ended grant for approximately $95,500 per year.

- **Talburt, J.R. (PI),** Acxiom Funded MSIQ – Extension of 3rd Year Award.


### Appendix 2 – List of Faculty Research/Creative Activities

#### Books


#### Research Articles in Professional Journals


Formal Presentations at professional meetings
- Note: Faculty listed in “Research Articles in Refereed Proceedings” also presented.

Discussants at professional meetings
- None

Other: Research Articles in Refereed Proceedings

Appendix 3 – List of Faculty Public Service Activities

Lectures and presentations, discipline-based, to non-discipline related audiences
- Ningning Wu made a Presentation at a 2008ASTA Research Meeting.
- Rolf Wigand - The Evolution of Vertical IS Standards Evolution in the US Mortgage Industry. Presentation made to faculty and students at the University of Frankfurt, Frankfurt, Germany.

Essays or articles in popular or semi-popular publications (in contrast to professional journals)
- Stephanie Harvey had an article on Teaching Philosophy accepted by UALR’s ATLE Newsletter.
Consultantships (paid)

- Ningning Wu completed 100 hours of consulting work for the USDA, Nutrient Database Analysis.
- John Talburt completed 32 billable hours in 2008-09 for Black Oak Partners, LLC, as a Senior Information Quality Analyst.

Consultantships (non-paid)

- Steve Jennings founded Sector3 Informatics to provide informatics, data quality, and IT infrastructure services to not-for-profit organizations; currently working with Our House, Inc., a Little Rock-based homeless shelter. No compensation at this time.
- Steve Jennings was a book proposal reviewer for Elsevier in the area of statistical bioinformatics; three hours.
- Steve Jennings was a workshop presenter for University of Tennessee/ORNL/Kentucky BRIN Bioinformatics summit on Bioinformatics Education

Other

- Marico Howe (3)
  - Reviewer for the 2009 Conference on Applied Research in IT (Discipline)
  - Chair of the Recruiting and Retention Committee (IFSC)
  - Member of the Arkansas Association of Women in Higher Education (Professional Society)
  - Volunteer for the Arkansas Children’s Hospital Research Institute (Community)
- Dan Berleant (14)
  - Member of Curriculum Committee (IFSC)
  - Chair of Search Committee (IFSC)
  - Member of Graduate Committee (EIT)
  - Member of Bioinformatics Curriculum & Steering Committee (Program)
  - Faculty Advisor to Bioinformatics Club (Program)
  - President/Board Member of MidSouth Computational Biology and Bioinformatics Society (MCBIOS) (Professional Society)
  - Member of Arkansas Plant-Powered Production Center, Steering Committee (Professional Society)
  - Member of Great Plains Network Bioinformatics and Computational Biology Group (Professional Society)
  - Reviewer for Bioinformatics, International Journal of Approximate Reasoning; The Open Bioinformatics Journal (Discipline – 3)
  - Co-Web master, Interval Computations Web site (Discipline)
- Editorial Board Member, The Open Bioinformatics Journal (Discipline)
- Associate Editor, International Journal of Intelligent Technologies and Applied Statistics (IJITAS) (Discipline)

**Serhan Dagtas (8)**
- Member of Personnel & Tenure Committee (IFSC)
- Member of Search Committee (IFSC)
- Program Committee Member for ICCIT 2008 - International Conference on Computer and Information Technology (Discipline)
- Member of ACM and IEEE (Professional Society – 2)

**Steve Jennings (20)**
- Chair of P&T Committee (IFSC)
- President of Faculty Assembly (EIT)
- Member of Graduate Council (UALR)
- Member of Internet 2 Committee (UALR)
- Chair of Bioinformatics Curriculum, Evaluation, Admission, and Steering Committee as well as AR INBRE Steering Committees (Program - 3)
- ARBIOS (Arkansas Chapter of MCBIOS) Faculty Advisor (hosted networking meetings, fall picnic, etc.) (Program)
- UALR Bioinformatics Club Faculty Advisor (financial and event planning; e.g., “Applications of Mass Spectrometry to Protein Identification and Proteomics: Peptide Fingerprinting and Sequencing” workshop at UAMS) (Program)
- Judge for UALR Graduate Student Association's Graduate Student Research Forum (Apr 22) (UALR)
- Member/Leadership roles in MCBIOS, ARBIOS, International Society for Computational Biology, Great Plains Network Biosciences Group, NICL (Discipline – 5)
- Dr. Jennings also lists an invited facilitator role, two invited talks, a hosted event, courtesy reviewer, and advisory role to Jackson State (Discipline – 5)

**Elizabeth Pierce (8)**
- Member of MSIQ Steering Committee (IFSC)
- Member of Undergraduate Curriculum Committee (EIT)
- Member of PAAG Assessment Committee (EIT)
- McNair Scholar’s Program Faculty Mentor (Summer 2008) (UALR)
- Associate Editor for the ACM Journal of Information Quality (Discipline)
- Reviewer for ICIQ, AMCIS Mini-Track on IQ (Discipline-2)
- Member of International Association of Information & Data Quality (Professional Society)
John Talburt (18)
- McNair Scholar’s Program Faculty Mentor (Summer 2008) (UALR)
- Member of Search Committee (IFSC)
- Member of P&T Committee (IFSC)
- Member of Curriculum Committee (IFSC)
- Chair of MSIQ Committee (Program)
- Member of Applied Science Chair Search Committee (EIT)
- Member of UALR-Axiom Relationship Committee (UALR)
- Member of High-Perf Computing (HPC) Steering Comm (UALR)
- Member of Graduate Coordinators Council (UALR)
- Member of 8 Professional Societies including ACM, IEEE, IAIDO, IRMA, ABET, ICIQ, AAQAP, and AR Academy of Computing.
- Technical advisor to Infoglide Software, Austin, TX, and invited to post monthly on their Identity Resolution Daily Links blog

Mihail Tudoreanu (6)
- Member of Faculty Senate (UALR)
- Member of Policy and Personnel Advisory Committee (EIT)
- Member of EIT Task Force on Research Infrastructure (EIT)
- Member of ACM and IEEE (Professional Society – 2)
- Reviewer for International Journal of Human-Computer Studies (Discipline)

Rolf Wigand (55)
- Member of P&T Committee (IFSC)
- Member of Business College Committees (BUS)
- Member of 16 Professional Societies
- Reviewer for nearly 20 different publication outlets (Discipline)
- eMarkets. Session Chair, Bled International Electronic Commerce Conference, Bled, Slovenia, June 16, 2008. (Discipline)
- Evaluator and judge, Youth Entrepreneur Showcase (Y.E.S.), an entrepreneurship competition, 2008.
- Evaluator of grant proposals for the National Science Foundation, Washington, DC as well as German National Science Foundation
- Program Committee Member for 13 Conferences or Review Boards

Ningning Wu (20)
- Member of Search Committee (IFSC)
- Member of P&T Committee (IFSC)
- Member of MSIQ Steering Committee (IFSC)
- Chair of Curriculum Committee (IFSC)
- Member of Awards Committee (EIT)
- Member of UALR Tenure Committee (UALR)
- Member of IEEE, ACM, and IAIDQ (Professional Society – 3)
- Program Committee Member for ICIQ Conference 2008, 12th Colloquium for Information Systems, 2nd International Symposium on Data, Privacy, and E-Commerce, and 2009 Colloquium for Information Systems Security Education (Discipline – 4)

- Xiaowei Xu (12)
  - Member of P&T Committee (IFSC)
  - Member of Curriculum Committee (IFSC)
  - Member of ACM, AIS, SIM (Professional Society – 3)
  - Reviewer for IEEE Transactions on Knowledge and Data Engineering, ACM Transactions on Information Systems, and Knowledge and Information Systems (Discipline – 3)
  - Program Committee Member for ACM SIGKDD, IEEE Data Mining (ICDM), ACM SIGKDD Workshop on Social Network Mining, Int’l Conf. on Computational Aspect of Social Networks (Discipline – 4)

