Kamran Iqbal, PhD

CONTACT INFORMATION

School of Engineering and Engineering Technology
University of Arkansas at Little Rock, Little Rock, Arkansas 72204

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RESEARCH INTERESTS

Control and robotic systems, sensorimotor control of human movement, biomedical signal and image processing, data-driven control and estimation, renewable energy, machine learning

EDUCATION

The Ohio State University, Columbus, Ohio

PhD, Electrical Engineering

MBA

MS, Electrical Engineering

NED University (Pak)

BE, Avionics Engineering (GPA: 3.97)

LICENSURE

Arkansas Professional Engineering License

CAREER HIGHLIGHTS

Administration. I served as assistant department chair for systems engineering (2010-13), whereby I managed course scheduling, student recruitment and advisement, student records, degree plans, graduation checks, student handbook, and website/catalog updates. As Electrical and Computer Engineering program coordinator (2018-date) I have managed and led program and curricula development, program assessment, ABET self-study reports, student advisement, website and catalog updates, and industrial advisory board (IAB) meetings.

Program Development. Having been hired as founding faculty, I have made major contributions toward the design of the following undergraduate and graduate programs: 1) BS in Systems Engineering (Electrical Systems Option, 2005); MS in Systems Engineering (2008); PhD in Engineering Science and Systems (2011); BS in Electrical and Computer Engineering (2016); MS in Electrical and Computer Engineering (2018); PhD in Engineering (Electrical and Computer Engineering Track, 2019).

Assessment. I have served as ABET program coordinator responsible for ABET self-study report, leading to successful ABET visits in 2015, 2018, and 2021. I served on a university-wide task force for a comprehensive review of the UALR core curriculum (2010-12). I served on the Provost Program Assessment Pilot Group to promote campus-wide best assessment practices (2015-17). I have served as PEV for ABET EAC since 2016.

Teaching. I have designed and/or taught over twenty undergraduate and twelve graduate courses. I designed an innovative and activity-based *Introduction to Systems Engineering* course that was credited with boosting student retention beyond the freshman level. I have designed and taught graduate courses on contemporary topics, such as Data-Driven Modeling and Control (taught since 2022). I was twice nominated for the Faculty Excellence Award in Teaching.

Research. I have led the Human Movement Biomechanics research group at UALR for over two decades. I have supervised over twenty graduate students and twenty undergraduate students' research projects. Proudly, my PhD students have been awarded postdoctoral fellowships at MIT, Georgia Tech, UNC Charlotte, the University of Minnesota, RIC, and UAMS. I have co-authored 150+ publications with 3000+ citations on Google Scholar, and 140+ entries on Scopus (ORCID: 0000-0001-8375-290X).

Professional Service. I currently serve as program coordinator for the Electrical and Computer Engineering BS and MS programs, as well as for the PhD program in Engineering (ECE Track). I have previously chaired departmental and college assessment and curriculum committees and served as president of the College of Engineering and Information Technology assembly (2015-17). I am a senior life member of IEEE, a member of IET (UK), ASEE, IASTED, IENG, and Sigma Xi (past president, Central Arkansas chapter). I serve as associate editor for Frontiers in Rehabilitation Sciences, Arabian Journal for Science and Engineering (Springer), and Journal of Engineering (Hindawi). I have served as an IPC/TPC member for 80+ conferences. I have delivered 30+ invited talks including six plenary talks.

PROFESSIONAL APPOINTMENTS

2014–	Professor of Electrical and Computer Engineering, University of Arkansas at Little Rock
	Program coordinator for Electrical and Computer Engineering (BS and MS programs) (2018-)
	Program coordinator for PhD in Engineering (Electrical and Computer Engineering track) (2022-)
2013–14	Visiting faculty, Mechanical and Aerospace Eng., University of California, Irvine (on sabbatical)
2010–13	Professor and Assistant Chair, Dept of Systems Engineering, University of Arkansas at Little Rock
2004–10	Associate Professor, Department of Systems Engineering, University of Arkansas at Little Rock
2000–04	Assistant Professor of Systems Engineering, University of Arkansas at Little Rock
1999–00	Lecturer, University of California–Riverside and California State University–Fullerton
1997–99	Research Associate, Northwestern University, Physical Therapy and Human Movement Sciences
1996–97	Assistant Professor of Electronic Engineering, GIK Institute of Engineering Sciences & Tech.
1996–96	Visiting Scholar, the Ohio State University, Department of Electrical Engineering
1993–96	Assistant Professor of Avionics Engineering, NUST College of Aeronautical Engineering
1989–92	Research Assistant, Department or Electrical/Systems Engineering, the Ohio State University
1982-86	Aircraft Maintenance Supervisor/Instructor, Air Force
1982-82	F-16 Electronics Maintenance Training, General Dynamics
1980–81	Maintenance Manager/Instructor, Air Defense Training School

HONORS AND AWARDS

UALR Student recruitment grant, $1950 (2024)
UALR Signature experience grant mentor (2025)
ADHE Student undergraduate research fellowship mentor (2023)
Arkansas Louis Stokes Alliance for Minority Participation research mentor award (2022)
INBRE publication grant, $2500 (2021)
ADHE Student undergraduate research fellowship mentor (2021)
Undergraduate research signature experience award mentor (2021)
Best paper finalist at IEEE International Conference on Control and Automation (2019)
Undergraduate research signature experience award mentor (2018)
Mentor for INBRE Pilot Study Faculty Grant (2018)
Kern Engineering Entrepreneurial Network e-Learning Mini-Grant, $2,000 (2017)
OER Alternative Textbook Mini-grant, $750 (2017)
ADHE Student undergraduate research fellowship mentor (2017)
President of the College of Engineering and Information Technology Assembly (2016)
ADHE Student undergraduate research fellowship mentor (2016)
Summer undergraduate program of entrepreneurship and research mentor, $500 (2013)
Student graduation and retention advocate award (2013)
UALR Sustainability award, $1,000 (2012)
President of Sigma Xi Central Arkansas Chapter (2011)
ADHE Student undergraduate research fellowship mentor (2009)
Secretary/Treasurer of Sigma Xi Central Arkansas Chapter (2009)
UALR Middle East studies faculty award, $3,000 (2008)
ADHE Student undergraduate research fellowship mentor (2007)
Faculty excellence award in service (2007)
UALR Project PACE grant, $1,200 (2006)
Elected senior member IEEE (2006)
Excellence in teaching award (2005)
Northrop young researcher award (2003)
Certificate for outstanding service (2001)
Ohio State University Presidential fellowship award (1991)
Ministry of Science and technology scholarship for graduate studies (1985)

RESEARCH GRANTS AND CONTRACTS

Co-PI, *Establishment of the Arkansas Energy Infrastructure:Next-Generation Energy Storage Devices, Artificial Intelligence, Environment, and Workforce* (PI: Dr. Noureen Siraj), NSF, $8,000,000, submitted

PI, *Real-time task discrimination for myoelectric control of arm prosthesis,* UALR, CEIT, College of Engineering and Information Technology, 2015, $4,500

PI, *Bio-mechatronic laboratory improvement: Adding real-time data capture of EMG signals for myoelectric control of prostheses,* UALR College of Engineering and Information Technology, 2013, $3,000.

PI, *Bio-mechanics laboratory development,* UALR College of Engineering and Information Technology, 2011, $35,000

PI, *Adding accessibility to Systems Engineering curriculum*, UALR Project PACE, 2006, $1,200

PI, *Development of a calling card proto-type auto dialer*, Robert's Communications, 2002, $5,500

PI, *Monitoring brain EKG activity in children*, Arkansas Children Nutrition Center, 2002, $36,400

PI, *Resolution of kinematic redundancy in motor control of human movement*, AR Space Grants Consortium, 2002, $7,550

PI, *Development of Technology-Enhanced System Modeling Course and Laboratory*, Chancellor's Office, 2002, $ 2,960

PI, *An investigation into the contributions from the passive and active mechanisms of postural stabilization*, Arkansas Science and Technology Authority, 2001, $40,962

PI, *Coordination between a human arm and a robot manipulator*, UALR ORSP, 2000, $4,000

Co-PI, *Smart antenna systems for wireless communications* (PI: Dr. Hussain Al-Rizzo), NASA/ASGC, 2001, $5,300

Co-PI, *An innovative virtual-based class in electromagnetics utilizing computer-based simulations and visualization tools* (PI: Dr. Hussain Al-Rizzo), UALR Provost's Office, 2001, $6,800

Co-I**,** *Role of limb collapse in falls among elderly* (PI: Dr. Clive Pai), NIH/NIA R01-AG16727-01, 1999, $605,000

THESES AND RESEARCH SUPERVISION

Graduate Research Supervision:

Muhammad Rizwan, *Machine learning applications in energy metering* (PhD student)

Fahad Malallah, *Smart design of brain-computer interfaces* (PhD student)

Ayorinde Alase, *Improving EMG-based data classification using GAN networks* (PhD student)

Ahmad Farooq, *Effective machine learning approaches in autonomous systems* (PhD student, exp. May 2026)

Kenny Garner, *Multicriteria decision optimization in healthcare industries* (PhD student, exp. Dec 2025)

Syed Umer Abdi, *Multicriteria planning for integrated energy systems* (PhD student, exp. Dec 2025)

Muhammad Haras, *Biomechanical models and robust control of human movement* (PhD student, exp. Dec 2024)

Tobiloba Johnson, *Maximum power point tracking control in PV systems* (MS student, May 2023)

Nahiyan bin Noor, *Detection of anemic condition using photoelectric sensors* (MS 2022, student changed advisor)

Safi Ullah, *Myoelectric control of prostheses using hypothesis of muscle synergies* (PhD, Dec. 2021)

