

---

**Department of Electrical and Computer Engineering, Dalhousie University, Halifax, NS, Canada**

---

## **SOFA 2020**

**9<sup>TH</sup> INTERNATIONAL WORKSHOP ON SOFT COMPUTING APPLICATIONS 27-29 NOV-2020  
ARAD, ROMANIA**

### **Special Session: Intelligent Control of Robotics and Power Systems**

**Scope and topics:** This special session aims to provide researchers, from academia and industry, a platform to address challenges associated with robotics and power systems using intelligent techniques. We seek original, unpunished contributions that are mainly focused on, but not necessarily limited to, the following topics:

#### **Tracks:**

##### **\*Power Systems**

Fault detection/analysis techniques, Time series classification

##### **\*Robotics and Automation**

Intelligent control of mobile robots, humanoid robots, and tele-robotics for rehabilitation, Deep learning in automation

##### **\*Power Converters**

Model-free and model-based Intelligent control of DC-DC Power converters and motor drives

•All accepted papers of SOFA 2020 will be published by Springer, *Advances in Intelligent Systems and Computing* (ISSN 2194-5357)

\*The books of this series are submitted to ISI Proceedings, SCOPUS, EI -Compendex, DBLP, Google Scholar and Springer link.

\*Selected papers will also be published in ISI (SCIE) indexed journals.

\*Submission of full papers: October 30, 2020

\*Notification of acceptance: November 10, 2020

\*Submission of final paper and early payment: November 15, 2020

\*The submission Web page for SOFA 2020 is <https://easychair.org/my/conference?conf=sofa2020#>

For more information please visit: <https://www.sofa-org.eu/2020/>

*Prospective authors are invited to submit full papers, minimum 8 pages including author contact details according to the instructions on the website.*



Dr. Khurram Karim Qureshi received a BSc degree with honors in Electrical Engineering from the University of Engineering and Technology, Lahore, Pakistan, in 1999 and a PhD degree also in Electrical Engineering from the Hong Kong Polytechnic University in 2006. He is currently an Associate Professor with the Electrical Engineering Department of KFUPM.

**Research Interests:**

Optical performance monitoring  
Optical Signal Processing using fiber and Semiconductor based Devices  
Gain clamping techniques in Optical Amplifiers  
Fiber Lasers  
Fiber Sensors



**Umar Farooq** (GSM'13–M'18) received the B.Sc. and M.Sc. degrees in electrical engineering from the University of Engineering and Technology, Lahore, Pakistan, in 2004 and 2011, respectively, and the Ph.D. degree in electrical engineering from Dalhousie University, Halifax, NS, Canada, in 2017. He has over 15 years of experience in effectively teaching the junior and senior level courses to undergraduate students of electrical engineering. He has also supervised over 30 senior year design projects. In addition, he established the Society of Engineering Excellence at EED, University of Punjab (UoP), Lahore, to promote research activities amongst undergraduate students of EE with the support of the then Vice-Chancellor, Prof. M. Kamran. He has published a number of papers in peer-reviewed international conferences and journals. His research interests include fuzzy logic, neural networks, feedback control systems and their applications.

Dr. Farooq was a recipient of the Dalhousie Faculty of Graduate Studies Publications Awards for the three consecutive years 2014–2016. He was also awarded with the 2017 Dalhousie Faculty of Engineering Excellence Award and the 2017 and 2018 Nova Scotia Graduate Scholar Awards.



**Dr. Asim Iqbal** is a Postdoctoral Researcher in Computational Neuroscience at . Prior to this, he finished his PhD in **Computational Neuroscience** on the topic: **'Exploring brain-wide development through deep learning'** at Institut für Hirnforschung (HiFo) and Zentrum für Neurowissenschaften Zürich (ZNZ), UZH|ETH Zürich.

Dr. Iqbal PhD thesis was advised by Prof. Theofanis Karayannis along with Prof. Fritjof Helmchen and Prof. Mehmet Fatih Yanik as advisory committee members. The focus of his PhD project was to develop deep learning-based tools to analyse neuro-imaging datasets which includes detection of neurons and generating an automated atlas for developing mouse and human brain sections captured through various imaging modalities.

Morover, he worked on explaining the functional and anatomical correlates of neural responses in the mouse somatosensory and visual cortex.



**Muhammad Abrar Akram** received the B.S. degree in Electrical Engineering from the University of Punjab, Lahore, Pakistan, in 2013, and combined M.S. leading to Ph.D. degree in Electrical and Medical Convergent Engineering from the Kangwon National University, Chuncheon, South Korea, in 2019. During his Ph.D., he was a full-time graduate research student in Integrated Circuits and Systems Laboratory, developing distributed PMU for DVFS using adaptive time-domain signal circuits. In addition, he was also involved in the development of adaptive distributed PMU using unified voltage and frequency regulators .

He is currently a Post-Doctoral Associate in Electrical and Computer Engineering Department at New York University Abu Dhabi, United Arab Emirates. His current research interests include the design of low-power mixed-signals CMOS integrated circuits for mm-scaled implantable devices.

Dr. Akram is the recipient of the President Award and the Company Special Award in 2016 and 2018, respectively, from the Korean Semiconductor Industry Association (KSIA).



**Muhammad Usman Asad** received the B.Sc. and M.Sc. degrees in electrical engineering from the University of the Punjab Lahore and the G.C. University Lahore in 2010 and 2015, respectively. He is currently pursuing Ph.D. studies at the Department of Electrical Engineering, Dalhousie University, Canada and working as Mitacs PhD intern in NovaResp Technologies Inc to develop intelligent control to improve the existing technology to treat sleep apnea disorder.

He served as President of Society of Engineering Excellence (2009) at Electrical Engineering Department University of the Punjab Lahore during the year 2009 and contributed in the research activities of the society. He was the recipient of Gold Medal award for his paper on Ball Scoring Robot in 24th IEEEEP International Multi-topic Symposium, 2009 and Silver Medal award for his paper on Neural Controller for Robot Navigation in 26th IEEEEP International Multi-topic Symposium, 2011.

He has more than 6 years of teaching and research experience and has published several papers in peer reviewed IEEE conferences and international journals. His research interests include the intelligent control of robotics and power systems.

#### **Technical Program Committee (TPC):**

Prof. Dr. Jason Gu, IEEE President, Region 7, Canada

Prof. Dr. Hamad Hanafi, Dalhousie University and NovaResp Technologies Inc, Halifax, NS, Canada

Prof. Dr. Zheng Chen, Associate Professor, Zhejiang University, China

Dr. Athar Qureshi, Nova Scotia Health Authority (NSHA), Dalhousie University, Canada

Mr. Shahid Mehmood-ul-Hassan, Al-Khawarizmi Institute of Computer Sciece (KICS), UET, Lahore, Pakistan