- Catherine Lowry (3)
  - Member of the Accreditation Self Study Team (UALR)
  - Chair of the Roles and Rewards for Non-tenured Faculty Committee (UALR)
  - Participated in the Winthrop Rockefeller Cancer Institute Auxillary annual planning meeting (Community)

- Thomas Wallace (5)
  - Member of Online Recruiting Committee (UALR)
  - Member of EIT Technology Task Force (EIT)
  - Member of Campus EAI Portal Committee (UALR)
  - Member of Web Services Committee (UALR)
  - Member of Recruiting and Retention Committee (IFSC)

- Stephanie Harvey (4)
  - Member of the Faculty Teaching & Service Development Committee (UALR)
  - Member of the Disaster Recovery Institute – (Professional Society)
  - Member of the Arkansas Council for Women in Higher Education – ACWHE (Professional Society)
  - KUAR Volunteer – ARCADE 2008, Saturday, April 5, 10 – 12 a.m. (Community)
Appendix

Department of Systems Engineering

Detailed Information
ADDENDUM TO ANNUAL REPORT
Systems Engineering Department
PREPARED BY: Dr. Seshadri Mohan, Chair

GRANT APPLICATIONS/AWARD

DR. AL-RIZZO
Ongoing Proposals

<table>
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<tr>
<th>Proposal Title</th>
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DR. BABICEANU
New Proposals

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<tbody>
<tr>
<td>FY09 MURI Topic #6 Pre-proposal: An Adaptive Multi-Agent System for Distributed Surveillance Control.</td>
<td>Co-Pl</td>
<td>$168,085.00</td>
<td>ONR, Nov 2008</td>
<td>Declined</td>
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</table>

DR. BABICEANU
Ongoing Projects

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<tr>
<th>Proposal Title</th>
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<th>Months of effort/year</th>
<th>Your Role (Pi, Co-Pi, C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkansas ASSET Initiative – Wireless Nano- Bio- and Info-Tech Sensor and System</td>
<td>NSF</td>
<td>3 yrs.</td>
<td></td>
<td>2</td>
<td>Senior personnel</td>
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DR. BOUAYNAYA
New Proposals

<table>
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<tr>
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### Proposal Title

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</tr>
</thead>
<tbody>
<tr>
<td>Transformative Elements for Space Communications</td>
<td>Co-PI</td>
<td>$682,719</td>
<td>NASA ESPSCOR</td>
<td>Pending</td>
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<tr>
<td>Targeting Breast Cancer Detection with Communications Technology</td>
<td>PI</td>
<td>$2,650</td>
<td>ADHE SURF Jan 2009-Aug 2009</td>
<td>Denied</td>
</tr>
<tr>
<td>New Infrastructure Elements for the Next Generation Internet</td>
<td>Co-PI</td>
<td></td>
<td>NSF EPSCOR</td>
<td>Denied</td>
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### DR. CHAN

#### New Proposals

<table>
<thead>
<tr>
<th>Proposal Title</th>
<th>PI &amp; Co-PIs</th>
<th>Amount Requested</th>
<th>Submitted To Date</th>
<th>Funded/Not Funded</th>
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<tbody>
<tr>
<td>Network Reliability and Capacity: Coping with Hazards and Attacks</td>
<td>PI</td>
<td>319,853</td>
<td>National Science Foundation (NSF) Oct 2008</td>
<td>Pending</td>
</tr>
<tr>
<td>Online Structural Health Monitoring of Bridge’s Steel Girders by Using a Piezoelectric Sensor System</td>
<td>Co-PI</td>
<td>$83,457</td>
<td>Transportation Research Board, IDEA Program</td>
<td>Not Funded</td>
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<tr>
<td>Central Arkansas Incident Management Command Center: A Beta Test Site*</td>
<td>PI</td>
<td>$100,000</td>
<td>Mack-Blackwell Rural Transportation Center Jan 2008</td>
<td>Pending</td>
</tr>
<tr>
<td>Visualization and Ontology of Geo-Spatial Intelligence*</td>
<td>PI</td>
<td>455,216</td>
<td>Office of Naval Research April 2008</td>
<td>Not Funded</td>
</tr>
<tr>
<td>Dynamic (Variable) Message Signs in Traffic Management*</td>
<td>PI</td>
<td>255,000</td>
<td>Arkansas State Highway and Transportation Department</td>
<td>Not Funded</td>
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<tr>
<td>Real-time Disruption Impacts of Incidents*</td>
<td>PI</td>
<td>150,000</td>
<td>Arkansas State Highway and Transportation Department</td>
<td>Not Funded</td>
</tr>
<tr>
<td>Cyber Transportation Logistics: A Global Value-Chain For Services*</td>
<td>PI</td>
<td>$4 million/yr up to 5 yrs</td>
<td>Arkansas Science &amp; Technology Authority/NSF EPSCOR</td>
<td>Not Funded</td>
</tr>
<tr>
<td>Visualization and Ontology of Geo-Spatial Intelligence*</td>
<td>PI</td>
<td>386,983</td>
<td>Arkansas Science &amp; Technology Authority/DoD EPSCOR</td>
<td>Not Funded</td>
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</table>

*Pre-proposal

### DR. CHAN

#### Ongoing Projects
## Proposal Title

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<th>Proposal Title</th>
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<th>Months of effort/year</th>
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</tr>
</thead>
<tbody>
<tr>
<td>International Conference on Cyber Transportation Logistics</td>
<td>Winthrop Rockefeller Center's Partnership Opportunity Grant</td>
<td>Jan-June 2008</td>
<td>$12,500</td>
<td>One month/yr</td>
<td>PI</td>
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<tr>
<td>UALR Intelligent Transportation System</td>
<td>Federal Highway Administration</td>
<td>10/1/04 - 10/31/09</td>
<td>$415,972</td>
<td>1. months per year</td>
<td>PI</td>
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<tr>
<td>Reality Simulation Center for Industries &amp; Academia</td>
<td>Economic Development of AR Fund Commission</td>
<td>Indefinite</td>
<td>$291,450</td>
<td>Indefinite</td>
<td>PI</td>
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</table>

### DR. HUANG

#### New Proposals

<table>
<thead>
<tr>
<th>Proposal Title</th>
<th>PI &amp; Co-Pis</th>
<th>Amount Requested</th>
<th>Submitted To Date</th>
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</thead>
<tbody>
<tr>
<td>Infrastructure for Wireless, Nano-, Bio-, Info-Tech Sensors and Systems</td>
<td>Senior Investigator</td>
<td></td>
<td>NSF EPSCoR</td>
<td>Funded</td>
</tr>
<tr>
<td>Real-Time Damage Detection in Sandwich Honeycomb Panels by Using Complementary Vibration and Wave Propagation Approaches</td>
<td>PI</td>
<td>20,000</td>
<td>08/15/2008 (NASA RID)</td>
<td>Funded</td>
</tr>
<tr>
<td>A New Smart system for bridge structural health monitoring</td>
<td>PI</td>
<td>168,000</td>
<td>11/27/2007-2011 (Korean Institute of Geosciences and Mineral Resources)</td>
<td>Funded (second year)</td>
</tr>
<tr>
<td>Development of Meta-composite materials with negative mass density</td>
<td>Co-PI</td>
<td>120,000</td>
<td>01/12/2007 (Air Force Research Laboratory)</td>
<td>Funded</td>
</tr>
<tr>
<td>Online Structural Health Monitoring of Bridge's Steel Girders by Using a Piezoelectric Sensor System</td>
<td>PI</td>
<td>111,397</td>
<td>02/27/08 Transportation Research Board</td>
<td>Declined</td>
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<tr>
<td>On-Line Structural Health Monitoring of Honeycomb Composites by Using a Multiple Sensor Network at Cryogenic Environments</td>
<td>PI</td>
<td>45000</td>
<td>11/19/2008 ASGC</td>
<td>Declined (rank third out of ten)</td>
</tr>
<tr>
<td>Development of Meta-Nanocomposite Materials for Broadband Acoustic Cloaks</td>
<td>PI</td>
<td>644934</td>
<td>10/22/08 DEPSCoR</td>
<td>Declined</td>
</tr>
<tr>
<td>Development, Characterization, and Evaluation of Advanced Materials for Airframe and Propulsion System Applications</td>
<td>Co-PI</td>
<td>650,000</td>
<td>12/1/08 NASA EPSCoR</td>
<td>Pending</td>
</tr>
<tr>
<td>Development of On-Line Structural Health Monitoring of Aerospace Composite Materials with Multiple Sol-Gel Spray Sensors</td>
<td>PI</td>
<td>674,827</td>
<td>12/1/08 NASA EPSCoR(preprosal)</td>
<td>Pending</td>
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<tr>
<td>A New Multiscale Continuum Modelling of Dynamic Behavior in Nano Thin Films</td>
<td>PI</td>
<td>7000</td>
<td>02/03/08 Kathleen Thomsen Hall Charitable Trust Grant, UALR</td>
<td>Declined</td>
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<tr>
<td>Stimulating STEM Education in the State of Arkansas: Success with Active Learning in Engineering and Mathematics (SALEM).</td>
<td>Co-PI</td>
<td>1000,000</td>
<td>NSF</td>
<td>Pending</td>
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</table>
DR. HUANG