Sarah Ansari, *Stability Analysis of DC Microgrid with Constant Power Load*, (PhD, Dec. 2021)

Ashar T. Abd, *Robustness of muscle synergies in upper limb rotational motion* (PhD, Aug. 2021)

Abdullah Al-Maliki, *Estimation of human able-bodied elbow joint actions using sEMG and ANN-based Softmax classifier* (PhD, May 2021)

Rajat Emanuel Singh, *Neuromuscular adaptation in learning to walk on slackline* (PhD, Dec. 2019) Assistant Professor at Northwestern College, Iowa

Neslihan Krasli, *Biomedical signal processing algorithms for fetal monitoring* (co-advised; PhD, Dec. 2019) Lecturer at University of Michigan

Kenny Garner, *Fuzzy multicriteria decision optimization for analyzing the trade space of the myoelectric prosthetic arm architecture* (MS, Dec. 2019) PhD Candidate at UA Little Rock

Faycal Znidi, *The detection and prevention of cascading failure in power systems: a real-time solution for intentional controlled islanding* (PhD, May 2019) Assistant Professor at Texas A&M Texarkana

Mustafa Bayraktar, *Malignant melanoma detection based on shape asymmetry and abrupt cutoff* (PhD, 2017, co-advised) Lockheed Martin, Orlando

Mudhafar Shanoob, *Optimal control of wind turbine system via state-space method* (MS, 2016) Senior Engineer in Iraq

Hamdi Albunashee, *Adaptive Kalman Filtering for movement discrimination in EMG signals* (MS, 2016) PhD Candidate at the University of Arkansas

Taimoor Afzal, *Novel methodologies for locomotion mode identification in lower limb prosthesis* (PhD 2015, co-advised); Assistant Professor at Worcester Polytechnic Institute

Ghulam Rasool *Myoelectric prostheses: novel methodologies for enhancing usability and control* (PhD, 2014); Assistant Professor at Rowan University

Alaa Abdur Rahman, *Neural networks for control of biomechanical movements with applications toward human walking* (PhD 2014); faculty position at Sulaimania University, Iraq

Sinan Kockara, *The integrated implementation of surgical simulations through modeling and collision detection in virtual environments* (PhD 2010, co-advised); Associate Professor at University of Central Arkansas

Muhammad Asif Mughal, *Analytical modeling with decoupled optimal control of biomechanical sit-to-stand movement* (PhD 2008); faculty position at Center for Advanced Studies in Engineering, Pakistan

Anindo Roy, *Robust stabilization of multi-body biomechanical systems: a control theoretic approach* (PhD 2005); Associate Professor at University of Maryland

Undergraduate Research and Senior Project Supervision:

Nuh Jakoet, Tabish Ilyas, *Drowsy driving detection through integration of EEG and camera signals* (2022)

Ahmed Al-Azzawi, *Altered muscle synergies while walking under higher postural constraints* (2018)

Patrick Elliot, *Effective real-time energy management in a southern US power grid* (2018)

Shelby Wingate, *Classification of myoelectric signals for task discrimination* (2017)

A. Obenshain, R. Herring, C. Metcalf, D. Vukmirovic, M. Alhuzaimi, M. Almashhad, *Automated Wastewater Neutralization at McClellan Water Treatment Plant* (2017)

Caroline Gentry & Anderson Banihirwe, *EMG signal recording and movement classification* (2016)

Nathan L. Davis, *Powerflow and energy management in Southern power grid* (2013)

Festus Hategekimana, *Determination of postural stability through VICON motion monitoring system* (2012-13)

Bruce Stracener, *The Arkansas Smart Grid Initiative: Need, Development, and Payoff* (2010)

Innocent Twesigye, *Postural stability determination for a four-segment biomechanical model in SimMechanics* (2010)

Jason R. Robison, R. Keeton, D. Duhart, J. Wilson, J. Lagios, *RFID scanner for autonomous checkout* (2008)

Brandon Ballard, *FEM analysis of human musculoskeletal system for simulation of postural reactions* (2008)

Kamuran O. Alkan, *Biomechanical movement visualization on computer using MAYA software* (2005)

Melissa Reed, *Design and implementation of active magnetic bearing controller* (2004)

P. Cadell, H. Hampton, K. Alkan, *Assisted GPS solution to Emergency 911 problem* (2002)

Chaudhry, *GPS-based flight navigation system for a model airplane* (2000)

COURSES DEVELOPED / TAUGHT

Online:

Research Ethics in Science and Engineering (UA Little Rock, F22, F21)

Introduction to Control Systems (UA Little Rock, S21, S20)

Decision and Risk Analysis (UA Little Rock, F20)

Digital Signal Processing (UCI Continuing Ed, F18, F17, F16, F15)

MATLAB for Engineers (UCI Continuing Ed, S18, S17, F16, S16, F15, S15, F14)

Undergraduate (UA Little Rock):

Signals and Systems (F25)

Network Analysis (F25, F24, S23, S22, F17)

Systems engineering capstone design I (F25, F24, S17, S02, F02)

Systems engineering capstone design II (S25, F17, F16, F08, S03)

Introduction to control systems (S25, S24, S23, S22, S21, S20, S19, S18, S17, S16, S11, S10, S09, S08, Su07, S05, F03)

Fundamentals of power systems w/Lab (F24, F23, F22, F 21)

Advanced Microprocessor systems w/Lab (S22)

Digital Systems w/Lab (F21)

Decision and Risk Analysis (F20)

Probability and random signals (S17, S16, F14, F12, F07, F06, F05, S05, S04)

Introduction to systems engineering (F16, F15, F09, F08, F07, F00, F01)

Circuits and Systems /Lab (F16, F15)

Optimization methods in systems engineering (S15, F12, F11, F10, F09, Su02)

Introduction to Electrical Engineering (S13)

Cooperative Education (S13, F11, F12, Su12, S12, F11, S11)

Dynamic Systems Modeling and Simulation (F12, F11, F10, F07, F06, S04, S03, S02, S01)

Cellular and wireless communications (S06, S05, S04, S03)

Analog and Digital communication systems /Lab (F04, F03, F02)

DES Systems Simulation (Su02, S02)

Undergraduate (UCI /UCR/ CSUF/ GIKI/ CAE):

Biomedical electronics (UCI, W14)

Dynamics (UCI, F13)

Circuit Analysis /Lab (UCR Extension, Su00)

Senior Design Project laboratory (CSUF, S00)

Introduction to Feedback Control Systems (S96, S97)
Industrial Process Control laboratory (S96, S97)
Electronics I /Lab (S97)
Circuit Analysis /Lab (S96)
Digital Logic Design (S93)
Feedback Control Systems /Lab (F95, S95, F94, S94, F93)
Discrete-Time Control Systems (F95, S95, F94, S94, F93)
ST: Navigational Guidance (F95)
Senior Project Design Laboratory (F95, S95, F94, S94, F93)

Graduate:

Mathematics for machine learning (S25)
Data-driven Modeling and Control Systems (F24, F23, F22)
Linear State-Space Control Systems (S25, S24, S23, S22, F15, Su15, S13, F11)
Linear Systems Theory (F18, F10, F08, F04, S03, S02)
Professional Ethics in Science and Engineering (F24, S23, S22, F19, S18, S17)
Research Methods (S24)
Robust and Optimal Control (S05)
ST: Biomechanics of Human Movement (S12)
ST: Neural Networks and Adaptive Systems (S09, S04)
ST: Biomedical Signal Processing and Modeling (S07)
ST: Classical Mechanics (Su06)
ST: Numerical Linear Algebra and Differential Equations (F05)
ST: Modeling and Simulation (S05, co-taught with Dr. Bayrak from CPSC)
ST: Advanced Control Systems (F04)
ST: Discrete Event Simulation of Complex Dynamic Systems (S02)
Multiprocessing and Computer Networks (CSUF, S00)

Short Courses and Workshops:

Optimum Engineering Design (Two-week short course), Institute of Space Technology, Pakistan (Jul 2018)
Reliability Engineering (Two-week short course), Institute of Space Technology, Pakistan (Jul 2017)
Optimum Engineering Design (Two-week short course), Institute of Space Technology, Pakistan (Jul 2016)
Linear State-Space Control Systems (Two-week short course), Institute of Space Technology, Pakistan (Aug 2015)
An Introduction to Bio-mechatronics, National University of Science and Technology, Pakistan (Aug 2013)
Neural networks and Adaptive Systems, National University of Science and Technology, Pakistan (Aug 2008)

UNIVERSITY SERVICE (recent)

Administrative

Program coordinator, Electrical and Computer Engineering BS, MS (2018-20, 2021-)
Graduate coordinator, PhD in Engineering, Electrical and Computer Engineering Track (2022-)
Graduate coordinator, Department of System Engineering (2020-21)
President, College of Engineering and Information Technology Assembly (2016-18)
Assistant Chair, Department of System Engineering (2010-13)

Committees Chaired

CSTEM graduate curriculum committee (2023-)
SYEN ABET preparation Task Force (2021, 2018)
SYEN Assessment committee (2018-)
SYEN Electrical and computer systems engineering (ECSE) program development (2015-17)
SYEN Committee for designing merit pay raise guidelines (2016)
SYEN Committee for designing Electrical and Computer Engineering program (2015)
SYEN Committee for review of Masters of Science in Systems Engineering program (2014)
SYEN Committee for review of Graduate Certificate program (2014)
SYEN Committee on promotion and tenure (2012, 2014)
SYEN Curriculum committee (2004-10)

Committee Membership

UALR Graduate Council (2020-date)
UALR Institutional Effectiveness Committee (2020-22)

