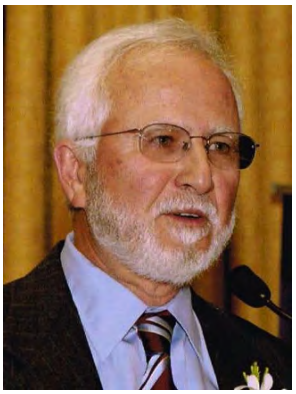
AACC AWARDS

The American Automatic Control Council sponsors five awards. These awards are given to recognize excellence in scientific, technological, or educational contributions to automatic control. Congratulations to this year's winners!

Richard E. Bellman Control Heritage Award
A. Galip Ulsoy, University of Michigan

Citation: For seminal research contributions with industrial impact in the dynamics and control of mechanical systems especially manufacturing systems and automotive systems



A. Galip Ulsoy is the C.D. Mote, Jr. Distinguished University Professor Emeritus of Mechanical Engineering (ME) and the William Clay Ford Professor Emeritus of Manufacturing at University of Michigan (UM), Ann Arbor, where he served as the ME Department Chair, Deputy Director of the National Science Foundation (NSF) Engineering Research Center for Reconfigurable Manufacturing Systems, and the Director of the USA Army Ground Robotics Reliability Center. He also served as Director of Civil and Mechanical Systems at NSF and the President of the American Automatic Control Council (AACC). He received the Ph.D. from University of California at Berkeley (1979), the M.S. degree from Cornell University (1975), and the B.S. degree from Swarthmore College (1973). His research interests are in the dynamics and control of mechanical systems, and he has published 4 books, holds 3 patents, and has published over 300 journal and conference papers. His work is highly-cited and has had major impact in industry. He has received numerous awards, including the AACC 1993 O. Hugo Schuck Best Paper Award, the 2003 and 2016 Rudolf Kalman Best Paper Awards from the J. Dynamic Systems, Measurement and Control, the 2008 Albert M. Sargent Progress Award from the Society of Manufacturing Engineers (SME), the 2008 Rufus T. Oldenburger Medal, the 2013 Charles Russ Richards Award from the American Society of Mechanical Engineers (ASME) and the 2014 Hideo Hanafusa Outstanding Investigator Award in Flexible Automation. He is a member of the USA National Academy of Engineering, received the 2012 Presidential Special Award from the Scientific and Technological Research Council of Turkey, and is a Fellow of ASME, SME, IEEE and the International Federation of Automatic Control (IFAC).

John R. Ragazzini Education Award
Naomi Leonard, Princeton University

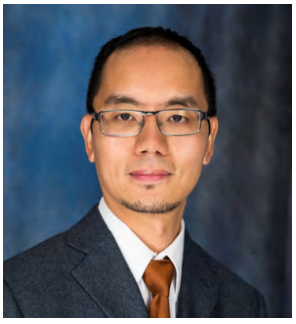
Citation: For outstanding contributions to control education through dedicated mentoring of undergraduate and graduate students, integration of research and education, and innovative curriculum development combining engineering and the arts.

Naomi Ehrich Leonard is the Edwin S. Wilsey Professor of Mechanical and Aerospace Engineering and Associated Faculty in the Program in Applied and Computational Mathematics at Princeton University. She is Director of Princeton's Council on Science and Technology and affiliated faculty member of the Princeton Neuroscience Institute and Program on Quantitative and Computational Biology. Leonard is a MacArthur Fellow, a member of the American Academy of Arts and Sciences, and Fellow of the IEEE, ASME, SIAM, and IFAC. She is Editor of the Annual Review of Control, Robotics, and Autonomous Systems. Previously, she was Senior Editor of IEEE Transactions on Control of Network Systems, Associate Editor of Automatica, and Associate Editor of SIAM Journal on Control and Optimization. She received the Hendrik W. Bode Lecture Prize (IEEE CSS, 2017), the Nyquist Lecture Award (ASME DSCD, 2014), and the Automatica Prize Paper Award (IFAC). She has also given plenary lectures at the SIAM Annual Meeting, IFAC World Congress, American Control Conference, and IEEE Conference on Robotics and Automation (ICRA).

Leonard received the B.S.E. degree in Mechanical Engineering from Princeton University in 1985 and the M.S. and Ph.D. degrees in Electrical Engineering from the University of Maryland in 1991 and 1994. From 1985 to 1989, she worked as an engineer in the electric power industry. Her current interests include decentralized control and decision making of dynamical systems on networks, autonomous vehicle and mobile robotic teams, collective animal behavior, human cognitive control, and intersections with dance. She led a multidisciplinary project that culminated in 2006 in a major field demonstration in Monterey Bay, CA of a first-of-its-kind automated and adaptive ocean observing system, featuring a coordinated network of autonomous underwater vehicles collecting data about the ocean.