Ongoing Projects

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<thead>
<tr>
<th>Proposal Title</th>
<th>Funding Agency</th>
<th>Duration</th>
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<th>Months of effort/year</th>
<th>Your Role (PI, Co-PI, C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure for Wireless, Nano-, Bio-, Info-Tech Sensors and Systems</td>
<td>NSF</td>
<td>3 years</td>
<td>2</td>
<td></td>
<td>Senior Investigator</td>
</tr>
<tr>
<td>On-Line Structure Health Monitoring for Space Structures by Using MEMs-Based Piezoelectric Sensors</td>
<td>NASA</td>
<td>1 year</td>
<td>45,000</td>
<td>2</td>
<td>PI</td>
</tr>
<tr>
<td>A New smart system for bridge structural health monitoring</td>
<td>Korean Institute of Geosciences and Mineral Resources</td>
<td>4 years</td>
<td>168,000</td>
<td>1</td>
<td>PI</td>
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<tr>
<td>Finite Element Analysis of Human Musculoskeletal System for Simulation of Postural Reactions</td>
<td>Arkansas Department of Higher Education</td>
<td>0.5 year</td>
<td>2,650</td>
<td>0.5</td>
<td>Mentor</td>
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DR. IQBAL

New Proposals

<table>
<thead>
<tr>
<th>Proposal Title</th>
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<th>Amount Requested</th>
<th>Submitted To Date</th>
<th>Funded/ Not Funded</th>
</tr>
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<tbody>
<tr>
<td>1. Integrative Neuromuscular, Motor, and Behavioral Modeling for Investigation of Motor Control Functions (PI), NSF-IIIS,</td>
<td>K. Iqbal A. Ahmad N. Bouaynaya</td>
<td>$789,279</td>
<td>Feb. 2008</td>
<td>Not funded</td>
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DR. JOVANOVIC

NONE

DR. KIM

Ongoing Projects

<table>
<thead>
<tr>
<th>Proposal Title</th>
<th>PI &amp; Co-Pls</th>
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<th>Submitted To Date</th>
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</tr>
</thead>
<tbody>
<tr>
<td>A New smart system for bridge structural health monitoring</td>
<td>Co-PI</td>
<td>$168,000</td>
<td>Submitted to Korean Institute of Geosciences and Mineral Resources</td>
<td>Awarded</td>
</tr>
<tr>
<td>Surface wave propagation in concrete by using piezoelectric actuators/sensors</td>
<td>Co-PI</td>
<td>$7,000</td>
<td>Submitted to Seoul Inspection INC</td>
<td>Awarded</td>
</tr>
<tr>
<td>Computational approach to finding mutations in the CFTR promoter region in cystic fibrosis patients</td>
<td>PI</td>
<td>$6,000</td>
<td>Submitted to ACH CF center</td>
<td>Awarded</td>
</tr>
<tr>
<td>Bioinformatics approach to finding mutations in the CFTR promoter region in cystic fibrosis patients</td>
<td>Co-PI</td>
<td>$50,000</td>
<td>Submitted to Arkansas Bioscience Institute</td>
<td>Awarded</td>
</tr>
<tr>
<td>Supercomputing time to execute dynamic algorithm on Dictystelium cell</td>
<td>PI</td>
<td>10,000 unit hours</td>
<td>National Advanced Computational Infrastructure</td>
<td>Awarded</td>
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### DR. LIU
New Proposals

<table>
<thead>
<tr>
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<th>Submitted To Date</th>
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</tr>
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<tbody>
<tr>
<td>Wireless Optical Communications with Tunable Lasers</td>
<td>PI</td>
<td>$304,606</td>
<td>12/17/2008</td>
<td>Pending</td>
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### DR. MOHAN
New Proposals

<table>
<thead>
<tr>
<th>Proposal Title</th>
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<th>Amount Requested</th>
<th>Submitted To Date</th>
<th>Funded/Not Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment of IP-based Optical Networking Protocols and Their Applicability to Satellite and Space Communications Networks</td>
<td>PI</td>
<td>$104,000 $16,539</td>
<td>Submitted to NSF EPSCOR (a multi-university, multi-project proposal)</td>
<td>Awarded $104K for 1st year; ext. with $16,539; another extension of $16K plus was granted</td>
</tr>
<tr>
<td>Concurrent Multilayer Recovery in WDM Optical Networks</td>
<td>PI</td>
<td>$52,248</td>
<td>Space Photonics</td>
<td>Declined</td>
</tr>
<tr>
<td>Arkansas ASSET (Advancing and Supporting Science, Engineering, and Technology) Initiative ¹</td>
<td>PI - UALR</td>
<td>$13,500,000</td>
<td>Submitted to NSF EPSCOR</td>
<td>Year 2 funding Awarded</td>
</tr>
<tr>
<td>Extensions to GMPLS and OSPF-TE Protocols for the Development of High-Speed Networking Provisioning Tools and Services</td>
<td>Co-PI</td>
<td>$100,000</td>
<td>Submitted to DOE SBIR in collaboration with Space Photonics</td>
<td>Declined</td>
</tr>
<tr>
<td>Stimulating Engr. Education in the State of Arkansas: Success w/Active Learning in Engineering &amp; Mathematics (SALEM) Program</td>
<td>PI</td>
<td>$20,000</td>
<td>ASTA</td>
<td>Awarded</td>
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<tr>
<td>Reliable Transport Layer for Networking Over the Airborne Network</td>
<td>PI</td>
<td>$100,000</td>
<td>Submitted to AFRL SBIR (in collaboration with Space Photonics)</td>
<td>Declined</td>
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<tr>
<td>Capstone project Mini Baja</td>
<td>PI</td>
<td>$6,000</td>
<td>NASA ESMD</td>
<td>Awarded</td>
</tr>
<tr>
<td>Stimulating Engr. Education in the State of Arkansas: Success w/Active Learning in Engineering &amp; Mathematics (SALEM) Program</td>
<td>PI</td>
<td>$1,000,000</td>
<td>NSF</td>
<td>Declined</td>
</tr>
<tr>
<td>Transformative Elements for the Next Generation Cyber Infrastructure</td>
<td>PI</td>
<td>$4m/yr for 5 years (Multiuniversity Proposal)</td>
<td>ASTA</td>
<td>Declined</td>
</tr>
<tr>
<td>Transformative Elements for Space Communications</td>
<td>PI</td>
<td>$750,000</td>
<td>NASA</td>
<td>Declined</td>
</tr>
<tr>
<td>Wireless Optical Communications with Tunable Lasers</td>
<td>Co-PI</td>
<td>$304,606</td>
<td>12/17/2008</td>
<td>Pending</td>
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### DR. MOHAN

