THE UNIVERSITY OF MICHIGAN
REGENTS COMMUNICATION

Item for Information

Subject: Henry Russel Awards for 2019

      I am pleased to inform you that the Henry Russel Awards Faculty Advisory Committee, chaired by Interim Dean Michael J. Solomon, met recently and selected four faculty members to receive Henry Russel Awards for 2019. This award, which recognizes both exceptional scholarship and conspicuous ability as a teacher, is one of the highest honors the University bestows upon junior faculty members. The awards will be presented on the occasion of the Henry Russel Lecture, to be delivered in the Winter Term of 2019.

      The faculty members selected to receive this award are:

      Meghan A. Duffy, Associate Professor of Ecology and Evolutionary Biology, College of Literature, Science, and the Arts

      Matthew Johnson-Roberson, Assistant Professor of Naval Architecture and Marine Engineering and Assistant Professor of Electrical Engineering and Computer Science, College of Engineering

      Timothy McAllister, Associate Professor of Music, Department of Winds and Percussion, School of Music, Theatre & Dance

      Necmiye Ozay, Assistant Professor of Electrical Engineering and Computer Science, College of Engineering

Respectfully submitted,

Mark S. Schlissel
President

June 2018

Attachment

Meghan A. Duffy

Meghan Duffy received her B.S. in biological sciences from Cornell University (2000) and her Ph.D. in zoology and ecology, evolutionary biology, and behavior from Michigan State University (2006). She was a postdoctoral fellow at the University of Wisconsin-Madison and an assistant professor in the School of Biology at the Georgia Institute of Technology before her appointment in 2012 as assistant professor in the Department of Ecology and Evolutionary Biology at the University of Michigan. She was promoted to associate professor in the Department of Ecology and Evolutionary Biology in 2014.

Professor Duffy is one of the leading evolutionary ecologists of her generation of scientists. Her research integrates three distinct approaches to the study of ecology and evolutionary biology, including field-based research to observe interactions in the natural environment, laboratory experimentation that unlocks the causative relationships of the interactions she observes, and mathematical modeling to explain the large-scale patterns of these observations and to create hypotheses for further investigation. She has made groundbreaking research contributions in advancing the understanding of general principles in host-pathogen interactions. Her discoveries about the dynamics of host-pathogen interactions in communities of planktonic crustaceans have revealed the significant consequences of these interactions for the ecology and evolution of these complex aquatic ecosystems. Through her research, Professor Duffy has advanced fundamental understandings of the evolution of host-resistance to parasitism and the dynamics of host-pathogen systems and their wider consequences for larger ecological communities. She has published 60 widely-cited peer-reviewed papers. The significance of her contributions to evolutionary ecology has earned Professor Duffy many highly prestigious awards, including a National Science Foundation Early Career Development Program Award, the Ecological Society of America's George Mercer Award for an outstanding ecology paper by a scientist under 40, and the Presidential Early Career Award for Scientists and Engineers, the highest award presented by the U.S. government to early-stage scientists and engineers.

Professor Duffy has recently won the John Dewey Award from the College of Literature, Science, and the Arts as an exceptional and highly committed teacher. She re-designed one of the largest introductory biology courses, incorporating a highly interactive format with in-class activities and collaborative learning that produced a measurable impact on both student performance and the depth of the material students learn. She currently advises four doctoral students, serves on the committees of seven others, and has mentored more than 20 undergraduates. Professor Duffy is a national leader in science outreach. Selected as a 2017 American Association for the Advancement of Science Leshner Fellow, a prestigious recognition of her capacity to excite interest in science, she developed a summer activity for Wolverine Pathways high school seniors on how to use data to answer questions they are interested in. In 2018, she was a mainstage speaker at the March for Science in Washington, D.C. She also established a program that pairs undergraduates at minority-serving institutions interested in ecology and evolutionary science with mentors to help them prepare to apply to graduate school. In 2017, she was an inaugural recipient of the University's President's Award for Public Impact.

Professor Duffy's accomplishments as an outstanding scientist, teacher, and mentor bring distinction to the University of Michigan and the Department of Ecology and Evolutionary Biology, and make her exceptionally qualified to receive the Henry Russel Award.