UALR Planning and Finance Committee (2020-22)
CSTEM Committee on Tenure Representatives (2020-22)
UALR Sustainability committee (2012-date)
UALR Judicial appeals committee (2017-2019)
UALR Program Assessment Pilot Group (2015-17)
UALR Study abroad committee (2015-17)
UALR Faculty governance committee (2015-16)
UALR Provost Task force for review of UALR core curriculum (2010-12)
EIT ENSS PhD program governance committee (2014-17)
EIT IGCP PhD program governance committee (2007-15)
SYEN Assessment committee (2002-03, 2014-17)
SYEN ABET visit preparation task force (2009, 2015)

PROFESSIONAL SERVICE (recent)

Review Panelist

NSF Graduate Research Fellowship Program (2022, 2019, 2016, 2015)
AFOSR Faculty Summer Fellowship Program (2018)
National Scientific and Engineering Research Council, Canada (2016)

Journal Editor

Associate editor for:
Frontiers in Rehabilitation Sciences – Rehabilitation Engineering, Springer (since 2022)
Arabian Journal of Science and Engineering, Springer (since 2018)
Journal of Engineering (open access), Hindawi (since 2014)

Faculty Evaluator for Tenure/Promotion

Temple University (2024)
Institute of Business Administration, Karachi, Pakistan (2020)
COMSATS University, Islamabad, Pakistan (2019, 2018)
Karachi University, Karachi, Pakistan (2017)

PhD External Examiner

Lahore University of Management Science (2022)
CASE Institute of Technology, Islamabad, Pakistan (2022)
Capital University of Science and Technology, Islamabad, Pakistan (2022, 2019, 2017, 2016)
National University of Science and Technology, Pakistan (2022, 2018)
COMSATS University, Islamabad, Pakistan (2022, 2021, 2018, 2017)
Hamdard University, Karachi, Pakistan (2021, 2016)
Bahria University, Islamabad, Pakistan (2021)
University of Engineering and Technology, Lahore, Pakistan (2019, 2016)

Reviewer for Book Publishers

Principles of Mathematical Modeling by Professor Clive Dym, Elsevier, Academic Press and North Holland (2015)
Miller & Freund's Probability & Statistics for Engineers, 8/e, Pearson Higher Education (2015)
Real Time Modeling, Simulation and Control of Dynamical Systems by Asif Mahmood Mughal, Springer (2015)
Linear Algebra and its Applications by Professor Gilbert Strang, 4/e, Brooks/Cole (2010)

Reviewer for Journals

MDPI Bioengineering, MDPI Brain Sciences, MDPI Biomedicine, MDPI Sensors, MDPI Actuators, MDPI Electronics, MDPI Micromachines, MDPI Mathematics (2024)
MDPI Bioengineering, MDPI Sensors, MDPI Axioms, MDPI Electronics, MDPI Machines, MDPI Mathematics (2022)
Computer Methods in Biomechanics and Biomedical Engineering, Taylor & Francis (2022, 2020)
Control Engineering Practice, Elsevier (2022)
Medical Engineering and Physics (2022)
Journal of Environmental Research and Public Health (2022)
Arabian Journal of Science and Engineering, Springer (2022)
Applied Energy, Elsevier (2022)
MDPI Sensors, MDPI Applied Sciences, MDPI Electronics (2021)
Frontiers in Bioengineering and Biotechnology (2021)

Frontiers Systems Neuroscience (2021)
BMC Sports Science, Medicine and Rehabilitation (2021)
Journal of Biomechanics, Elsevier (2021, 2020, 2019, 2018, 2016)
European Journal of Applied Physiology (2021)
IEEE Transactions on Systems, Man, and Cybernetics (2021, 2020)
IEEE Transactions on Neural Systems and Rehabilitation Engineering (2020, 2019, 2018)
Biological Cybernetics, Springer (2020)
Biomedical Engineering Online, Springer (2020)
Measurement and Control, Sage Publications (2020, 2019)
Measurement, Elsevier (2020)
MDPI Processes, MDPI Symmetry (2020)
Advances in Science, Technology and Engineering Systems Journal (2020)
Journal of Applied Geodesy, De Gruyter (2020)
Applied Bionics and Biomechanics, Hindawi (2019, 2018)
Aircraft Engineering and Aerospace Technology, Emerald Publishing (2021, 2019)
Southern Journal of Research (2021)
Journal of Energy Storage, Elsevier (2019)

Reviewer for Conference

IEEE Engineering in Medicine and Biology Conference (2022, 2021, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2011)
IEEE Systems Man and Cybernetics Conference (2022, 2017, 2016, 2015, 2011, 2010)
IEEE Control and Decision Conference (2021, 2017, 2014, 2013, 2012, 2011)
IEEE International Conference on Automation and Computing (2022)
International Conference on Artificial Intelligence, Robotics and Control (2022)
International Symposium on Electrical, Electronics and Information Engineering (2022)
ASEE Annual Conference (2020, 2018, 2017, 2016, 2015, 2014)
IEEE European Control Conference (2023, 2019, 2018, 2017)
IEEE EMBS Conference on Neural Engineering (2019, 2015)
IEEE American Control Conference (2017, 2015, 2013, 2012, 2011)
IEEE Conference on Automation Science and Engineering (2017)
IEEE Conference on Control Technology and Applications (2017)

Session Chair /Member International Program Committee

ASME Dynamic Systems and Control Conference (DSCC 2020 online)
International Symposium on Electrical, Electronics and Information Engineering (ISEEIE 2019) Auckland, New Zealand
International Conference on Electrical and Electronics Engineering (ISEEE 2019), Istanbul, Turkey
International Conference on Open-Source Systems and Technologies (ICOSST 2019), Lahore, Pakistan
IEEE International Conference on Industrial Technology (ICIT 2018), Lyon, France
International Conference on Open-Source Systems and Technologies (ICOSST 2018), Lahore, Pakistan
International Symposium on Electrical, Electronics and Information Engineering (ISEEIE 2018) Auckland, New Zealand

INVITED TALKS (recent)

Reinforcement learning of optimal control policy in biomechanical models of human movement, King Fahd University of Petroleum and Minerals, Dammam, Saudi Arabia, Feb 2025

LQR-PID Controller Design for a Biomechanical Model of Human Postural Control, 11th International Conference on Electrical and Electronics Engineering (ICEEE 2024), Marmaris, Turkey, Apr 2024

Reinforcement learning of LQR control policy by inverted-pendulum type biomechanical models, 4th International Conference on Artificial Intelligence, Robotics and Control (AIRC 2023), Cairo, Egypt, May 2023

Reinforcement learning-based design of linear quadratic regulator for biomechanical models, 10th International Conference on Electrical and Electronics Engineering (ICEEE 2023), Istanbul, Turkey, May 2023

EMG signals and muscle synergies for task discrimination and prostheses control, IEEE AR Section meeting, Little Rock, Arkansas, Apr 2019

Wearable technology for healthcare: Living longer, better lives with wearables, ***Plenary*** lecture at International Conference on Electrical Engineering (ICEE 2018), Lahore, Pakistan, Feb 2018

Neural data processing and feature extraction for discrimination of motor task, International Conference on Emerging Trends in Engineering, Sciences & Technology (ICEEST-17), Karachi, Pakistan, Aug 2017

Myoelectric data analysis for muscle synergy extraction and task discrimination, Data Science Workshop, Islamabad, Pakistan, Apr 2017

*Brain-Computer Interfaces for Recording and Interpreting Neural Signals, **Plenary** lecture at Frontiers in Information Technology (FIT 2016), Islamabad, Pakistan, Dec 2016*

PROFESSIONAL AFFILIATIONS

Institute of Electrical and Electronic Engineering (IEEE: AC, RA, SMC, EMBC), Life Senior Member
Institution of Engineering and Technology (IET, UK)
American Society for Engineering Education (ASEE)
Sigma Xi Scientific Honor Society
President, Central Arkansas Chapter (2011-13); Secretary (2009-11)

PUBLICATIONS:

Google Scholar Ref: https://scholar.google.com/citations?user=hPczUq6oxQgC&hl=en
Summary stats: Publications: 175+; citations: 3050+; h-index 26; i10-index 64

Semantic Scholar Ref: https://www.semanticscholar.org/author/K.-Iqbal/34552792
Summary stats: Publications: 130+; citations: 1760+; highly influential citations: 57; h-index 19

Research Gate Ref: https://www.researchgate.net/profile/Kamran-Iqbal-5
Summary stats: Publications: 170+; citations 2460+; h-index 24; research interest score: 1597

Scopus Ref: https://www.scopus.com/authid/detail.uri?authorId=7102992929
Summary stats: Publications: 145+; citations 1790+; h-index 20

Theses/ Dissertation

K. Iqbal (1992), Stability and control in a planar neuro-musculo-skeletal model with latencies, Ph.D. dissertation*, The Ohio State University,* Columbus, Ohio

K. Iqbal (1988), Postural stability of a constrained four-link biped in the frontal plane, Master's thesis*, The Ohio State University,* Columbus, Ohio

Books

1. Fundamental Engineering Optimization Methods, ISBN: 9788740304893, BookBoon.com (2013)
2. A First Course in Control System Design, ISBN: 9788793609051, River Publishers (2017)
3. A First Course in Control System Design, 2nd Ed, ISBN: 9788770221528, e-ISBN: 9788770221511, River Publishers (2020)
4. Introduction to Control Systems, published online under CC BY-NC-SA by Libretexts.org (2020)