**Ongoing Projects**

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<th>Your Role (Pi, Co-Pi)</th>
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<tbody>
<tr>
<td>Arkansas ASSET (Advancing and Supporting Science, Engineering, and Technology) Initiative</td>
<td>NSF EPScOR</td>
<td>3 years</td>
<td>$13,500,000</td>
<td>1</td>
<td>Pi-UALR</td>
</tr>
<tr>
<td>Assessment of IP-based Optical Networking Protocols and Their Applicability to Satellite and Space Communications Networks</td>
<td>Space Photonics Inc. for as part of SBIR to AFRL</td>
<td>1 year</td>
<td>Awarded $104K for the first year; ext. with $16,539; another ext. of $16K was granted</td>
<td>1</td>
<td>Pi</td>
</tr>
<tr>
<td>Stimulating Engineering Education in the State of Arkansas: Success with Active Learning in Engineering and Mathematics (SALEM) Program</td>
<td>ASTA, NSF, Winthrop Rockefeller Foundation</td>
<td>2 weeks</td>
<td>$20,000</td>
<td>1</td>
<td>Pi</td>
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</table>

### DR. NISANCI

**NONE**

### DR. REDDY

**New Proposals**

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<tr>
<td>Electrostatic charged particle deposition in human lungs. Mathematical Modeling and Experimental Verification</td>
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### DR. TUDOREANU

**New Proposals**

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>IRES: U.S.-France Cooperative Research in Engineering Innovative Software Systems with Applications to Maritime Transportation Logistics</td>
<td>Co-PI</td>
<td>$149,703</td>
<td>NSF</td>
<td>Funded</td>
</tr>
<tr>
<td>EPScorT2: Cyber infrastructure for Transformational Scientific Discovery in Arkansas and West Virginia (CI-TRAIN),</td>
<td>PI</td>
<td>$2M</td>
<td>NSF</td>
<td>Pending</td>
</tr>
<tr>
<td>Integrating Power Grid Visualizations in a Comprehensive Interactive Visualization, PI in preparation, SPP (Southwest Power Pool) and EPRI (Electric Power Research)</td>
<td>PI</td>
<td></td>
<td>SPP (Southwest Power Pool) and EPRI (Electric Power Research)</td>
<td></td>
</tr>
<tr>
<td>Virtual Human Explorer</td>
<td></td>
<td></td>
<td>NASA, Arkansas Space Grant Consortium</td>
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</table>
## DR. XI

### New Proposals

<table>
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<tr>
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<th>Amount Requested</th>
<th>Submitted To Date</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Controlled lung delivery of nano and micrometer aerosols through condensation growth</td>
<td>Co-PI</td>
<td>$250,000.00</td>
<td>NIH/May 2008</td>
<td>Pending</td>
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<tr>
<td>Enhanced Mixing in Microfluidic Devices</td>
<td>Co-PI</td>
<td>$300,000.00</td>
<td>NSF/Nov. 2008</td>
<td>Pending</td>
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</table>

## DR. ZHANG

### New Proposals

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<tr>
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<th>Submitted To Date</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Hub of Best Robot (ASTA)</td>
<td>PI</td>
<td>$15,000</td>
<td>5/21/08</td>
<td>Funded</td>
</tr>
<tr>
<td>DC Electric Power System for Residential Applications (AHDA)</td>
<td>PI</td>
<td>$2,600</td>
<td>10/28/08</td>
<td>Funded</td>
</tr>
<tr>
<td>Three-Phase High Voltage Amplifier (NASA JPL)</td>
<td>PI</td>
<td>$25,000</td>
<td>7/30/08</td>
<td>Pending</td>
</tr>
</tbody>
</table>
PUBLICATIONS
Systems Engineering

DR. AL-RIZZO

Publications


Patents:

a. Articles submitted for publication


b. Articles being prepared for submission

In Preparation:


H. M. Al-Rizzo, "An Interdisciplinary Simulation-Based Laboratory for Systems Engineering:
Electromagnetics, Antennas, and Wireless Communications Undergraduate Teaching and Learning,” IEEE Transactions Education.


Note: 1, 2 and 5 are delayed from publications because of patents issues

DR. BABICEANU

Publications

c. Articles published (attach a copy of each publication and use a standard bibliographic form, including page reference and date).

d. Articles accepted for publication

e. Articles submitted for publication

f. Articles being prepared for submission

DR. BOUAYNAYA

Accepted Journal papers


Accepted Conference papers

6. PDF copies of my accepted and published papers can be found at: http://syen.ualr.edu/nxbouaynaya/publications.htm

Journal papers submitted

Conference papers submitted


Articles being prepared for submission


DR. CHAN

Publications

Articles published


Articles submitted for publication


Textbooks, chapters, or manuals in preparation


DR. HUANG

Publications

Journal Publication:

Conference Publication:

Journal Publication:

Articles submitted for publication

Articles being prepared for submission

Textbooks, chapters, or manuals published
Nil

Textbooks, chapters, or manuals in preparation
MEMS Lab--Sputtering Machine Manuals
Dr. Iqbal

Publications


5. A.M. Mughal and K. Iqbal, “Analytical symmetrical and asymmetrical bipedal models with holonomic constraints”, Proceed. 10th Intl. IASTED Conf. on Modeling and Simulation”, paper no. , Quebec City, Canada, May 2008


Articles accepted for publication


Articles submitted for publication


Articles being prepared for submission


Textbooks, chapters, or manuals in preparation


DR. JOVANOVIĆ
NONE

DR. KIM
Publications
  a. Published
    Peer-reviewed Journals

Conference Proceedings

DR. LIU
Publications

DR. MOGAN
Publications
  a. Articles published (attach a copy of each publication and use a standard bibliographic form, including page reference and date).

b. Articles submitted for publication

c. Articles being prepared for submission
- “Impact of mobility models on IP Multimedia Subsystems,” in preparation for submission to IEEE Communications.

d. Textbooks, chapters, or manuals in preparation
- Textbook: “Mobile Multimedia Internet,” proposal reviewed and accepted by Wiley; being co-authored by J.G. Waclawsky (Chief Software Architect, Motorola) and Prathima Agrawal (Chair Professor, Department of Elec. And Comp. Eng., Auburn University).

DR. NISANCI
NONE

DR. REDDY

Publications

Articles published (attach a copy of each publication and use a standard bibliographic form, including page reference and date).

DR. TUDOREANU

Publications
a. Articles published (attach a copy of each publication and use a standard bibliographic form, including page reference and date).

b. Articles accepted for publication


c. Articles submitted for publication

Elmqvist, N., Tudoreanu, M. E. “Motion Constraints for 3D Wayfinding: Tour Generation and Guidance for Navigation in Virtual Environments” to ACM Transactions on Visualization and Computer Graphics

d. Articles being prepared for submission

Peterson E., Tudoreanu M. E. “Effects of Spatial Distortion on Steering Tasks in Immersive VR”

DR. XI

Publications

a. Articles published (attach a copy of each publication and use a standard bibliographic form, including page reference and date).


Articles submitted for publication


b. Articles being prepared for submission

J. Xi, and B, Ariel “Aerosol transport and Deposition in a 5-year-old Nasal Airway model,” Journal of Applied Physiology.


J. Xi, and P. W. Longest, “Numerical Investigation of Extra-thoracic Physiological Effect on Airflows and Nasal Airway Aerosol Deposition,” Respiratory Physiology and Neurobiology,
c. Textbooks, chapters, or manuals in preparation

DR. ZHANG

Publications
a. Articles published (attach a copy of each publication and use a standard bibliographic form, including page reference and date).