Matthew Johnson-Roberson

Matthew Johnson-Roberson received his B.S. in computer science from Carnegie Mellon University (2005) and his Ph.D. in robotics from the University of Sydney (2010). He was a postdoctoral fellow at KTH Royal Institute of Technology, a research fellow at the University of Sydney, and a guest investigator at the Woods Hole Oceanographic Institution before his appointment in 2013 as assistant professor of naval architecture and marine engineering and assistant professor of computer science and engineering at the University of Michigan.

Professor Johnson-Roberson is considered to be the top underwater roboticist of his generation of researchers. His research articles are among the most cited in his field. He is a world leader in the development of marine robotic systems that can operate in challenging environments and deploy underwater mapping technologies that acquire and assemble massive amounts of data to provide large-scale 3D color-corrected images. His work is giving ocean scientists and archaeologists powerful new tools for their work. Archaeologists, for instance, are using his robotic imaging and mapping systems to investigate a submerged Bronze Age city in Greece and the lost 17th century city of Port Royal, Jamaica. His path-breaking work as a robotics engineer also has a terrestrial impact. Professor Johnson-Roberson is co-director of the U-M Ford Center for Autonomous Vehicles, the largest university-based research program worldwide in autonomous mobility, where he leads multi-disciplinary teams that are researching perception, control, and planning for self-driving cars and developing algorithms, mathematical models, and technologies for object detection and imagery needed for safe autonomous vehicles. His research is exceptionally well-funded by grants from diverse sources, including NASA, the National Oceanic and Atmospheric Administration, the National Science Foundation, and the Department of Energy, as well as industrial sponsors such as Ford and Samsung. In recognition of his excellence, Professor Johnson-Roberson has won the prestigious NSF Early Career Development Program Award and an Australian Research Council Super Science Fellowship. In 2017, he received the Department of Naval Architecture and Marine Engineering's Outstanding Faculty Award.

Professor Johnson-Roberson is an exemplary teacher. He revamped an underwater vehicle design course that is now one of the most popular introductory engineering sections. He co-teaches a new graduate class on autonomous vehicles that fills the Stamps Auditorium and has become one of the largest graduate courses ever taught in the College of Engineering. He maintains a truly exceptional level of engagement with graduate students, directing and supporting two vibrant and productive research labs. He is the advisor and mentor for two postdoctoral fellows and 13 Ph.D. students, chairing 10 dissertation committees. He has also advised 24 master's students. Professor Johnson-Roberson has a strong commitment to outreach, diversity, and inclusion. He is a strong advocate for women and under-represented students in engineering and is an active participant in events sponsored by the Society of Hispanic Professional Engineers, the National Society of Black Engineers, and other organizations.

Professor Johnson-Roberson is a brilliant researcher who is a leader in his field. He is an outstanding teacher and inspiring mentor to graduate students. He has brought distinction to the University of Michigan and the College of Engineering, and is extraordinarily qualified to receive the Henry Russel Award.

Timothy P. McAllister

Timothy McAllister received his B.M. in wind instruments (saxophone) (1995), his M.M. in saxophone performance and M.M. wind conducting (1997), and his D.M.A. in saxophone performance (2002) from the University of Michigan. He was an assistant and then associate professor at the State University of New York at Potsdam, a professor of music at Arizona State University, and an associate professor of music at Northwestern University, before his appointment in 2014 as associate professor of music (saxophone) at the University of Michigan.

Professor McAllister is quite simply the leading performer of the classical saxophone in the world today and a leading champion of contemporary classical music. He has achieved what has been called an almost impossible combination of technical prowess, richly nuanced interpretation, and hip-shaking groove. He performs regularly as a soloist with the world's finest orchestras, including the Berlin Philharmonic, the Chicago Symphony, the Detroit Symphony, the Los Angeles Philharmonic, the Munich Symphony, the St. Louis Symphony, and others. He is a member of the PRISM Quartet, an award-winning ensemble that is at the vanguard of new music. He is credited with over 200 premieres of new works by eminent and emerging composers across the globe, including the premiere of John Adams' *Saxophone Concerto*, which was composed for him and conducted by the composer in the Sydney Opera House. Professor McAllister is only the second saxophonist to appear as a soloist in the 120-year history of the BBC Symphony Proms concerts in the Royal Albert Hall. He has made over 40 recordings as a soloist and ensemble performer with major music labels, including as a solo performer on the Grammy-winning recording *John Adams: City Noir* with the St. Louis Symphony. Professor McAllister received his second Grammy for *Gavin Bryars: The Fifth Century*, recorded with the PRISM Quartet. He has won the School of Music, Theatre & Dance's Paul C. Boylan Alumni Award, given to an outstanding alumnus for significant contributions to the field of music, and the Christopher Kendall Award in recognition of his artistry and educational service.