Book Chapters

1. R.E. Singh, G. White, K. Iqbal (2024). Hill-type model. In: Singh, R.E. (eds) Motion Analysis of Biological Systems. Springer, Cham. https://doi.org/10.1007/978-3-031-52977-1_5
2. R.E. Singh, K. Iqbal, J. Son (2023). Editorial: From depth (needle) to surface: Electromyography as a diagnostic tool in identifying neuromuscular changes associated with neurological disorders. *Front. Hum. Neurosci., Sec. Motor Neuroscience*, Volume 17 – 2023; doi: 10.3389/fnhum.2023.1214106
3. K.W. Garner, K. Iqbal (2022). Fuzzy Multicriteria Optimization for System Engineer's Design of Myoelectric Prostheses. In: Madni, A.M., Boehm, B., Erwin, D., Moghaddam, M., Sievers, M., Wheaton, M. (eds) *Recent Trends and Advances in Model Based Systems Engineering*. Springer, Cham. doi: 10.1007/978-3-030-82083-1_32
4. R.E. Singh, K. Iqbal, G.A. White, J.K. Holtz (2019). A review of EMG techniques for detection of gait disorders, In: Marco Antonio Aceves-Fernandez (Ed.) *Machine Learning in Medicine and Biology*. InTech Open, London, https://www.intechopen.com/chapters/65853
5. M. Bayraktar, E. Yeniaras, S. Kaya, S. Lawhorn, K. Iqbal, N.V. Tsekos (2017). Noise Sensitive Trajectory Planning for MR Guided TAVI. In: Pop M., Wright G. (eds) *Functional Imaging and Modelling of the Heart*. Lecture Notes in Computer Science, vol 10263, pp. 195-203. Springer, Cham. doi: 10.1007/978-3-319-59448-4_19
6. M. Bayraktar, S. Kaya, E. Yeniaras, K. Iqbal (2016). Trajectory Smoothing for Guiding Aortic Valve Delivery with Transapical Access. In: Shekhar R. et al. (eds) *Clinical Image-Based Procedures. Translational Research in Medical Imaging*. Lecture Notes in Computer Science, vol 9958, pp. 44-51, Springer, Cham.
7. M. Bayraktar, B. Sahin, E. Yeniaras, K. Iqbal (2014). Applying an Active Contour Model for Pre-Operative Planning of Transapical Aortic Valve Replacement. In: Linguraru M. et al. (eds) *Clinical Image-Based Procedures. Translational Research in Medical Imaging*. Lecture Notes in Computer Science, vol 8680, pp. 151-158. Springer, Cham.
8. K. Iqbal, "Posture, Equilibrium, and Postural Control," Chapter E6-188-18 in Mathematical Physiology Section in *UNESCO Encyclopedia of Life Support Systems* (www.eolss.net), 2011.
9. A.M. Mughal and K. Iqbal, "Asymmetrical Bipedal Modeling for Biomechanical Sit-to-Stand Movement," In: Gregorio Rey and Luisa Muneta (eds.) *Modeling, Simulation and Optimization*, INTECH, 2010. ISBN 978-953-307-048-3. DOI: 10.5772/7679

10. K. Iqbal and A. Roy, "Kinematic trajectory generation in a neuromusculoskeletal model with somatosensory and vestibular feedback," In: Feng D.D., Zaytoon J. (Eds) *Modelling and Control in Biomedical Systems*, 363-68, Elsevier, 2006. ISBN: 978-0-08-044530-4.
11. A.M. Mughal, K. Iqbal, "Modeling and analysis of the physiological motor control system using Bond graphs," In: Feng D.D., Zaytoon J. (Eds) *Modelling and Control in Biomedical Systems*, 393-98, Elsevier, 2006. ISBN: 978-0-08-044530-4.

Journal Articles

1. R.E. Singh, K. Iqbal, C. Hill, "Age changes reinforcement processing during locomotor adaptation", *Frontiers in Aging,* submitted Oct 2025.
2. E. Bouzid, N. Baccar, K. Iqbal, "Design and Implementation of a Machine Learning Predictive Model for Basil Yield in Indoor Vertical Hydroponic Farms," *Applied Computational Intelligence and Soft Computing* (revision submitted 2025).
3. Fahad L. Malallah, K. Iqbal, "Spectrogram Contrast Enhancement Improves EEG Signal-Based Emotional Classification," *MDPI Applied Sciences*, https://www.mdpi.com/2076-3417/15/23/12634
4. H. Kallel, K. Iqbal, "Online estimation of manipulator dynamics for computed torque control of robotic systems," *MDPI Sensors*, https://www.mdpi.com/1424-8220/25/22/6831
5. S. Ullah, K. Iqbal, M. Rizwan, "Gait and postural control deficits in diabetic patients with peripheral neuropathy compared to healthy controls", *MDPI Bioengineering* https://www.mdpi.com/2306-5354/12/10/1034
6. M.A. Rahman; M.F. Shahrior; K. Iqbal; A. Abushaiba, "Enabling intelligent industrial automation: A review of machine learning applications with digital twin and edge AI integration", *MDPI Automation* https://www.mdpi.com/2673-4052/6/3/37.
7. A.Y. Al-Maliki, K. Iqbal, G. White, "Estimation of Elbow Joint Movement Using ANN-Based Softmax Classifier," *Journal of Engineering Research and Sciences,* Special Issue on Computing, Engineering and Sciences; doi: https://www.jenrs.com/v03/i04/p001/
8. S. Ansari, K. Iqbal, "Stability analysis of DC microgrid with constant power load," *Advances in Science, Technology and Engineering Systems Journal,* 7(2): 63-72, 2022, doi: 10.25046/aj070206.
9. A.S. Abdulhussien, A.T. AbdulSaddaa, K. Iqbal, "Automatic seizure detection with different time delays using SDFT and time-domain feature extraction," *The Journal of Biomedical Research*, 2022, 36(1): 48-57; doi: 10.7555/JBR.36.20210124
10. A.T. Abd, R.E. Singh, K. Iqbal, G. White, "A perspective on muscle synergies and different theories related to their adaptation", *MDPI Biomechanics*, 1(2), 253-263, 2021; doi:10.3390/biomechanics1020021
11. A.T. Abd, R.E. Singh, K. Iqbal, G. White, "Investigation of Power Specific Motor Primitives in an Upper Limb Cyclic Rotational Motion", *Journal of Motor Behavior*, published online 24 Jun 2021; doi: 10.1080/00222895.2021.1916424
12. K. Iqbal, "Optimal regulation of postural movements in a single-link neuro-mechanical model with feedback latencies," *Biological Cybernetics*, Springer, Aug 2020; doi: 10.1007/s00422-020-00843-9
13. S. Ullah, K. Iqbal, R.E. Singh, "Muscle synergies based gait phase classification during kinematically constrained walking on slackline," *International Journal of Electronics and Electrical Engineering*, Vol. 8, No. 3, pp. 47-52, Sep 2020; doi: 10.18178/ijeee.8.3.47-52
14. R.E. Singh, K. Iqbal, G. White, "Proficiency-based recruitment of muscle synergies in a highly-perturbed walking task (slackline)", *Engineering Reports*, Wiley, Jul 2020; doi: 10.1002/eng2.12253
15. R.E. Singh, G. White, I. Delis, K.Iqbal, "Alteration of muscle synergy structure while walking under increased postural constraints", *IET Cognitive Computation and Systems*, 2(2), Jun 2020, doi: 10.1049/ccs.2019.0021
16. T. Ashuri, R.J. Hamidi, A. Armani, T. Reasnor, S. Ahmadi, K. Iqbal, "Biomedical soft robots: current status and perspective", *Biomedical Engineering Letters*, May 2020, doi: 10.1007/s13534-020-00157-6
17. S. Ullah, F.M. Malik, K. Iqbal, "Fault-tolerant sliding mode control of a quadrotor UAV with delayed feedback", *International Journal of Mechanical Engineering and Robotics Research* 9(1): 1-6 (2020); doi: 10.18178/ijmerr
18. F. Znidi, H. Davaraika, K. Iqbal, M. Barati, "Multi-layer spectral clustering algorithm to controlled islanding in power systems", *Journal of Modern Power Systems and Clean Energy*, Springer, Jul 2019; doi: 10.1007/s40565-019-0554-1
19. M. Bayraktar, S. Kockara, T. Halic, M. Mete, H. K. Wong, K. Iqbal, "Local edge-enhanced active contour for accurate skin lesion border detection," *BMC Bioinformatics* 20 (2), 91 (2019) doi: 10.1186/s12859-019-2625-8
20. A.M. Mughal and K. Iqbal, "Optimization of biomechanical movement with linear matrix inequalities," *Mechatronic Systems and Control*, ACTA Press, Jan 2019, doi: DOI: 10.2316/J.2019.201-2753
21. A.Y. Al-Maliki, K. Iqbal, "PID-type FLC controller design and tuning for sensorless speed control of DC motor," *Adv. Sci. Technol. Eng. Syst. J.* 3(6), 515-522 (2018); DOI: 10.25046/aj030660
22. R.E. Singh, K. Iqbal, G. White, T.E. Hutchinson, "Muscle synergies: from building blocks of motor behavior to a neurorehabilitation tool," *Applied Bionics and Biomechanics*, Special Issue on Muscle Synergies, Apr 2018; doi: 10.1155/2018/3615368
23. M.L. Shanoob, K. Iqbal, A.Y. Al-Maliki, "Wind turbine transient response and fault ride-through improvements with optimal control," *Wiley International Transactions on Electrical Energy Systems*, Oct 2017; DOI: 10.1002/etep.2412
24. T. Afzal, K. Iqbal, G. White, A.B. Wright, "A method for locomotion mode identification using muscle synergies, *IEEE Trans. Neural and Rehab. Eng.*, Jun 2016; doi: 10.1109/TNSRE.2016.2585962
25. G. Rasool, K. Iqbal, N. Bouaynaya, G. White, "Real-time task discrimination for myoelectric control employing task-specific muscle synergies", *IEEE Trans. Neural Sys. Rehab. Eng.*, Jan 2016; doi: 10.1109/TNSRE.2015.2410176
26. H. Albunashee, G. Rasool, K. Iqbal, and G. White, "A new technique to improve the operation of prosthetic limbs during muscle fatigue," *Journal of the Arkansas Academy of Sciences*, Vol. 70, pp. 35-39, 2016.