B. PUBLIC SERVICE

DR. AL-RIZZO

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE, Antennas and Propagation Society</td>
<td></td>
<td>since 1992</td>
</tr>
<tr>
<td>IEEE, Microwave Theory and Techniques Society</td>
<td></td>
<td>since 1992</td>
</tr>
<tr>
<td>Materials Research Society</td>
<td></td>
<td>since 1992</td>
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<tr>
<td>International Microwave Power Institute</td>
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<td>since 1992</td>
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<tr>
<td>Applied Computational Electromagnetic Society</td>
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<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Contribution</th>
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Contacts made with potential funders (consulting, industrial, government)
UAMS, NASA, NIH

Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, school, university)</th>
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<tbody>
<tr>
<td>ABET Task Force</td>
<td>Member</td>
<td>Department</td>
</tr>
<tr>
<td>Annual Performance Evaluation</td>
<td></td>
<td>Department</td>
</tr>
<tr>
<td>Curriculum Committee</td>
<td>Member</td>
<td>Department</td>
</tr>
<tr>
<td>Undergraduate Student Advisor</td>
<td>Advisor</td>
<td>Department</td>
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<tr>
<td>College Undergraduate</td>
<td></td>
<td>College</td>
</tr>
<tr>
<td>Curriculum Committee</td>
<td>Alternate</td>
<td>College</td>
</tr>
<tr>
<td>Intern. Student Advisor</td>
<td>Advisor</td>
<td>College</td>
</tr>
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</table>
Traffic Committee Member University.
Replacement member of the Graduate Council Member University
Academic Technology and Computing Committee Member University
Ambassador for the Systems Engineering Department Member University
Graduate Council Replacement Member University
Search Committee Chair Department
Graduate Students/Travel Fund Committee Member College
College Assembly Secretary College
Promotion and Tenure Committee Member Department

Administrative duties other than committee work

International Students’ Advisor/College

Off-campus professional, public, and community services

Volunteer to the Lions School for the Blind
Held several meetings with product designers and software vendors: CST, Speag, Agilent, Ansoft, VisSim, and AMI. A Network Analyzer and CST Design Suite, VisSim, SEMCAD have been installed in the Telecommunications Lab.

Additional information

- Ambassador for the Systems Engineering Department, Campus Campaign.
- Reviewed the book, Microwave/RF Design, SCITECH Publishing Inc.
- Member of the Technical Advisory Committee of the International Microwave Power Institute, three-year term started on February, 2005.

DR. BABICEANU

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
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<th>Dates</th>
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<tbody>
<tr>
<td>INCOSM</td>
<td>Member</td>
<td>2006-present</td>
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<tr>
<td>INCOSM - Systems Science Enabler Group</td>
<td>Member</td>
<td>2007-present</td>
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<tr>
<td>IEEE</td>
<td>Member</td>
<td>2006-present</td>
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<tr>
<td>IEEE - Systems, Man, and Cybernetics</td>
<td>Member</td>
<td>2006-present</td>
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<tr>
<td>INFORMS</td>
<td>Member</td>
<td>2004-present</td>
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<tr>
<td>Institute of Industrial Engineers (IIE)</td>
<td>Member</td>
<td>2002-present</td>
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Participation in activities of professional or learned societies

<table>
<thead>
<tr>
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<th>Contribution</th>
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<tr>
<td>International Journal of Manufacturing</td>
<td>Reviewer</td>
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Technology and Management

- INCOSE - Systems Science Enabler Group (SSEG) Panelist

Meetings of professional associations attended (include those cited above if present)

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<tr>
<th>Professional Association</th>
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<tr>
<td>The 17th INCOSE International Symposium</td>
<td>San Diego, CA</td>
<td>June 2007</td>
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<tr>
<td>INCOSE - Systems Science Enabler Group</td>
<td>San Diego, CA</td>
<td>June 2007</td>
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<tr>
<td>Managing “Human” Supply Chains: Novel FedEx Institute of Technology Applications of Supply Chain Management</td>
<td>The University of Memphis, TN</td>
<td>June 2007</td>
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<tr>
<td>Identity Solutions Symposium and Workshop</td>
<td>Arkansas State University, Jonesboro, AR</td>
<td>Feb. 2007</td>
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Contacts made with potential funders (consulting, industrial, government)


Department, school, and university committees

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<tr>
<th>Nature of Service</th>
<th>Level (Department, Committee) (Chairman/Member) (school, university)</th>
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<tbody>
<tr>
<td>Assessment Committee</td>
<td>Member Department</td>
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<tr>
<td>PAAG Assessment Committee</td>
<td>Member College</td>
</tr>
<tr>
<td>Ad-hoc Website Committee</td>
<td>Member Department</td>
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Administrative duties other than committee work

Off-campus professional, public, and community services

- Panelist reviewer for the Student Undergraduate Research Fellowship (SURF) Program, Arkansas Department of Higher Education, Nov. 2007.

Awards and recognition received


DR. BOUAYNAYA

Publications

Journal Papers


2) Nidhal Bouaynaya and Dan Schonfeld, “Theoretical Foundations of Spatially-Variant Mathematical
Morphology Part II: Gray-Level Images”, IEEE Transactions on Pattern Analysis and Machine Intelligence, accepted.


Conference Papers


DR. CHAN

Paid Consulting or Contracts as an individual (list client, work title, total billed hours)

- External Academic Advisor for their Master of Arts in Quantitative Analysis programme, Department of Management Sciences, City University of Hong Kong, 1 October 2007– September 2008 (15 hours total).

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Affiliation</th>
<th>Office Held</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Transportation Research Board (National)</td>
<td>University Representative for UALR</td>
<td>4/04 to present</td>
</tr>
<tr>
<td>Omega Rho International Honor Society (International)</td>
<td>Past President</td>
<td>11/04 to present</td>
</tr>
<tr>
<td>Institute for Operations Research &amp; Management Science (National)</td>
<td>Promoted from a 2-yr term as Secretary to Vice-President, Section on Location Analysis</td>
<td>11/06 to present</td>
</tr>
<tr>
<td>American Society of Civil Engineers (National)</td>
<td>Associate Editor, Urban Planning &amp; Development Journal</td>
<td>10/88 to present</td>
</tr>
<tr>
<td>International Journal of Interdisciplinary Telecommunications &amp; Networking</td>
<td>Associate Editor</td>
<td>1/08 to present</td>
</tr>
<tr>
<td>International Journal of Society Systems Science</td>
<td>American Editor</td>
<td>4/08 to present</td>
</tr>
<tr>
<td>ABET</td>
<td>Accreditation Evaluator</td>
<td>9/07 to present</td>
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</table>
Participation in activities of professional or learned societies

a. Contribution to a meeting program or reviewing of journal or proceedings articles


b. Meetings of professional associations attended (include those cited above if present)

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<tr>
<th>Professional Association</th>
<th>Contribution</th>
<th>Date(s)</th>
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<tbody>
<tr>
<td>87th Annual Meeting of the Transportation Research Board</td>
<td>Committee meetings</td>
<td>1/13-16/08</td>
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<tr>
<td>Rockefeller Conference Center, Petit Jean Mountain, AR</td>
<td>Chaired an International Conference on Cyber TRANSPORTATION Logistics</td>
<td>4/3-5/08</td>
</tr>
<tr>
<td>10th International Conference on Application of Advanced Technologies in Transportation, American Society of Civil Engineers</td>
<td>Paper presentation</td>
<td>5/28-30/08</td>
</tr>
<tr>
<td>Fall national meeting of the Institute of Operations Research &amp; Management Sciences, Seattle, WA</td>
<td>Committee meetings and presentation</td>
<td>10/12-14/08</td>
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<tr>
<td>13th Hong Kong Society of Transportation Studies International Conference</td>
<td>Plenary presentation</td>
<td>12/13-15/08</td>
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</table>

Contacts made with potential funders (consulting, industrial, government)