Control Engineering Practice Award
Leo H. Chiang, The Dow Chemical Company

Citation: For the application of advanced data-driven algorithms for fault detection, fault diagnosis, and control in the chemical process industry



Leo H. Chiang is Technology Director at Dow Inc., leading Chemometrics and AI implementations for Manufacturing. Leo has developed and implemented several data analytics techniques to solve complex manufacturing problems, resulting in 11 Dow Manufacturing Technology Center Awards. In 2016 he received the Dow R&D Excellence in Science Award in recognition of his scientific achievement in industrial research.

Leo has a B.S. degree from University of Wisconsin at Madison and M.S. and Ph.D. degrees from the University of Illinois at Urbana-Champaign, all in Chemical Engineering. Leo has contributed to over 40 externally refereed

journal/proceedings papers and has given over 100 conference presentations and university lectures. Leo has co-authored two books published by Springer Verlag. His textbook Fault Detection and Diagnosis in Industrial Systems is available in English and Chinese and has received over 2,100 citations according to Google Scholar.

Leo has a long history of supporting American Institute of Chemical Engineers (AIChE), having served as 2014-2016 Computing and Systems Technology (CAST) director, 2016 CAST 10E programming chair, 2017-2018 spring meeting program chair (MPC), and recently elected to serve the 2019-2022 Executive Board of the Program Committee (EBPC). Leo was instrumental in setting up the Big Data Analytics Topical Conference (2015 to 2017) and Industry 4.0 Topical Conference (2018-2020) at the AIChE spring meeting. He was recognized by the AIChE with the 2016 Herbert Epstein Award for his leadership on Big Data Analytics technical programming and 2016 Computing Practice Award for his world-class leadership in the development and application of methodologies in analytics for batch and continuous processes known as Big Data.

Leo is also active in the broader engineering and control community, currently serves as 2019-2021 Computer Aids for Chemical Engineering (CACHE) trustee, 2021 International Symposium on Advanced Control of Chemical Processes (ADCHEM) industry co-chair, and 2022 American Control Conference (ACC) vice chair for industrial applications.

Donald P. Eckman Award
Samuel Coogan, Georgia Institute of Technology

Citation: For outstanding contributions to formal methods for control of autonomous systems with applications to transportation systems

Sam Coogan is an assistant professor at Georgia Tech with a joint appointment in the School of Electrical and Computer Engineering and the School of Civil and Environmental Engineering. He currently holds the Demetrius T. Paris Junior Professorship in the School of ECE. Prior to joining Georgia Tech in 2017, he was an assistant professor in the Electrical Engineering Department at UCLA from 2015 to 2017. He received the B.S. degree in Electrical Engineering from Georgia Tech and the M.S. and Ph.D. degrees in Electrical Engineering from the University of California, Berkeley. His research is in the area of dynamical systems and autonomy and focuses on developing scalable tools for verification and control of networked, cyber-physical systems with an emphasis on transportation systems. He received a Young Investigator Award from the Air Force Office of Scientific Research in 2018, a CAREER Award from the National Science Foundation in 2018, the IEEE Transactions on Control of Network Systems Outstanding Paper Award in 2017, and the best student paper award at the 2015 Hybrid Systems: Computation and Control conference.

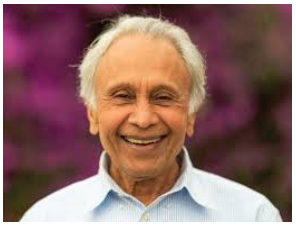
O. Hugo Schuck Best Paper Awards: Theory
Junjie Qin, Sen Li, Kameshwar Poolla, and Pravin Varaiya

"Distributed Storage Investment in Power Networks"

Junjie Qin is a postdoctoral researcher at UC Berkeley, working with Prof. Kameshwar Poolla and Prof. Pravin Varaiya. He received a Bachelor of Engineering degree in Hydraulic and Hydropower Engineering and a Bachelor of Economics degree from Tsinghua University, Beijing, China. He obtained a Ph.D. degree in Computational and Mathematical Engineering (2018) from Stanford University, where he also received a M.S. degree in Civil and Environmental Engineering (2011) and a M.S. degree in Statistics (2017). His research interests include electric energy systems and transportation networks. He is a recipient of the Satre family fellowship on energy and sustainability and a finalist for the Best Student Paper Award at the 55th IEEE Conference on Decision and Control 2016.