27. S.U. Abdi, K. Iqbal, "Institution-wise Feasibility for Establishment of Inter-Disciplinary Postgraduate Engineering Program in Southern Punjab," *Technical Journal, University of Engineering and Technology* (UET) Taxila, Pakistan, 21(1): 89-98, Jan 2016
28. G. Rasool, N. Bouaynaya, K. Iqbal, G. White, "Surface myoelectric signal classification using the AR-GARCH model", *Biomedical Signal Processing and Control* 13: 327-226, Elsevier, Sep 2014; doi: 10.1016/j.bspc.2014.06.001
29. T. Afzal, A.B. Wright, K. Iqbal, "Trajectory generation for stair ascent walking using Rayleigh oscillator," *Journal of the Arkansas Academy of Sciences*, Vol. 67, pp. 22-27, Mar 2014.
30. A.M. Abdulrahman, K. Iqbal, G. White, "Improving inverse dynamics accuracy in a planar walking model based on stable reference point," *Journal of Robotics*, Hindawi, 2014; doi: 10.1155/2014/245896
31. A.M. Mughal and K. Iqbal, "Bond graph modeling for physiological motor control system", *International Journal of Modelling and Simulation*, ACTA Press, Jun 2013; doi: 10.2316/Journal.205.2013.2.205-5742
32. A.M. Mughal and K. Iqbal, "Fuzzy optimal control of sit-to-stand movement in a biomechanical model," *Journal of Intelligent and Fuzzy Systems* 25: 247-58, IOS Press, Jan. 2013; doi: 10.3233/IFS-2012-0632
33. A.M. Mughal and K. Iqbal, "Physiological LQR design for postural control and coordination of sit-to-stand movement," *Cognitive Computation* 2012, Springer; doi: 10.1007/s12559-012-9160-5
34. G. Rasool, K. Iqbal, G. White, "Myoelectric activity detection during sit-to-stand using threshold methods," *Computers and Mathematics with Applications*, Elsevier, April 2012; doi: 10.1016/j.camwa.2012.03.094
35. A.T. Abdulsada, K. Iqbal, "An Improved Fuzzy SPSA Algorithm for Training Neural Networks for Nonlinear System Identification", *International Journal on Automation and Computing*, August 2011; doi: 10.1007/s11633-011-0589-x
36. A.M. Mughal and K. Iqbal, "3D bipedal model with holonomic constraints for the decoupled optimal controller design of the biomechanical sit-to-stand maneuver," *ASME J. Biomech. Eng.* 132, 041010 (2010); doi: 10.1115/1.4000992
37. S. Kockara, T. Halic, C. Bayrak, K. Iqbal, R. Rowe, "Contact Detection Algorithms", *Journal of Computers* (JCP, ISSN1796-203X), Vol. 4, No. 10, pp. 1053-1063, Oct 2009.
38. K. Iqbal and A. Roy, "A novel theoretical framework for the dynamic stability analysis, movement control, and trajectory generation in a multi-segment biomechanical model" *ASME J. Biomech. Eng.* 131, 011002 (2009); doi: 10.1115/1.3002763
39. Y.-C. Tsao, G. Weismer, K. Iqbal, Inter-speaker variation in habitual speaking rate: additional evidence for a biological basis, *Journal of Speech, Language and Hearing Research*, Vol. 49, No. 5, pp. 1156-1164, Oct 2006; doi: doi:10.1044/1092-4388(2006/083).
40. R. Ahangar, K. Iqbal, A.M. Mughal, "Finite difference simulation of a multi-stage carcinogenesis model," *WSEAS Transactions on Mathematics and Computers in Biology and Biomedicine*, Vol. 3, No. 4, pp. 285-291, Apr 2006.
41. Y.-C. Tsao, G. Weismer, K. Iqbal, "The effect of intertalker speech rate variation on acoustic vowel space," *Journal of the Acoustic Society of America*, Vol. 119, No. 2, pp. 1074-1082, Feb 2006; doi: 10.1121/1.2149774.
42. A. Roy and K. Iqbal, "PID controller tuning for the first-order-plus-dead-time process model via Hermite–Biehler theorem", *ISA Transactions*, Vol. 44, No.3, July 2005.
43. K. Iqbal and A. Roy, "Stabilizing PID Controllers for a single-link biomechanical model with position, velocity, and force feedback," *ASME J. Biomech. Eng.* 126, 838 (2004); doi: 10.1115/1.1824134
44. R. Ahangar, N. Ali, K. Iqbal, K. Altmayer, "Biodynamic Modeling and Simulation of Multistage Mutations", *Journal of DNA and Cell Biology*, Vol. 23, No. 10, pp. 625-633, Oct 2004.
45. A. Roy and K. Iqbal, "PID stabilization of a position-controlled robot manipulator acting independently or in collaboration with human arm," *Journal of the Arkansas Academy of Sciences*, Vol. 57, pp. 131-139, 2004.
46. Y.-C. Pai, J.D. Wening, E.F. Runtz, K. Iqbal, and M.J. Pavol, "Role of feedforward control of movement stability in reducing slip-related balance loss and falls among older adults," *Journal of Neurophysiology*, 90: 755-762, 2003; doi: 10.1152/jn.01118.2002.
47. K. Iqbal and Y.-C. Pai, Author's response to Comments on 'Predicted region of stability for balance recovery: motion at the knee joint can improve termination of forward movement', *Journal of Biomechanics*, 34:833, 2001.
48. K. Iqbal and Y.-C. Pai, "Predicted region of stability for balance recovery: motion at the knee joint can improve termination of forward movement," *Journal of Biomechanics*, 33:1619-1627, 2000; doi: 10.1016/S0021-9290(00)00129-9.
49. Y.-C. Pai, B.E. Maki, K Iqbal, W.E. McIlroy, S.D. Perry, "Thresholds for step initiation induced by support-surface translation: A dynamic center-of-mass model provides much better prediction than a static model," *Journal of Biomechanics*, 33:387-392, 2000; doi: 10.1016/S0021-9290(99)00199-2.
50. Y.-C. Pai and K. Iqbal, "Simulated movement termination for balance recovery: can movement strategies be sought to maintain stability even in the presence of slipping or forced sliding?" *Journal of Biomechanics*, 32:779-786, 1999; doi: 10.1016/S0021-9290(99)00074-3.
51. K. Iqbal, B. Clymer and H. Hemami, "Squatting maneuver of a three-link nine-muscle model in the sagittal plane," *Journal of Automatic Control*, 7:113-129, 1997.
52. K. Iqbal, H. Kallel and H. Hemami, "Linear decoupling controllers for constrained dynamic systems," *International Journal of Control*, 60(4):607-616, 1994; doi:10.1080/00207179408921483.
53. K. Iqbal, H. Hemami and S.R. Simon, "Stability and control of a frontal four-link biped system," *IEEE Trans. Biomed. Eng*., 40(10): 1007-1018, 1993; doi: 10.1109/10.247799
54. K. Iqbal and H. Hemami, "Simultaneous stabilization and decoupling of constrained robotic systems with minimal inputs," *IEEE Trans. Sys. Man Cyber*., 22(5):945-952, Sept.-Oct. 1992; doi: 10.1109/21.179834.

