

IEEE Canada 2016 Awards Programme

Awards presented in reverse order

IEEE CANADA ACHIEVEMENT AWARDS

A.G.L. MCNAUGHTON GOLD MEDAL

for exemplary contributions to the engineering profession

R.A. FESSENDEN MEDAL

for important contributions to the field of telecommunications engineering

POWER MEDAL

for important contributions to the field of electric power engineering

OUTSTANDING ENGINEER MEDAL

for outstanding contributions to electrical and electronics engineering

J.M. HAM (OUTSTANDING ENGINEERING EDUCATOR) MEDAL

for outstanding contributions to engineering education

IEEE CANADA SERVICE AWARDS

W.S. READ OUTSTANDING SERVICE MEDAL

for outstanding and sustained service to IEEE Canada and the Institute

E.F. GLASS WESTERN CANADA MERIT MEDAL

for meritorious service in western Canada at the local IEEE Section and Area level

M.B. BROUGHTON CENTRAL CANADA MERIT MEDAL

for meritorious service in central Canada at the local IEEE Section and Area level

J.J. ARCHAMBAULT EASTERN CANADA MERIT MEDAL

for meritorious service in eastern Canada at the local IEEE Section and Area level

2016 IEEE Canada R.A. Fessenden Medal

For outstanding contributions to wireless sensor networks for the Internet of Things



Hussein Mouftah



Hussein Mouftah (LFIEEE) is a Distinguished University Professor and Tier 1 Research Chair at the School of Electrical Engineering and Computer Science at the University of Ottawa. Previously, he was a professor and associate head with the Department of Electrical and Computer Engineering at Queen's University. He also has six years of industrial experience at Bell Northern Research of Ottawa.

Dr. Mouftah is developing next-generation technologies that will serve as a foundation for smart cities. He has made significant contributions to the understanding and knowledge of telecommunication networks, including ad hoc and sensor networks related to the Internet of Things (IoT). He is currently developing a solution to securely charge

electric vehicles within smart grid environments, allowing users to locate the nearest charging station using a mobile device, then book and pay for it. An internationally acclaimed scholar, Dr. Mouftah has authored or co-authored 10 books, 144 industrial reports and more than 1,400 technical papers; to date, he holds 14 patents and six invention disclosures.

Dr. Mouftah is a Fellow of the IEEE, the Canadian Academy of Engineering, the Engineering Institute of Canada and the Academy of Science of the Royal Society of Canada. His volunteer contributions to IEEE are numerous. Within IEEE Canada, he served as Chair of the Regional Awards & Recognition Committee. Within the IEEE Communications Society, he has served as Editor-in-Chief of IEEE Communications Magazine, Director of Education and was named a Distinguished Lecturer. He has also served as a Member of the Board of Governors.

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2016 IEEE Canada A.G.L. McNaughton Gold Medal

For outstanding contributions in the field of robotics and automation including research and development and founding of high-technology companies



Andrew Goldenberg



Andrew Goldenberg (LFIEEE) is the founder (1982) of the field of Robotics at the University of Toronto where he has been a Professor of Mechanical and Industrial Engineering, cross-appointed in the Institute of Biomaterials & Biomedical Engineering, and now a Professor Emeritus. He is also an Adjunct Professor at Ryerson University, Toronto, and a guest/visiting professor at three prestigious universities in the P.R. China. He is the founder and current President of Engineering Services Inc. (ESI), involved in the development of leading-edge robotics-based automation.

Dr. Goldenberg has made significant contributions to theory of robot kinematics, dynamics and control. He is one of the most prolific developers of robotic technology in a wide variety of fields such as security, manu-

facturing, medical surgery, and nuclear. He is a world-wide recognized expert, concurrently active in academic research (43 Ph.D., 67 M.A. Sc., 43 patents granted/applied, 255 peer-reviewed publications with more than 3300 citations in leading journals) and commercial enterprises. In May 2015 the scope of his robotics commercialization efforts has expanded with the acquisition of ESI by Shenzhen ANZER Intelligent Engineering Co., Ltd., a P.R. China consortium.