Professor McAllister is an inspiring and innovative teacher, recognized as among the very best. Under his leadership, the University has maintained its reputation as having the most prominent saxophone program in the world. He has expanded the curriculum to focus on group improvisation and creative music-making as a path to collaboration and diverse musicianship. He has integrated technology into the studio lesson and music-making experience, introducing the use of interactive hardware and software. His students and chamber music ensembles regularly win or are finalists in major international music competitions. Professor McAllister is a sensitive and highly effective advisor of students. Graduates from his studio are achieving prominence as professional musicians and have earned tenure-track positions at major music schools across the United States. He also contributes knowledge, imagination, service, and leadership to many musical organizations, including the North American Saxophone Alliance and the Detroit Chamber Winds and Strings.

Professor McAllister is a brilliant musician and teacher whose accomplishments bring distinction to the University of Michigan and the School of Music, Theatre & Dance, and is extraordinarily qualified to receive the Henry Russel Award.

Necmiye Ozay

Necmiye Ozay received her B.S. in electrical and electronic engineering from Boğaziçi University (2004), her M.S. in electrical engineering from The Pennsylvania State University (2006), and her Ph.D. in electrical engineering from Northeastern University (2010). She was a postdoctoral scholar in computing and mathematical sciences at the California Institute of Technology before her appointment as assistant professor of electrical engineering and computer science at the University of Michigan in 2013.

Professor Ozay is a world leader in the field of feedback control engineering for dynamical systems. A remarkably innovative engineer, she has developed novel techniques to model, design, and test cyber-physical systems. She combines tools from applied mathematics, computer science, and engineering to provide brilliant insights and solutions to long-standing and confounding problems in the reliable design of complex collections of computing nodes and physical devices connected by communication networks. Her research has produced what has been called an epistemic breakthrough for the development of highly complex cyber-physical systems required for autonomous vehicles, swarms of mobile search-and-rescue robots, smart cities, and other smart systems that can reliably operate on a massive scale. Professor Ozay has also made a major breakthrough in cybersecurity, creating a highly novel approach for detecting attacks on cyber-physical systems that greatly exceeds previous results in detection. Her contributions to cyber-physical system theory have wide applications in energy networks, aerospace, naval research, and automotive systems. Her research team is testing their safety modules for autonomous vehicles in Mcity, the University's proving ground for connected and automated vehicles and technologies. Her work has won funding from a broad range of government and industry sources, including the National Science Foundation, NASA, and the Department of Defense. She received the 2014 Defense Advanced Research Projects Agency Young Faculty Award and the DARPA Director's Fellowship, awarded to the most exceptional researchers. Among the many honors she has already won in recognition of her brilliant career, Professor Ozay has received an NSF Early Career Development Program Award, a NASA Early Career Faculty Award, and a Young Investigator Award from the Office of Naval Research.

Professor Ozay is an outstanding and inspiring teacher. The College of Engineering has awarded her its 1938E Award in recognition of her excellence as an outstanding teacher in both elementary and advanced courses, as an understanding counselor of students who seek guidance in their choice of a career, as a contributor to the educational growth of the college, and as a teacher whose scholarly integrity pervades her service and is a tribute to the profession of engineering. She integrates state-of-the-art research into her courses and has earned exceptional student evaluations. Professor Ozay has an unusually strong record of involving undergraduates and master's students in research, and encourages them to pursue bold ideas. Her first Ph.D. student is now a postdoctoral fellow at CalTech, and she is chairing the dissertations of five other doctoral students. She is actively engaged in broadening participation in engineering education and creating a more inclusive engineering community, mentoring female engineering students in research projects and participating in the Marian Sarah Parker Scholars program.

Professor Ozay is a brilliant engineer and teacher whose accomplishments bring distinction to the University of Michigan and the College of Engineering, and is extraordinarily qualified to receive the Henry Russel Award.