Selected Conference and Symposia Publications

1. F. Malallah, K. Iqbal, "Predicting signs of problematic Internet use to analyze children's health using deep learning," accepted for presentation at Intern. Joint Confer. Biomed. Eng. Sys. & Tech. (BioSignals 2026), Marbella, Spain, 2-4 Mar 2026.
2. H. Albunashee, K. Iqbal, "Adaptive classification framework for control of myoelectric prostheses during muscle fatigue," Proceed. Intern. Confer. Sys. Cont., Marrakesh, Morocco, 22-24 Oct 2025.
3. R.E. Singh, C.M. Hill, K. Iqbal, "Stochastic algorithm-based estimation of slow and fast processes of sensorimotor adaptation during locomotion," Proceed. IEEE Intern. Confer. Systems, Man, and Cybernetics, Vienna, Austria, 5-8 Oct 2025.
4. S.U. Abdi, A.N. Sanjrani, K. Iqbal, "Performance improvement through lean system case of Karachi shipyard & engineering works," Proceed. IEEE Technology and Eng. Management Society Confer. (TEMSCON Global), San Diego, California, Aug 4-7, 2025.
5. A. Farooq, K. Iqbal, "Towards Transparent Ethical AI: A Roadmap for Trustworthy Robotic Systems," Proceed. IEEE International Conference on Robotics, Control, and Vision Engineering (RCVE 2025) Paris, France, Jun 1-4, 2025; doi: 10.1145/3747393.3747400.
6. A. Farooq, K. Iqbal, "Integrating Vision Foundation Models with Reinforcement Learning for Enhanced Object Interaction," Proceed. IEEE International Conference on Robotics, Control, and Vision Engineering (RCVE 2025) Paris, France, Jun 1-4, 2025; doi: 10.1145/3747393.3747399.
7. A. Farooq, K. Iqbal, "A survey of reinforcement learning for optimization in automation," Proceed. International Conference on Automation Science and Engineering (CASE 2024), Bari, Italy, Aug 28 - Sep 1, 2024. https://arxiv.org/abs/2502.09417
8. N.B. Noor, U. Oyshi, D. Avishek, K. Iqbal, "A systematic approach to predicting anemia from eye Conjunctiva images," Proceed. International Conference on Computer and Information Technology (ICCIT 2023), Cox Bazar, Bangladesh, Dec 13-15, 2023; doi: 10.1109/ICCIT60459.2023.10441533.
9. M. Haras, K. Iqbal, "Data-driven identification and optimal control of a biomechanical triple-link inverted pendulum for sit-to-stand movement," Proceed. IEEE Intern. Conf. Sys., Man, Cyber., Maui, Hawaii, Oct 2023; doi: 10.1109/SMC53992.2023.10394318.
10. K. Iqbal, M. Haras, "Reinforcement learning of LQR control policy by a double inverted-pendulum biomechanical model," Proceed. IEEE Intern. Conf. on Industrial Technology (ICIT 2023), Orlando, Florida, April 2023; doi: 10.1109/ICIT58465.2023.10143150.
11. M. Haras, K. Iqbal, "Model-based and model-free optimal control of biomechanical SIP model," Proceed. IEEE International Conference on Automation and Computing, Bristol, UK, 1-3 Sep 2022; doi: 10.1109/ICAC55051.2022.9911165.
12. A.Y. Al-Maliki, K. Iqbal, "Improved classification accuracy of hand movements using Softmax classifier and Kalman filter," Proceed. IEEE Eng. Med. Biol. Conf. (EMBC 2022), Glasgow, Scotland, July 2022; doi: 10.1109/EMBC48229.2022.9871606.
13. K. Iqbal, S. Ansari, "Near optimal control of cascaded buck converters in a DC microgrid," Proceed. IEEE Intern. Conf. on Compat., Power Electron. Power Eng. (CPE-PowerEng 2022), Birmingham, UK, Jun 2022; doi: 10.1109/CPE-POWERENG54966.2022.9880865.
14. S. Ullah, K. Iqbal, "Characterization of muscle fatigue in diabetic patients with peripheral neuropathy," Proceed. 9th Intl. Conf. Elect. Electron. Eng., Alanya, Turkey, Mar 2022; doi: 10.1109/ICEEE55327.2022.9772599.
15. K. Iqbal, "Use of orthogonal functions for model predictive control of biomechanical sit-to-stand," Proceed. IEEE International Conference on System, Man, and Cybernetics (SMC 2021), Melbourne, Australia, Oct 2021; doi: 10.1109/SMC52423.2021.9658642.
16. K. Iqbal, "Model predictive control of biomechanical sit-to-stand," Proceed. ASME Modeling, Estimation, and Control Conference (MECC 2021), 54(20): 96-101, Austin, Texas, Oct 2021; doi: 10.1016/j.ifacol.2021.11.159.
17. A.Y. Al-Maliki and K. Iqbal, "Hand and lower arm movement classification using deep ANN and sEMG," The 30th International Symposium on Industrial Electronics (ISIE online), Jun 2021; doi: 10.1109/ISIE45552.2021.9576387.
18. S. Ansari, J. Zhang, K. Iqbal, "Modeling, stability analysis and simulation of buck converter in a DC microgrid," Proceed. 2021 IEEE Kansas Power and Energy Conference (KPEC), Apr 2021; doi: 10.1109/KPEC51835.2021.9446255.
19. K. Iqbal, "Controller design for an inverted-pendulum model of postural balance with delayed proprioceptive feedback", Proceed. IEEE Int. Conf. Cont. Appl. (ICCA, online), Oct 2020; doi 10.1109/ICCA51439.2020.9264322
20. K. Iqbal, "Optimal regulation of postural movements in a biomechanical model with feedback latencies", Proceed. IEEE Int. Conf. Cont. Appl. (ICCA, online), Oct 2020; doi 10.1109/ICCA51439.2020.9264471
21. K. Iqbal, "Optimal Realization of Desired Endpoint Stiffness in Static Human Arm Postures," Proceed. ASME Dyn. Sys. Cont. Conf., (online), Oct 2020; doi 10.1115/DSCC2020-3269
22. A. Abd, R.E. Singh, K. Iqbal, G. White, "Muscle synergies are robust across subjects in upper limb rotational motion," Proceed. 7th Intl. Conf. Elect. Electron. Eng. (online), Apr 2020; doi: 10.1109/ICEEE49618.2020.9102587
23. S. Ullah, K. Iqbal, "Reconstruction of muscle activations using estimated neural drive for a novel postural task," Proceed. 7th Intl. Conf. Elect. Electron. Eng. (online), Apr 2020; doi: 10.1109/ICEEE49618.2020.9102488
24. K. Iqbal, "An LMI approach to controller design for balancing over slackline," Proceed. IEEE Int. Conf. Cont. Appl. (ICCA), July 2019, Edinburgh, UK; doi 10.1109/ICCA.2019.8900024
25. R.E. Singh, K. Iqbal, S. Ullah, A. Ahmed, G.A. White, "Gait phase discrimination during kinematically constrained walking on slackline", Proceed. IEEE Int. Conf. Cont. Appl., July 2019, Edinburgh, UK; doi: 10.1109/ICCA.2019.8899952
26. M. Shanoob, K. Iqbal, "State feedback sliding mode control law design for grid-connected wind turbine model," Proceed. IEEE Intl. Confer. Smart Energy Grid Eng., Oshawa, Canada, Aug 2019; DOI: 10.1109/SEGE.2019.8859816
27. H. Davarikia, M. Barati, F. Znidi, K. Iqbal, "Real-time integrity indices in power grid: a synchronization coefficient based clustering approach," Proceed. IEEE Power & Energy Soc. General Meeting, Portland, Oregon, Aug 05-08, 2018. 10.1109/PESGM.2018.8586469

28. M. Bayraktar, S. Kockara, M. Mete, T. Halic, K. Iqbal, "Local edge-enhanced active contour (leeac) for accurate skin lesion border detection and classification", Proceed. Intl. Society for Computational Biology annual meeting, July 2018, Chicago, IL.
29. S. Ullah, K. Iqbal, F.M. Malik, "Fault-tolerant sliding mode control of a quad rotor UAV with delayed feedback," Proceed. Intl. Conf. on Electrical and Electronic Eng., May 2018, Istanbul, Turkey.
30. A.Y. Al-Maliki, K. Iqbal, "FLC-based PID controller tuning for sensorless speed control of DC motor," Proceed. IEEE Intl. Confer. Industrial Technology, Lyon, France, Feb 2018, doi: 10.1109/ICIT.2018.8352171
31. F. Znidi, H. Davarikia, K. Iqbal, "Modularity clustering-based detection of coherent groups of generators with generator integrity indices," Proceed. 2017 IEEE Power & Energy Society General Meeting, Chicago, Illinois, July 16-20. 10.1109/PESGM.2017.8273835
32. A.M. Mughal, K. Iqbal, "Fuzzy reduced order observer for optimal control of biomechanical sit-to-stand movement," Proceed. 2016 IEEE SMC Conference, Budapest, Hungary, Oct 9-12. 10.1109/SMC.2016.7844733
33. H. Davarikia, F. Znidi, M. Aghamohammadi, K. Iqbal, "Identification of coherent groups of generators based on synchronization coefficient," Proceed. 2016 IEEE Power & Energy Society General Meeting, Boston, MA, July 17-21. 10.1109/PESGM.2016.7741434
34. K. Iqbal, G. Anderson, "Assessment of student outcomes in a distinctive engineering program," Proceed. 2016 ASEE Annual Conference, New Orleans, Louisiana, 26-29 June.
35. S.U. Abdi, K. Iqbal, "Development of PC-based SCADA training system," Proceed. 2016 IEEE International Conference on Industrial Technology, Taipei, Taiwan, Mar 14-17. DOI: 10.1109/ICIT.2016.7474923
36. R.N. Reddy, K. Iqbal, "Integrating systems engineering concepts in all design-oriented courses in the engineering curriculum," Proceed. 2015 ASEE Annual Conference, Seattle, WA, June 14-17.
37. T. Afzal, K. Iqbal, G. White, A. Wright, "Task discrimination for non-weight-bearing movements using muscle synergies," Proceed. 2015 IEEE EMBC Conference, Milano, Italy, Aug 25-29. DOI: 10.1109/EMBC.2015.7318403
38. T. Afzal, G. White, A. Wright, K. Iqbal, "Locomotion mode identification for lower limbs using neuromuscular and joint kinematic signals, Proceed. IEEE 2014 Int. Confer. Eng. in Med. & Biol., Chicago, Illinois, Aug 26-30. DOI: 10.1109/EMBC.2014.6944518
39. A. Roy, H.I. Krebs, K. Iqbal, N. Macko, R.F. Macko, L.W. Forrester, "Facilitating push-off propulsion: a biomechanical model of ankle robotics assistance for plantarflexion gait training," Proceed. 2014 IEEE Intern. Confer. on Biomedical Robotics and Biomechatronics, Sao Paulo, Brazil, 12-15 Aug. DOI: 10.1109/BIOROB.2014.6913853
40. A.M. Abdulrahman, K. Iqbal, "Capturing human body dynamics using rnn based on persistent excitation data generator," Proceed. IEEE 27th International Symposium on Computer-Based Medical Systems, New York, NY, May 2014; doi: 10.1109/CBMS.2014.145
41. G. Rasool, K. Iqbal, N.Bouaynaya, G. White, "Neural drive estimation using the hypothesis of muscle synergies and the state-constrained Kalman filter", Proceed. 6th Int. IEEE EMBS Conference on Neural Engineering, San Diego, California, 6-8 Nov 2013; doi: 10.1109/NER.2013.6696056.
42. G. Rasool, K. Iqbal, "Muscle activity onset detection using energy detectors," Proceed. 2012 IEEE International Conference on Engineering in Medicine and Biology, pp. 3094-97, San Diego, CA, Aug 29-Sep 02, 2012; doi: 10.1109/EMBC.2012.6346618.
43. G. Rasool, N. Bouaynaya, K. Iqbal, "Muscle activity detection from myoelectric signals based on the AR-GARCH model," Proc. IEEE Statistical Signal Processing Workshop, Ann Arbor, MI, Aug 2012; doi: 10.1109/SSP.2012.6319721.
44. G. Rasool, K. Iqbal, "Muscle activity onset detection in sit-to-stand movement using double threshold method," Proceed. International Symposium on Computer, Consumer and Control, June 4-6, 2012, Taichung, Taiwan.
45. A.M. Mughal, S. Pervaiz, K. Iqbal, "LMI based physiological cost optimization for biological STS transfer," Proceed. IEEE Conference on Systems, Man, and Cybernetics, Anchorage, Alaska, Oct 2011; doi: 10.1109/ICSMC.2011.6083885.
46. K. Iqbal, "Mechanisms and models of postural stability and control," Proceed. IEEE Conference on Engineering in Medicine and Biology, Boston, Massachusetts, Sep 2011; doi: 10.1109/IEMBS.2011.6091931.
47. A.M. Mughal and K. Iqbal, "3D bipedal model for biomechanical sit-to-stand movement with coupled torque optimization and experimental analysis", Proceed. IEEE SMC Conference, Istanbul, Turkey, pp. 568-73, Oct 2010; doi: 10.1109/ICSMC.2010.5642012.
48. G. Rasool, A.M. Mughal, K. Iqbal, "Fuzzy biomechanical sit-to-stand movement with physiological feedback latencies", Proceed. 2010 IEEE SMC Conference, Istanbul, Turkey, pp. 316-321, Oct 2010; doi: 10.1109/ICSMC.2010.5641681.
49. A.T. Abdulsadda, N. Bouaynaya, and K. Iqbal. "Noninvasive breast tumor localization based on ultrawideband microwave backscatter" Proceed. Int. Conf. on Signal Processing and Communications, Banglore, India, Jul 2010; doi: 10.1109/SPCOM.2010.5560490
50. A.T. Abdulsadda and K. Iqbal. "A wavelet-based recurrent fuzzy neural network trained with stochastic optimization algorithm." Proceed. IEEE Int. Conf. on Systems, Man, and Cyber., San Antonio, TX, pp. 4089-93, Oct 2009; doi: 10.1109/ICSMC.2009.5346702
51. A.T. Abdulsadda and K. Iqbal. "Reduced order modeling using genetic-fuzzy algorithm." Proceed. IEEE Conference on Systems, Man, and Cybernetics, San Antonio, TX, pp. 4796-00, Oct 2009, doi: 10.1109/ICSMC.2009.5346072
52. A.T. Abdulsadda N. Bouaynaya, and K. Iqbal. "Stability analysis and breast tumor classification from 2D ARMA models of ultrasound images," Proceed. IEEE Conf. on Eng. in Med. and Biol., Minneapolis, MN, pp. 3763-66, Sep 2009; doi: 10.1109/IEMBS.2009.5334482
53. K. Iqbal and A.M. Mughal, "Bipedal modeling and decoupled optimal control design of biomechanical sit-to-stand transfer," Proceed. IEEE International Workshop on Robotic and Sensors Environments (ROSE 2008), pp. 46-51, Ottawa, Canada, 17-18 Oct, 2008; doi: 10.1109/ROSE.2008.4669179
54. A.M. Mughal and K. Iqbal, "Biomechanical bipedal model with asymmetrical reference trajectories for sit-to-stand", Second International Conference on Elec. Eng., Lahore, Pakistan, Apr 2008; doi: 10.1109/ICEE.2008.4553899