Sen Li is an Assistant Professor of the Department of Civil and Environmental Engineering at The Hong Kong University of Science and Technology. Between 2017-2019, he was a postdoctoral fellow at The University of California, Berkeley, working with Prof. Kameshwar Poolla and Prof. Pravin Varaiya. He received his B.S. from Zhejiang University, and Ph.D. from The Ohio State University. Previously, he was an intern at the Pacific Northwestern National Laboratory, and a visiting student at Harvard University. Dr. Li's research interest lies in the intersection of control, optimization and game theory with applications in the smart city. He is particularly interested in renewable energy integration and intelligent transportation systems. He is a finalist of Best Student Paper Award at 2018 European Control Conference.

Kameshwar Poolla is the Cadence Distinguished Professor at UC Berkeley in EECS and ME. His current research interests include many aspects of future energy systems including economics, security, and commercialization. He served as the Founding Director of the IMPACT Center for Integrated Circuit manufacturing. Dr. Poolla co-founded OnWafer Technologies which was acquired by KLA-Tencor in 2007. He has served as a technology and mergers/acquisitions consultant for Cadence Design Systems. Dr. Poolla has been awarded a 1988 NSF Presidential Young Investigator Award, the 1993 Hugo Schuck Best Paper Prize, the 1994 Donald P. Eckman Award, the 1998 Distinguished Teaching Award of the University of California, the 2005 and 2007 IEEE Transactions on Semiconductor Manufacturing Best Paper Prizes, and the 2009 IEEE CSS Transition to Practice Award**.**



Pravin Varaiya is a Professor of the Graduate School in the Department of Electrical Engineering and Computer Sciences at the University of California, Berkeley. He has been a Visiting Professor at the Institute for Advanced Study at the Hong Kong University of Science and Technology since 2010. He has co-authored four books and 350+ articles. His current research is devoted to electric energy systems and transportation networks. Varaiya has held a Guggenheim Fellowship and a Miller Research Professorship. He has received three honorary

doctorates, the Richard E. Bellman Control Heritage Award, the Field Medal and Bode Lecture Prize of the IEEE Control Systems Society, and the Outstanding Researcher Award of the IEEE Intelligent Transportation Systems Society. He is a Fellow of IEEE, a Fellow of IFAC, a member of the National Academy of Engineering, and a Fellow of the American Academy of Arts and Sciences.

O. Hugo Schuck Best Paper Awards: Application
Chao Ning and Fengqi You

"Data-Driven Adaptive Robust Optimization Framework for Unit Commitment under Renewable Energy Generation Uncertainty"

Chao Ning received the B.Eng. degree in Automation from University of Electronic Science and Technology of China in 2012, and M.S. degree in Control Science and Engineering from Tsinghua University, China, in 2015. He is currently working toward the Ph.D. degree at Cornell University, USA. His research interests include data-driven optimization under uncertainty, learning for dynamics and control, big data analytics and machine learning, power systems operations, and renewable energy systems.

Fengqi You is the Roxanne E. and Michael J. Zak Professor at Cornell University (Ithaca, New York), and is affiliated with the Graduate Fields of Chemical Engineering, Electrical and Computer Engineering, Operations Research and Information Engineering, Systems Engineering, Mechanical Engineering, Civil and Environmental Engineering, and Applied Mathematics. He also serves as Chair of Cornell Systems Engineering PhD Studies and Associate Director of Cornell Energy Systems Institute. He earned a B.Eng. from Tsinghua University and received his Ph.D. from Carnegie Mellon University. Fengqi was on the faculty of Northwestern University from 2011 to 2016, and worked at Argonne National Laboratory as an Argonne Scholar from 2009 to 2011. He has published more than 150 peer-reviewed journal articles, and has an h-index of 57. Some of his research results have been editorially highlighted in Science and Nature, featured on multiple journal covers, and reported by major media outlets (e.g. The New York Times, BBC, BusinessWeek, and National Geographic). His recent awards include an NSF CAREER Award, W. Curtis McGraw Research Award from ASEE, Cornell Engineering Research Excellence Award, and ACS Sustainable Chemistry & Engineering Lectureship Award, as well as W. David Smith, Jr. Publication Award, Sustainable Engineering Research Excellence Award, Environmental Division Early Career Award, Computing and Systems Technology (CAST) Outstanding Young Researcher Award, and Excellence in Process Development Research Award from AIChE. He is currently an Editor of Computers & Chemical Engineering, an Associate Editor of AAAS Journal Science Advances, a Consulting Editor of AIChE Journal, and an editorial board member of several other journals. His research focuses on novel computational models, optimization algorithms, statistical machine learning methods, and multi-scale systems analytics tools for smart manufacturing, digital agriculture, energy systems, and sustainability. For more information about his research group: www.peese.org.