As an employee of SPAR Aerospace Ltd. of Toronto, he played a key role in the development of the first Space Shuttle Remote Manipulator System (Canadarm).

Dr. Goldenberg's accolades include Fellow of ASME, Fellow of Engineering Institute of Canada (EIC), Fellow of CAE, and Fellow of AAAS. He is the recipient of the 2010 PEO Engineering Medal for Entrepreneurship and the 2013 Sir John Kennedy Medal, the highest honour awarded by the EIC.

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2016 IEEE Canada Power Medal

For outstanding contributions to power engineering research and education



Claudio Cañizares



Claudio Cañizares (FIEEE) is a Professor in the Electrical and Computer Engineering (ECE) Department of the University of Waterloo, where he has held various academic and administrative positions since 1993, and currently serves as the Hydro One Endowed Chair and the Associate Chair Research of the ECE Department. He is also Associate Director of the Waterloo Institute for Sustainable Energy. He received the Electrical Engineer degree from the Escuela Politécnica Nacional (EPN) in Quito-Ecuador in 1984, where he held different teaching and administrative positions between 1983 and 1993, and his MSc (1988) and PhD (1991) degrees from the University of Wisconsin-Madison.

Dr. Cañizares' leadership in improving the operation of competitive energy markets and smart grids is widely respected across IEEE Power & Energy Society (PES). His particular areas of expertise focus on the study of stability, modeling, simulation, control, optimization, and computational issues in large and small grids and energy systems. In these areas, he has collaborated with industry and university researchers in Canada and abroad, supervising/co-supervising many research fellows and graduate students.

Dr. Cañizares has authored/co-authored a large number of journal and conference papers, as well as various technical reports, book chapters, disclosures and patents, and has been invited to make multiple keynote speeches, seminars, and presentations at many institutions and conferences world-wide. He is a Fellow of the IEEE, the Royal Society of Canada and of the Canadian Academy of Engineering, and has been the recipient of various IEEE PES Technical Council and Committee awards and recognitions.

2016 IEEE Canada Outstanding Engineer Medal

For outstanding contributions to synthetic aperture radar imaging and moving target indication systems development



Anthony Damini



Anthony Damini (SMIEEE) obtained his Bachelor's and Master's degrees in Electrical Engineering from McMaster University, Hamilton, Ontario. In 1989, he joined the Department of National Defence as a Defence Scientist. Since then, he has spent time as lead of several scientific groups and manager of Radar Systems at Defence Research and Development Canada (DRDC), responsible for setting technical direction and overseeing R&D. Currently, he is the lead of the Tactical Radar group within DRDC, responsible for imaging and moving target indication technologies.

Anthony has a proven track record in concept development and technology transition, enabled by his approach to cost-effective rapid prototyping, early field testing and risk reduction. He has made numerous

pioneering contributions by conceiving of and leading the development of several diverse sensing technologies which were successfully transferred to industry. The technologies are dual use with applications to both defence and societal needs, and have led to increased demand for sensing R&D in government, academia and industry. He serves as one of the principal advisors to national defence on airborne sensing and integrated intelligence, surveillance, reconnaissance architectures.

His specific research interests include real-time systems and signal processing for synthetic aperture radar, ground moving target indicator radar, moving target imaging, phased array radar, and adaptive sensor resource management.

Anthony has authored or co-authored more than 75 conference/journal papers, book chapters and internal reports. He has served as both a member and Chair of several international panels and working groups in the areas of sensors and signal processing on behalf of Canada.

2016 IEEE Canada W.S. Read Outstanding Service Medal

For sustained dedication and outstanding service to IEEE Canada and its members



Sreeraman Rajan



Sreeraman Rajan (SMIEEE) is the Canada Research Chair in Sensor Systems at Carleton University. Previously, he worked as a defence scientist at Defence Research Development Canada-Ottawa Research Centre. He also developed signal processing algorithms at JDS Uniphase, led the channel monitoring team at CeybaInc, developed algorithms for non-invasive medical devices at Biopark and developed systems for control of nuclear power at Bhabha Atomic Research Centre in India. He holds adjunct professorship at the University of Ottawa and the Royal Military College of Canada.