55. A.M. Mughal and K. Iqbal, "Synthesis of angular profiles for bipedal sit-to-stand movement", Proceed. 40th Southeastern Symposium on System Theory, pp. 293-297, New Orleans, LA, 16-18 Mar 2008; doi: 10.1109/SSST.2008.4480240
56. K. Iqbal and A.M. Mughal, "Active control vs. passive stiffness in posture and movement coordination," IEEE Int. Conf. on Systems, Man, and Cybernetics, pp. 3367-72, Montreal, Canada, Oct 2007; doi: 10.1109/ICSMC.2007.4414105
57. A.M. Mughal and K. Iqbal, "Human bipedal biomechanical modeling with Maple DynaFlex Pro", 2007 Digital Human Modeling Conference, *Society of Automotive Engineers*, Technical paper No. 2007-01-2452, 2007; doi: https://doi.org/10.4271/2007-01-2452
58. T. Halic, S. Kockara, C. Bayrak, K. Iqbal and R. Rowe, "Two-way semi-automatic registration in augmented reality system," IEEE Int. Conf. on Systems, Man, and Cybernetics, , pp. 3390-95 Montreal, Canada, Oct 2007; doi: 10.1109/ICSMC.2007.4414000
59. S. Kockara, T. Halic, K. Iqbal, C. Bayrak and R. Rowe, "Collision detection algorithms: a survey," IEEE Int. Conf. on Systems, Man, and Cybernetics, pp. Montreal, Canada, Oct 2007, doi: 10.1109/ICSMC.2007.4414258
60. A.M. Mughal and K. Iqbal, "Physiological cost optimization for sit-to-stand transfer", Proceed. IEEE Region 5 Technical Conference, pp. 147-152; 10.1109/TPSD.2007.4380370
61. A.M. Mughal, K. Iqbal, "H-infinity controller synthesis for a physiological motor control system modeled with Bond graphs," Proceed. IEEE Int. Conf. on Control Applications, Munich, Germany, pp. 947-952, Oct 2006
62. K. Iqbal, A. Roy, "Kinematic trajectory generation in a neuro-musculoskeletal model with somatosensory and vestibular feedback," Proceed. IFAC Symposium on Modeling and Control in Biomedical Systems, Reims, France, pp. 363-368, Sep 2006; doi: 10.3182/20060920-3-FR-2912.00066
63. A.M. Mughal, K. Iqbal, "Modeling and analysis of the physiological motor control system using Bond graphs," Proceed. IFAC Symposium on Modeling and Control in Biomedical Systems, Reims, France, pp. 393-398, Sep 2006; doi: 10.3182/20060920-3-FR-2912.00071
64. A.M. Mughal, X. Ye and K. Iqbal, "Computational algorithm for higher order Legendre polynomial and Gaussian quadrature method," Proceed. 2006 International Conference on Scientific Computing (CSC'06), pp73-77, Las Vegas, NV, Jun 2006
65. A.M. Mughal, K. Iqbal, "A fuzzy biomechanical model with H_2 control scheme for sit-to-stand movement," Proceed. American Control Conference, pp. 3427-32, Minneapolis, Minnesota, June 2006; doi: 10.1109/ACC.2006.1657248
66. A.M. Mughal, K. Iqbal, "A fuzzy biomechanical model for optimal control of sit-to-stand movement," Proceed. IEEE Int. Conf. on Engineering of Intelligent Systems (ICEIS'06), paper No. 2250, Islamabad, Pakistan, Apr 2006; doi: 10.1109/ICEIS.2006.1703160
67. E. Sarioglu, K. Iqbal, C. Bayrak, "Neural network performance prediction with feature extraction," Proceed. IEEE ICEIS'06, paper No. 3003, Islamabad, Pakistan, Apr 2006; doi: 10.1109/ICEIS.2006.1703223
68. U. Topaloglu, C. Bayrak, K. Iqbal, "A pseudo random number generator using Java's garbage collector", Proceed. IEEE ICEIS'06, paper No. 2244, Islamabad, Pakistan, Apr 2006; doi: 10.1109/ICEIS.2006.1703161
69. S. Kockara, S. Dagtas, K. Aydin, N. Ali, K. Iqbal, "New set of algorithms to create 3D images of cellular structures using light microscopy", Proceed. IEEE Int. Conf. Eng. Intel. Sys., pp. 1-6, Islamabad, Pakistan, Apr 2006; doi: 10.1109/ICEIS.2006.1703162
70. A.M. Mughal, K. Iqbal, "A fuzzy biomechanical model for H2 optimal control of sit-to-stand movement," Proceed. ICSC Congress on Computational Intelligence Methods and Applications, paper no. 785, Istanbul, Turkey, Dec 2005; doi: 10.1109/CIMA.2005.1662353
71. A. M. Mughal & K. Iqbal, "A Fuzzy Biomechanical Model for H∞ suboptimal Control of Sit-to-Stand Movement", Proceed. Eighth IASTED International Conference on Intelligent Systems and Control, pp374-379, Cambridge, MA, Oct 2005
72. A. Roy, K. Iqbal, "Optimization of goal-oriented voluntary movements," Proceed. IEEE-EMBS conference, pp. 4998-901, Shanghai, PRC, Sep 2005; doi: 10.1109/IEMBS.2005.1615597
73. Y. Tsao, K. Iqbal, "Can acoustic vowel space predict the habitual speaking rate of the speaker?" Proceed. IEEE-EMBS conference, pp. 1220-23, Shanghai, PRC, Sep 2005; doi: 10.1109/IEMBS.2005.1616644
74. A. Roy, K. Iqbal, "Robust Stabilization in a Single-Link Biomechanical Model: A Time-Domain Analysis", Proceed. IEEE Conference on Systems, Man, and Cybernetics, pp. 847-52, the Hague, Netherlands, Oct 2004, doi: 10.1109/ICSMC.2004.1398408
75. R. Ahangar, K. Iqbal, "Biodynamic modeling and simulation of multistage carcinogenesis", Proceed. IEEE EMBS Conference, pp. 3023-26, San Francisco, California, Sep 2004; doi: 10.1109/IEMBS.2004.1403856
76. A. Roy and K. Iqbal, "Analytical framework for constraining the control effort in a single-link biomechanical model with feedback delays", Proceed. IEEE Conference on Control Applications, pp. 562-567, Taipei, Taiwan, Sep 2004; doi: 10.1109/CCA.2004.1387271
77. K. Iqbal, A. Roy, M. Imran, "Passive and active contributors to postural stabilization", Proceed. IEEE Conference on Systems, Man and Cybernetics, Washington, D.C., pp. 4502-07, Oct 2003; doi: 10.1109/ICSMC.2003.1245693
78. A. Roy and K. Iqbal, "PID Stabilization of a Position-Controlled Manipulator with Wrist Sensor," *Society of Manufacturing Engineers*, Technical Paper, EE03-129, pp. 1-7, 2003.
79. A. Roy and K. Iqbal, "PID stabilization of a single-link biomechanical model with multiple delayed feedbacks", Proceed. IEEE Conference on Systems, Man and Cybernetics, pp. 642-47, Washington, D.C., Oct 2003; doi: 10.1109/ICSMC.2003.1243887
80. A. Roy, K. Iqbal, D.P. Atherton, "New criteria for model reduction of sampled data control systems", Proceed. IEEE International Symposium on Intelligent Control, pp. 146-51, Houston, Texas, Oct 2003; doi: 10.1109/ISIC.2003.1253929
81. A. Roy, K. Iqbal, D.P. Atherton, "On using prioritized optimization in sampled data control systems: a new variable weight", Proceed. IEEE Conference on Control Applications, pp. 764-69, Istanbul, Turkey, Jun 2003; doi: 10.1109/CCA.2003.1223534
82. A. Roy and K. Iqbal, "PID controller design for first-order -plus-dead-time process via Hermite –Biehler theorem", Proceed. 2003 American Control Conference, pp. 5286-91, Denver, Colorado, Jun 2003; doi: 10.1109/ACC.2003.1242567