- Project Selection and Review Panel, National Cooperative Highway Research Program, Transportation Research Board, January 2008 through December 2008
- Air Force Research Laboratory, Wright – Patterson AFB, Ohio
- Air Force Office of Scientific Research
- Office of Naval Research
- Army Research Lab
- National Science Foundation

Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service (Chairman/Member)</th>
<th>Level (Dept/School/University)</th>
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<tbody>
<tr>
<td>UALR Senate</td>
<td>Senator</td>
<td>University</td>
</tr>
<tr>
<td>UALR Cooperative Education Board</td>
<td>Member</td>
<td>University</td>
</tr>
<tr>
<td>EIT College Graduate Curriculum Committee</td>
<td>Chair</td>
<td>College</td>
</tr>
<tr>
<td>EIT College Ad Hoc Library Committee</td>
<td>Member</td>
<td>College</td>
</tr>
<tr>
<td>Assessment Standing Committee</td>
<td>Advisor</td>
<td>Department</td>
</tr>
<tr>
<td>Ad Hoc Promotion &amp; Tenure Committee</td>
<td>Chair</td>
<td>Department</td>
</tr>
<tr>
<td>Department Program Coordination Committee</td>
<td>Member</td>
<td>Department</td>
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</table>

Administrative duties other than committee work
Proposal to create an ASTA Center of Excellence on Cyber Transportation Logistics
- Coordinator of Exchange Program with the City University of Hong Kong
- Graduate Coordinator, Graduate Certificate in Systems Engineering
- Coordinator, Co-operative Education Courses
- Faculty Advisor, INCOSE Chapter, UALR

Off-campus professional, public, and community services
- I am a program advisor for the Supply Chain Management Program and an external examiner of the Master of Arts in Quantitative Analysis program of the Dept. of Management Science Dept. at the City University of Hong Kong (CityU). The initial activity started six years ago. This results in an international exchange agreement between CityU and UALR. There is also an opportunity to effect a joint research program between the two campuses.
- Since the Fall of 2007, I serve as MIT Educational Counselor, interviewing high school students for admission to MIT.

Awards and recognition received
- EIT Service Award 2007-2008

DR. HUANG

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
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</thead>
<tbody>
<tr>
<td>American Society of Mechanical Engineering</td>
<td>Member</td>
<td>2005-present</td>
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Participation in activities of professional or learned societies
a. Contribution to a meeting program or reviewing of journal or proceedings articles

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>Mechanics of Advance Materials and Structures</td>
<td>Reviewer</td>
</tr>
<tr>
<td>AIAA Journal of Thermophysics</td>
<td>Reviewer</td>
</tr>
<tr>
<td>International Journal of Solids and Structures</td>
<td>Reviewer</td>
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</table>

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Location</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASME Applied Mechanics and Materials Conference</td>
<td>Austin, Texas</td>
<td>June 5-9 2007</td>
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<tr>
<td>World Forum on Smart Materials and Smart Structure Technology</td>
<td>Chongqing, China</td>
<td>June 22-25 2007</td>
</tr>
<tr>
<td>NSF Summer Institute of Nanomechanics and Nanomaterials</td>
<td>Evanston, IL</td>
<td>July 9-12, 2007</td>
</tr>
</tbody>
</table>

Contacts made with potential funders (consulting, industrial, government)
- Invited by Dr. John Wang, I visited the NASA Langley Research Center on August 9th, 2007 and gave a presentation on “Structural Health Monitoring Using a Piezoelectric Actuator/Sensor System.”
- Contacted with Dr. Les Lee in Air Force Laboratory

Department, school, and university committees
Committee | Nature of Service | Level (Department, school, university)
--- | --- | ---
Curriculum Committee (Chairman/Member) | Member | Department
Assessment Committee | Member | Department
Faculty Search Committee | Member | Department
Undergraduate Curriculum Committee | Member | College

Administrative duties other than committee work
- Set-up a research laboratory “Ultrasonics Laboratory” at UALR
- Supervision of Mechanics of Materials Lab at UALR

Off-campus professional, public, and community services
- Serve as a judge for the SECME Olympiad in 2007
- Host 75 fourth grade students from Stephens Elementary School by demonstrating material’s mechanical properties testing in Materials Lab (2007).
- Host 15 high school students as part of the Summer Aerospace Academy by demonstrating material’s mechanical properties testing in Materials Lab (2007).

Awards and recognition received
- Fellowship of NSF Summer Institute of Nanomechanics and Nanomaterials

Additional information
- Summer Project for High School Students “POLYMER-CARBON NANOTUBE COMPOSITE FOR USE AS A SENSOR”.

DR. IQBAL

Paid Consulting or Contracts as an individual (list client, work title, total billed hours)

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute of Electrical and Electronics Engineers (IEEE), Soc: Control Systems; System, Man, and Cybernetics</td>
<td>Senior Member</td>
<td>2006-present</td>
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<tr>
<td>International Council on Systems Engineering</td>
<td>Member</td>
<td>2002-present</td>
</tr>
<tr>
<td>International Association of Science and Technology for Development (Technical committee on control)</td>
<td>Member</td>
<td>2001-present</td>
</tr>
<tr>
<td>Institution of Engineering and Technology (UK)</td>
<td>Member</td>
<td>2003-present</td>
</tr>
<tr>
<td>Sigma Xi scientific honor society</td>
<td>Member</td>
<td>2003-present</td>
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<tr>
<td>Pakistan Engineering Council</td>
<td>Member</td>
<td>1980-present</td>
</tr>
<tr>
<td>American Society of Biomechanics</td>
<td>Member</td>
<td>2006-07</td>
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Participation in activities of professional or learned societies
- Contribution to a meeting program or reviewing of journal or proceedings articles
  | Professional Association | Contribution |
  | IEEE(Pak) International Conf. on Electrical Eng | Colloquium speaker |
  | World Congress on Comp. Science and Information Eng | Member Program Committee |
IEEE Transactions on Biomedical Engineering Reviewer
IEEE American Control Conference Reviewer
IEEE Control and Decision Conference Reviewer
IEEE Systems Man and Cybernetics Conference Reviewer
IEEE Conference on Automation Science and Engineering Reviewer
IEEE International Conference on Industrial Technology Reviewer
IEEE International Workshop on Variable Structure Systems Reviewer
ASME Dynamic Systems and Controls Conference Reviewer

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Location</th>
<th>Date(s)</th>
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<tbody>
<tr>
<td>IEEE(Pak) International Conf. on Electrical Eng</td>
<td>Lahore, Pak</td>
<td>Mar 24-25, 2008</td>
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Contacts made with potential funders (consulting, industrial, government)

Department, school, and university committees

<table>
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<tr>
<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, school, university)</th>
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<tbody>
<tr>
<td>Curriculum Committee</td>
<td>Chair</td>
<td>Department</td>
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<tr>
<td>Tenure and Promotion Committee</td>
<td>Member</td>
<td>Department</td>
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<tr>
<td>Laboratory and Facilities Committee</td>
<td>Member</td>
<td>Department</td>
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<tr>
<td>Departmental Vision Task Force</td>
<td>Member</td>
<td>Department</td>
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<tr>
<td>Faculty Search Committee</td>
<td>Member</td>
<td>Department</td>
</tr>
<tr>
<td>Undergraduate Council</td>
<td>Member</td>
<td>University</td>
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<tr>
<td>Awards Committee</td>
<td>Member</td>
<td>University</td>
</tr>
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</table>

Off-campus professional, public, and community services

Served as PhD external examiner at the following institutions:

1. Gulistan Raja, Design and implementation of improved quality low bit rate video coding, University of Taxila, Pakistan (2008-09)
2. Manzar Saeed, Optimization of block encryption based speed coder against transmission channel noise, University of Engineering and Technology, Lahore, Pakistan (2008-09)

Awards and recognition received

Professional Engineering License (Dec 2008)