Dr. Rajan has been an IEEE member since 1990, most recently serving as Area East Chair of IEEE Canada. Prior to that, he served as Treasurer, Vice-Chair and Chair of the

IEEE Ottawa Section, and was a member of the IEEE Canada Conference Advisory Committee. He quickly developed a reputation for boosting participation in workshops and conferences by creating quality programming, and for spearheading the revival of the Engineering in Medicine and Biology Society (EMBS) Chapter, which went on to win Best Ottawa Chapter three times and received the Outstanding Chapter Award from IEEE EMBS in 2011.

An Associate Editor for IEEE Canada's Canadian Journal on Electrical and Computer Engineering, Rajan is also a notable author: He has published 25 journal papers, 70 conference papers and 15 technical reports, and has one patent, one pending patent and two disclosures of invention. He received a 2012 IEEE MGA Achievement Award and was also honoured that year by the Government of Canada with the Queen Elizabeth II Diamond Jubilee Medal.

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2016 IEEE Canada J.M. Ham Outstanding Engineering Educator Medal

For outstanding contributions in data analytics and sustainable ICT engineering education and research



Mohamed Cheriet



Mohamed Cheriet (SMIEEE) is a professor in the Department of Automation Engineering at the École de Technologie Supérieure at the University of Quebec in Montreal, where he has worked since 1992. He received his M.Sc. and Ph.D. in computer science from the University of Pierre & Marie Curie (Paris VI). Dr. Cheriet is also the founder and director of Synchromedia, which targets multimedia communications in telepresence applications.

Dr. Cheriet is leading the way in building sustainable ICT infrastructure for education, research and smart cities, developing low-carbon technologies and creating open, sustainable broadband. As a Tier 1 Canada Research Chair on Sustainable and Smart Eco-Cloud, he has established the first smart university campus in Canada, creating a

model for next-generation ICT infrastructure in universities and smart cities. He was Principal Investigator of the GreenStar project, the world's first zero-carbon Internet and cloud infrastructure, which uses low-carbon technologies including wind- and solar-powered networks to provide sustainable broadband provisioning — and ensure ICT's carbon footprint does not increase as the world becomes more reliant on communication technologies.

Dr. Cheriet is the founder and former Chair of the IEEE Montreal Chapter of Computational Intelligent Systems (CIS) and Steering Committee Member of the IEEE Green ICT Initiative. As an expert in computational intelligence, pattern recognition and machine learning, he has published more than 350 technical papers and serves on the editorial boards of several renowned journals and international conferences. Dr. Cheriet is the recipient of the 2012 Queen Elizabeth II Diamond Jubilee Medal.

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2016 IEEE Canada E.F. Glass Western Canada Merit Medal

For sustained contributions to Western Canada sections



Rasheek Rifaat



Rasheek Rifaat (LFIEEE) has his B.Sc. from Cairo University and M.Eng. from McGill University. Currently he is a Technical Director-Electrical at Jacobs Canada, where he has been working for 25 years. His Canadian engineering work history expands over 40 years in Calgary, Regina and Montreal. Since 1976, he has been an active IEEE member and in 2014 was elevated to Fellow Grade for "contributions to protection of industrial power systems." He is notably engaged in the IEEE Standards for Recommended Practices for Industrial and Commercial Power Systems. He is currently the chair of Standards Working Group - Protection & Coordination (Series 3004) and the Vice Chair of the Industrial & Commercial Power Systems (I&CPS) Department of the IEEE/IAS.