83. Y.-C. Pai, J.D. Wening, E.F. Runtz, K. Iqbal, and M.J. Pavol, "Role of movement stability in reducing slip-related balance loss and falls among older adults", 1st International IEEE EMBS Conf. on Neural Engineering, pp. 253-56, Capri, Italy, Mar 2003; doi: 10.1109/CNE.2003.1196806
84. K. Iqbal and A. Roy, "PID controller design for the human arm-robot manipulator coordination problem", Proceed. 17th IEEE International Symposium on Intelligent Control, pp. 121-24, Vancouver, Canada, Oct 2002, doi: 10.1109/ISIC.2002.1157749
85. A. Roy and K. Iqbal, "PID stabilization of a position-controlled manipulator with wrist sensor", Proceed. IEEE Conference on Control Applications, pp. 209-214, Glasgow, UK, Sep 2002; 10.1109/CCA.2002.1040187
86. K. Iqbal and Y.F. Zheng, "Arm-manipulator coordination for load sharing using predictive control", Proceed. IEEE International Conference on Robotics and Automation (ICRA'99), pp. 2539-44, Detroit, Michigan, May 1999; doi: 10.1109/ROBOT.1999.773979
87. K. Iqbal and Y.F. Zheng, "Use of prediction control in arm-manipulator coordination", Proceed. 12th IEEE International Symposium on Intelligent Control, pp. 409-14, Istanbul, Turkey, Jul 1997; doi: 10.1109/ISIC.1997.626534
88. K. Iqbal, H. Hemami, "An investigation into the execution of human skilled movements", Proceed. Third International Conference on Signal Processing, pp 1437-40, vol. 2, Beijing, China, Oct 1996; doi: 10.1109/ICSIGP.1996.571130
89. K. Iqbal, "A parameterization and an algorithm for computation of determinants of polynomial matrices", Proceed. American Control Conference (IEEE Cat. No.95CH35736), Seattle, Washington, pp. 2536-37 (vol.4), Jun 1995; doi: 10.1109/ACC.1995.532304
90. K. Iqbal, M. Dogruel and H. Hemami, "Stability of linearized robotic musculoskeletal systems with feedback delays", Proceed. 32nd IEEE Conference on Decision and Control, pp. 1623-24, vol. 2, San Antonio, Texas, Dec 1993; doi: 10.1109/CDC.1993.325462
91. K. Iqbal, "A parameterization and an algorithm for the selection of decoupling feedback gains", Proceed. American Control Conference (IEEE Cat. No.93CH3225-0), pp. 1289B-90 vol.2, San Francisco, California, Jun 1993
92. K. Iqbal, J.A. Dineen, "H. Hemami and S.R. Simon, Coactivation and synergy in a planar multiple actuator system", Proceed. ASME Joint European Eng. Sys. Design and Analysis Conference (Vol. 2), pp. 115-23, Istanbul, Turkey, Jul 1992
93. K. Iqbal, H. Hemami and S.R. Simon, "Dynamics and control of side-to-side sway in the frontal plane", Proceed. Rehab. Soc. North America 12th Annual Conference, New Orleans, Louisiana, Dec. 1989

Abstracts

1. J. Seabaugh, K. Iqbal, "Real-time guitar signal processing: From audio to MIDI with minimal latency," UALR Research Expo, University of Arkansas at Little Rock, Apr 2025.
2. S.U. Abdi, M.A. Masood, T. Masood, K. Iqbal, "A tailored STATCOM configuration technique to optimize and dynamically control the voltage instability during heavy/light load condition," Arkansas Engineering Forum, Little Rock, Arkansas, Sep 2023.
3. A. Jordan, K. Iqbal, "Knowledge and Skills that Reliability Engineers Need in Data Science – a Survey," submitted to 69th Annual Reliability and Maintainability Symposium, Orlando, Florida, Jan 2023.
4. N. Jakoet, T. Ilyas, Iqbal, "Drowsy driving detection through integration of EEG and camera signals," UALR Research Expo, University of Arkansas at Little Rock, Apr 2022.
5. R.E. Singh, G. White, H. Hutchinson, K. Iqbal, "Bayesian network modeling for muscle synergies", 13th Annual Neuromuscular Plasticity Symposium**,** University of Florida**,** Mar 2018.
6. M. Bayraktar, S. Kockara, T. Halic, M. Mete, H.K. Wong, K. Iqbal, "Local edge-enhanced active contour (LEEAC) for accurate skin lesion border detection," Mid-South Computational Biology and Bioinformatics Society Conference, Mar 2018
7. R.E. Singh, K. Iqbal, G. White, G. Rasool, S.M. Wingate, H. Hutchinson, "Muscle synergy extraction from electromyogram data: a comparison of algorithms," 41st Annual Meeting of American Society of Biomechanics, Boulder, Colorado, Aug 2017.
8. R.E. Singh, K. Iqbal, G. White, "Transition in muscle synergies and neural commands during learning," Workshop on Brain Dynamics and Neurocontrol Engineering, Washington University, St. Louis, Jun 2017.
9. K. Iqbal, A.M. Abdulrahman, "Design and validation of a TDNN human walking model," 2015 ASB Annual Meeting, Columbus, Ohio, Aug 2015.
10. K. Iqbal, K. Altmayer, "Controller design for improved dynamic stability in a DFIG model," Twenty-third annual Arkansas Space Grant Symposium, Hot Springs, Arkansas, Apr 2015.
11. A.L. Shoushtari, A. Guran, K. Iqbal, B. Yousefghahari. Theoretical Study of Central Nervous Systems to Control Body Posture despite Redundancy, 6th Annual Congress of Iran Rheumatology Association, Tehran, Oct 2012.
12. A. Guran, A. Shooshtri, K. Iqbal, "Biomechatronic motion simulation of human lifting using a novel approach to solve kinematic redundancy in human movements", EUROMECH Physics of Sports, Paris, Apr 2012.
13. R.F. Babiceanu, S. Mohan, K. Iqbal, "Quantifying component abilities of program outcomes and continuous improvement models", ABET symposium, Indianapolis, Indiana, April 2011.
14. A.M. Mughal, K. Iqbal, Experimental analysis of kinematic variables associated with biomechanical sit-to-stand movement, American Society of Biomechanics Annual Meeting, Providence RI, Aug 2010.
15. B. Stracener, K. Iqbal, "Smart grid 101: lessons for Arkansas consumers", Sigma Xi Central Arkansas chapter annual meeting, Searcy, Arkansas, April 2010.
16. K.S. Altmayer, K. Iqbal, "Math modeling, and analysis of Navier- Stokes equations," 2009 COMSOL Conference, Boston, Massachusetts, Oct 2009
17. K.S. Altmayer, K. Iqbal, H. Akca, "Using FEMLAB, MATLAB, and linear algebra pack for Navier-Stroke equations," World Congress of Nonlinear Analysis, Orlando, Florida, Jul 2008

18. K. Iqbal, A. Roy. “A neuro-musculoskeletal motor control model with somatosensory and vestibular feedback,” American Society of Biomechanics 2007 meeting, Stanford, California, Aug 2007
19. S. Mohan, K. Iqbal, H.M. Al-Rizzo, “Assessment of nontraditional engineering program,” Best Assessment Practices VII, Rose-Hulman Institute, Terre Haute, Indiana, Feb 2006
20. R. Ahangar, K. Iqbal, N. Ali, “A stochastic model of multistage mutations based on gene interactions” 3rd Annual Conference of Mid-South Computational Biology and Bioinformatics Society, Baton Rouge, Louisiana, Feb 2006
21. M. Reed, K. Iqbal, A.M. Mughal, “Design and implement active magnetic bearing controller,” Thirteenth Annual Arkansas Space Grant Symposium, Fayetteville, Arkansas, Apr 2005