Additional information

Mentor for McNair scholarship program
Arkansas BRIN/INBRE program mentor

DR. JOVANOVIC

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
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<tbody>
<tr>
<td>American Society of Mechanical Engineers (ASME)</td>
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<tr>
<td>American Society for Engineering Education (ASEE)</td>
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<tr>
<td>American Association of University Professors (AAUP)</td>
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Participation in activities of professional or learned societies
a. Contribution to a meeting program or reviewing of journal or proceedings articles

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<tr>
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<tr>
<td>ASEE</td>
<td>Reviewed articles for Mechanics Division</td>
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Department, school, and university committees

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<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, school, university)</th>
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</thead>
<tbody>
<tr>
<td>UALR Faculty Senate</td>
<td>Senator from DCEIT</td>
<td>University</td>
</tr>
<tr>
<td>DCEIT Assembly</td>
<td>Vice President</td>
<td>College</td>
</tr>
</tbody>
</table>

Off-campus professional, public, and community services

- Chair of the Computer and Computational Science Subpanel. Each year, the subpanel reviews ~300 applications for prestigious NDSEG fellowships in the fields of computer science and engineering and computational science. As subpanel chair, I coordinate the activities of the subpanel, which comprises ~15 experts from around the country. The panel meets annually in Washington, D.C. every February.

Additional information

- Professional Engineer License #9149
- Arkansas Board of Registration for Professional Engineers and Land Surveyors

According to Arkansas State Law, only licensed professional engineers are permitted to teach junior-level and above courses. Therefore, during 2008, I was one of only two faculty members in the SYEN department who complied with this law. I have encouraged my colleagues to get licensed so that our department can become 100% compliant with the law. One colleague was already licensed in another state and has since become licensed in Arkansas, and another colleague just passed the PE Exam and became licensed. Therefore, in 2009, three members of the SYEN faculty are licensed.

DR. KIM

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
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<tbody>
<tr>
<td>IEEE Computer Society</td>
<td>Senior member</td>
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Participation in activities of professional or learned societies

a. Contribution to a meeting program or reviewing of journal or proceedings articles

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<tr>
<th>Professional Association</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>IEEE Computer Society</td>
<td>reviewer</td>
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</table>

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
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<th>Professional Association</th>
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<tr>
<td>2008 ISAC</td>
<td>Spain</td>
<td>July, 2008</td>
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Contacts made with potential funders (consulting, industrial, government)
Industrial (Samsung SDS), Government (NIH, NSF, DoD), CF foundation

Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, school, university)</th>
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<tbody>
<tr>
<td>Award Committee</td>
<td>Member</td>
<td>College</td>
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<tr>
<td>Graduate Curriculum Committee</td>
<td>Member (alt.)</td>
<td>College</td>
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<tr>
<td>Undergraduate Student Adviser</td>
<td>Adviser</td>
<td>Dept.</td>
</tr>
<tr>
<td>Library Liaison</td>
<td></td>
<td>Dept.</td>
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<tr>
<td>Faculty Search Committee</td>
<td>Member</td>
<td>Dept.</td>
</tr>
<tr>
<td>Bio-informatics admission committee</td>
<td>Member</td>
<td>College</td>
</tr>
<tr>
<td>New Ph.D program in computing</td>
<td>Member</td>
<td>College</td>
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Awards and recognition received

DR. LIU

Paid Consulting or Contracts as an individual (list client, work title, total billed hours)

Memberships and/or offices held in professional associations

<table>
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<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
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<tr>
<td>IEEE</td>
<td>Member</td>
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Participation in activities of professional or learned societies

a. Contribution to a meeting program or reviewing of journal or proceedings articles

<table>
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<tr>
<th>Professional Association</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>IEEE Globecom 2008</td>
<td>TPC/Paper reviewer (7 papers)</td>
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<tr>
<td>IEEE WCNC 2009</td>
<td>TPC (5 papers)</td>
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<td>IEEE WCNC 2009</td>
<td>Reviewer (1 paper)</td>
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<tr>
<td>IEEE ICC 2009</td>
<td>Reviewer (3 papers)</td>
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<tr>
<td>Journal of Optics Commun</td>
<td>Reviewer (1 paper)</td>
</tr>
<tr>
<td>IEEE Trans. on Vehicular Technology</td>
<td>Reviewer (1 paper)</td>
</tr>
</tbody>
</table>

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Location</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE WCNC 2008</td>
<td>Las Vegas</td>
<td>April</td>
</tr>
<tr>
<td>IEEE Globecom 2008</td>
<td>New Orleans</td>
<td>December</td>
</tr>
</tbody>
</table>

Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, school, university)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Award Committee</td>
<td>Member</td>
<td>College</td>
</tr>
<tr>
<td>Graduate Curriculum Committee</td>
<td>Member (alt.)</td>
<td>College</td>
</tr>
<tr>
<td>Undergraduate Student Adviser</td>
<td>Adviser</td>
<td>Dept.</td>
</tr>
<tr>
<td>Library Liaison</td>
<td></td>
<td>Dept.</td>
</tr>
<tr>
<td>Faculty Search Committee</td>
<td>Member</td>
<td>Dept.</td>
</tr>
<tr>
<td>Bio-informatics admission committee</td>
<td>Member</td>
<td>College</td>
</tr>
<tr>
<td>New Ph.D program in computing</td>
<td>Member</td>
<td>College</td>
</tr>
</tbody>
</table>

Off-campus professional, public, and community services

External reviewer of a Ph.D thesis.
DR. MOHAN

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE</td>
<td>Member</td>
<td>Since 1975</td>
</tr>
</tbody>
</table>

Participation in activities of professional or learned societies

a. Contribution to a meeting program or reviewing of journal or proceedings articles

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Location</th>
<th>Date(s)</th>
</tr>
</thead>
</table>

Contacts made with potential funders (consulting, industrial, government)

- NSF: Met with program directors when I visited NSF to participate as a panelist and reviewer of NSF SBIR; Directors met with include: Dr. Sirin Tekinay, Dr. Adnan Akay, Dr. R. Pimmel; discussed with them CDI, CLLI, and STEP programs and ideas for proposals and solicited feedback.
- Space Photonics, Fayetteville, Arkansas; a proposal was submitted to Space Photonics, which formed part of SBIR proposal to DoE; Chuck Chalfant, CEO of Space Photonics is now a member of the Industrial Advisory Council;
- Met with IMS group of Alltel;
Met with a VP of Wipro at ANTS 2008, Mumbai, India, an IT firm based in Bangalore, India; continued a prior discussion regarding support for IMS related research; and

Met with former CTO Airtel, Chennai, India and discussed fruitful collaborative efforts.

Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, school, university)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems Engineering Vision Task Force, Chair</td>
<td>Department</td>
<td>(Chairman/Member)</td>
</tr>
<tr>
<td>Program Coordination Committee, Chair</td>
<td>Department</td>
<td></td>
</tr>
<tr>
<td>Systems Engineering Core Curriculum Reform ad hoc Task Force, Chair</td>
<td>Department</td>
<td></td>
</tr>
<tr>
<td>Systems Engineering Recruiting, Retention, and Advising Task Force, Chair</td>
<td>Department</td>
<td></td>
</tr>
<tr>
<td>University Inventions Advisory Committee, Member</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

Administrative duties other than committee work

Chair, Systems Engineering Department

Off-campus professional, public, and community services

- Initiated an MoU with Pondicherry University, India, for student/faculty exchange;

Awards and recognition received

- Nominated by Dean Good to the IEEE Region 5 Outstanding Educator Award

Additional information:

- I was awarded four patents in 2007, and one in 2008, a significant accomplishment and key steps in building innovations within EIT

- Outreach Efforts
  - Funded by ASTA, NSF EPSCOR, and Winthrop Rockefeller Foundation, 17 high school students were given engineering experience during a 2-week residential summer program; besides helping build engineering talent within the State of Arkansas, this effort will help recruit students to the College.