Rasheek's dedicated support to related IEEE technical conferences, tutorials, seminars and events reflects profound appreciation for the importance of these activities — critical for advancement of the electrical engineering profession and inter-generation transfer of engineering knowledge. His contributions have been particularly strong in Western Canada. He chaired two I&CPS Technical Conferences (2009/2015) and was the Treasurer of EPEC 2014, all held in Calgary. He is currently the Vice Chair of IEEE Southern Alberta Section's Joint PES/IAS Chapter, which has received several awards and recognitions since 2010. He has been instrumental in devising the evening seminars and events shared by the Southern Alberta and Northern Canada Sections. In January 2016 he joined the IEEE Canada Board as Regional Treasurer.

Rasheek is registered as P.Eng. in Alberta, Saskatchewan and Ontario and is a member of the Energy Industry Electrical Engineering Association.

2016 IEEE Canada M.B. Broughton Central Canada Merit Medal

For exemplary service to IEEE Central Canada Sections



Alagan Anpalagan



Alagan Anpalagan (SMIEEE) is a professor in the Department of Electrical and Computer Engineering at Ryerson University, where he directs a research group working on radio resource management (RRM) and radio access and networking (RAN) within the WINCORE Lab. He holds a Ph.D. in electrical engineering from the University of Toronto, and is currently Vice-Chair of IEEE SIG on Green and Sustainable Networking and Computing with Cognition and Cooperation.

Dr. Anpalagan has left a lasting legacy by fostering a sense of cohesion and unity among the Region's Central Sections, most notably during his tenure as IEEE Canada Central Area Chair (2012-2014). Leading up to that position, he served as IEEE Toronto Section Chair and IEEE Communications

Society (ComSoc) Chapter Chair, as well as Technical Program Committee Chair for the Canadian Conference on Electrical and Computer Engineering (2004 and 2008). As Technical Program Chair, he introduced changes that attracted substantially greater submissions. In 2009 he was appointed for a two-year term as IEEE Canada's Professional Activities Committee Chair, and then subsequently began serving as Central Area Chair, increasing section collaboration through developing strong relationships and building trust.

Dr. Anpalagan is the recipient of the Dean's Teaching Award at Ryerson, and is a two-time winner of the Faculty Scholastic, Research and Creativity Award and two-time winner of the Faculty Service Award. As editor of several IEEE publications, he received the Exemplary Editor Award from IEEE ComSoc and Editor-in-Chief Top10 Choice Award in Transactions on Emerging Telecommunications Technology. He has also co-authored three books.

2016 IEEE Canada J.J. Archambault Eastern Canada Merit Medal

For exemplary service to IEEE Canadian Atlantic Section and Area level



Jianjun (Jason) Gu



Jason Gu (SMIEEE) is a professor of Robotics and Assistive Technology in the Department of Electrical and Computer Engineering at Dalhousie University, where he also directs the robotics laboratory for biomedical, rehabilitation and assistive technology. He received his B.S. degree in Electrical Engineering and Information Science at the University of Science and Technology of China in 1992 and his Master's degree in Biomedical Engineering at Shanghai Jiaotong University in 1995 and earned his Ph.D. degree in the area of Rehabilitation Medicine and Electrical and Computer Engineering in 2001 from University of Alberta. His research areas include: biomedical engineering, bio-signal processing, rehabilitation engineering, neural networks, robotics, mechatronics and control.

Dr. Gu's relationship with IEEE started as an IEEE Canadian Atlantic Section (CAS) student branch counselor, garnering recognition in 2004 as an IEEE Outstanding Branch Counselor. He continued to dedicate himself to leadership roles in IEEE CAS, becoming vice chair and chair, and successfully organizing IEEE Electrical Power and Energy Conferences 2010 and 2013. He established new processes for evaluating and organizing conference paper and poster sessions to enhance participants' experiences. More recently he chaired the 2015 IEEE Canadian Conference on Electrical and Computer Engineering. He was awarded IEEE CAS's Murugan Award (2014) and IEEE CAS Distinguished Service Award (2015) due to his unique effectiveness and efficiency in leadership.

A Fellow of Engineering Institute of Canada, Dr. Gu has published more than 250 journal papers, book chapters and conference papers. He was a recipient of the best paper award in ICCSE 2003 and IEEE ICIA 2014.

IEEE Canada Members elected as 2016 IEEE Fellows

YIU TONG CHAN (FIEEE) — Kingston, ON
for development of efficient localization and tracking algorithms

JIE CHEN (FIEEE) — Edmonton, AB
for contributions to low-power and biomedical ultrasound circuits and devices

C. Y. CHUNG (FIEEE) — Saskatoon, SK
for contributions to power system stability and control

GABOR FICHTINGER (FIEEE) — Kingston, ON
for contributions to medical robotics and computer-assisted intervention

F. STUART FOSTER (FIEEE) — Toronto, ON
for contributions to the development and commercialization of ultrasound technology

DIMITRIOS HATZINAKOS (FIEEE) — Toronto, ON
for contributions to signal processing techniques for communications, multimedia and biometrics

BLAKE LLOYD (FIEEE) — Mississauga, ON
for development of non-intrusive diagnostics for electrical motors and generators

VINCENT WONG (FIEEE) — Vancouver, BC
for contributions to mobility management in wireless networks and demand side management in smart grid

LIANG-LIANG XIE (FIEEE) — Waterloo, ON
for contributions to fundamental limits of feedback control systems and wireless networks

IEEE Awards, 2016

IEEE HERMAN HALPERIN ELECTRIC TRANSMISSION AND DISTRIBUTION AWARD

GEORGE ANDERS (FIEEE) — Woodbridge, Ontario
for contributions to advances in computational methods for the thermal rating of electric power cables

IEEE RICHARD HAROLD KAUFMANN AWARD

G.S. PETER CASTLE (LFIEEE) — London, Ontario
for developments of applied electrostatic devices and processes in industry, agriculture, and environmental protection

IEEE DONALD O. PEDERSON AWARD IN SOLID-STATE CIRCUITS

MILES A. COPELAND (FIEEE) — Ottawa, Ontario
for contributions to the design and application of switched-capacitor and RF signal processing circuits

IEEE Medals, 2016

IEEE JAMES H. MULLIGAN, JR. EDUCATION MEDAL

SIMON S. HAYKIN (LFIEEE) — Hamilton, Ontario
for contributions to engineering education in adaptive signal processing and communication.

IEEE/RSE JAMES CLERK MAXWELL MEDAL

GEOFFREY HINTON — Toronto, Ontario
for pioneering and sustained contributions to machine learning, including developments in deep neural networks.

IEEE Canada Members elected as 2016 EIC Fellows

ALEXEI BOTCHKAREV (SMIEEE) — Toronto, Ontario
for his exceptional contributions to complex information management systems in health care and aerospace and service to the profession

KEITH BROWN (SMIEEE) — Toronto, Ontario
for his leadership and service to the nuclear and electrical engineering professions and his unstinting and reliable pursuit of excellence

IBRAHIM GEDEON (SMIEEE) — Edmonton, Alberta
for his exceptional leadership and contributions to the development of internet protocol television and IT for health care

WOLFGANG HOEFER (LFIEEE) — Victoria, British Columbia
for his exceptional contributions to electromagnetic field theory and its engineering applications from radio to optical frequencies

FARROKH JANABI-SHARIFI (SMIEEE) — Toronto, Ontario
for his outstanding contributions to advanced opto-mechatronic systems and application to robots

HUGH H.T. LIU (MIEEE) — Toronto, Ontario
for his exceptional contributions to aircraft systems and controls including autonomous unmanned systems and fault-tolerant controls

HA NGUYEN (SMIEEE) — Saskatoon, Saskatchewan
for his outstanding contributions to the field of digital communications and engineering education

Awards Presentation Remise des prix



IEEE Canada
The Institute of Electrical and Electronic Engineers Inc.

29th
**Canadian
Conference on
Electrical and
Computer Engineering**

29^{ème}
**Conférence
canadienne de
génie électrique
et informatique**

May 16 – 16 mai 2016
Vancouver, BC