DR. NISANCI

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Society for Engineering Education (ASEE)</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Society of Automotive Engineering International (SAE International)</td>
<td>2008</td>
<td></td>
</tr>
</tbody>
</table>

Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, school, university)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P&amp;T committees (2)</td>
<td>Chairman</td>
<td>Department</td>
</tr>
<tr>
<td>Search committee</td>
<td>Member</td>
<td>Department</td>
</tr>
</tbody>
</table>

Off-campus professional, public, and community services
Chaired proposal review panels for the following National Science Foundation programs:
  Advance Technological Education (ATE),
  Course, Curriculum, and laboratory Improvement (CCLI) Phase I,
  Course, Curriculum, and laboratory Improvement (CCLI) Phase II,
  National Science Digital Library (NSDL).

Additional information

A. Supervised the Senior Capstone Baja team till May 31st without extra compensation. This included traveling to Peoria and attending the three day competition in Illinois. The project team competed with 119 top national and international engineering schools at a competition held in Peoria-Illinois. Although this was the first time for UALR’s engineering team, it ranked 46th. In addition to core engineering expertise, the team also had to apply project management, engineering cost analysis, and teaming and communication skills to conduct the project successfully.

B. I encouraged and guided a first year Systems Engineering student to apply and secure a prestigious and competitive summer research job at the Institute for Systems Research in the School of Engineering, University of Maryland. Through the Research Experiences for Undergraduates (REU) program funded by the National Science Foundation and working under the supervision of a Professor, our student conducted research and prepared a paper titled “Person Identification and Gender Recognition from Footstep Sound using Modulation Analysis.”

C. Put together a document to structure the Capstone Design course. The document included sections on organization principles, soliciting proposals, project proposal format, guidelines for potential industrial partners, report preparation, and evaluation rubrics. This document was presented and distributed to SYEN faculty.

DR. REDDY

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member INCOSE</td>
<td>member</td>
<td>2005-2006</td>
</tr>
</tbody>
</table>

Department, school, and university committees

Nature of Service

Level (Department, Committee (Chairman/Member), college/university) Director of

undergraduate studies

Chair, Department of Systems engineering faculty recruitment committee, system engineering program 1999-2008

Chair, Systems engineering program assessment committee 2002-2008

Peer evaluation       Member       Department

Provost Task force     Member       University

Teaching academy       Member       University

On Rolls and Rewards   Member       Department

System Engineering program coordination committee     Department

Administrative duties other than committee work

Director of Undergraduate Studies

Off-campus professional, public, and community services

Central High School Science Fair Judge

Junior academy Science Fair Judge

Arkansas amth and Science school visit
DR. TUDOREANU

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE, IEEE Computer</td>
<td>member</td>
<td></td>
</tr>
<tr>
<td>ACM</td>
<td>member</td>
<td></td>
</tr>
</tbody>
</table>

Participation in activities of professional or learned societies

a. Contribution to a meeting program or reviewing of journal or proceedings articles

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Journal of Human-Computer Studies</td>
<td>reviewer</td>
</tr>
<tr>
<td>ACM CHI 2008 Conference on Human Factors in Computing Systems</td>
<td></td>
</tr>
</tbody>
</table>

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Location</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACM CHI 2008 Conference on Human Factors in Computing Systems</td>
<td>Florence, Italy, April</td>
<td></td>
</tr>
</tbody>
</table>

Contacts made with potential funders (consulting, industrial, government)

- Together with SPP (Southwest Power Pool), hosted an EPRI (Electric Power Research Institute) representative to discuss avenues for funding the 3D Power Grid visualization project.
- Visited and gave a presentation NASA Langley to discuss about future funding for the Virtual Human Explorer project.
- Performed a proof of concept session for general contractor Nabholz in which one of their clients had a chance to examine a future hospital building in virtual reality.

Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service</th>
<th>Level (Department, college, university)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Senate</td>
<td>member</td>
<td>university</td>
</tr>
<tr>
<td>Curriculum Committee</td>
<td>member</td>
<td>department</td>
</tr>
<tr>
<td>Policy and Personnel Advisory Committee</td>
<td>member</td>
<td>college</td>
</tr>
<tr>
<td>EIT Task Force on Research Infrastructure</td>
<td>member</td>
<td>college</td>
</tr>
</tbody>
</table>

Administrative duties other than committee work

Manager Virtual Reality Center

Awards and recognition received

- Faculty Excellence in Teaching, Donaghey College of Engineering and Information Technology, University of Arkansas in Little Rock, 2008.
- Best paper for 2007 in the International Journal of Virtual Reality

Additional information

- I was interviewed for an article in Arkansas Business, August 18, 2008 issue: “UALR’s Virtual Reality Center Aiding Businesses”.
- Helped with an article in the Arkansas Democrat Gazette of February 12.

Bridgetta Super, a student who participated in the Summer High School program in 2007 received the highest
award for Medicine and Health at the 2008 Science Fair West Central Region Special
DR. XI

Paid Consulting or Contracts as an individual (list client, work title, total billed hours)

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASME</td>
<td>Member</td>
<td>1999-present</td>
</tr>
<tr>
<td>Biomedical Engineering Society</td>
<td>Member</td>
<td>2006-present</td>
</tr>
<tr>
<td>Society of American Physical Society</td>
<td>Member</td>
<td>2008-present</td>
</tr>
<tr>
<td>American Association for Aerosol Research</td>
<td>Member</td>
<td>2008-present</td>
</tr>
<tr>
<td>Sigma Xi Society</td>
<td>Full Member</td>
<td>2008-present</td>
</tr>
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</table>

Participation in activities of professional or learned societies

a. Contribution to a meeting program or reviewing of journal or proceedings articles

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal of Aerosol Science</td>
<td>Reviewer</td>
</tr>
</tbody>
</table>

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Location</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS 61st Annual DFD Meeting</td>
<td>San Antonio, TX</td>
<td>Nov. 2008</td>
</tr>
<tr>
<td>AAAR 27th Annual Conference</td>
<td>Orlando, FL</td>
<td>Oct. 2007</td>
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</table>

Department, school, and university committees

Committee Nature of Service Level (Department, school, university)

Recorder Department

DR. ZHANG

Memberships and/or offices held in professional associations

<table>
<thead>
<tr>
<th>Professional Association (chapter, region, national)</th>
<th>Office Held</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE</td>
<td>member</td>
<td>Jan.06–Dec.06</td>
</tr>
<tr>
<td>① System, Man, and Cybernetics Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>② Control Systems Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>③ Signal Processing Society</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participation in activities of professional or learned societies

a. Contribution to a meeting program or reviewing of journal or proceedings articles

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE IECON08</td>
<td>Review three papers</td>
</tr>
<tr>
<td>IEEE ICIT09</td>
<td>Review one paper</td>
</tr>
<tr>
<td>IEEE ICARCV08</td>
<td>Review one paper</td>
</tr>
<tr>
<td>Elsevier Science &amp; Technology Books</td>
<td>Review a proposal for a textbook ‘A Practical Introduction to Electricity and Electronics’</td>
</tr>
</tbody>
</table>

b. Meetings of professional associations attended (include those cited above if present)

<table>
<thead>
<tr>
<th>Professional Association</th>
<th>Location</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE Energy 2030</td>
<td>Atlanta</td>
<td>11/17 – 18</td>
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</table>

Contacts made with potential funders (consulting, industrial, government)

NASA JPL
Department, school, and university committees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Nature of Service</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate Curriculum</td>
<td>Member</td>
<td>Department</td>
</tr>
<tr>
<td>Assessment committee</td>
<td>Chair member</td>
<td>Department</td>
</tr>
</tbody>
</table>

Awards and recognition received

1. Faculty Excellence Award in Research, Donaghey College of Engineering and Information Technology (EIT)

2. IEEE Creativity and Innovation Prize Paper Award for the paper