

THE UNIVERSITY OF MICHIGAN
REGENTS COMMUNICATION

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Item for Information

Subject: Henry Russel Awards for 2011

I am pleased to inform you that the Russel Awards Faculty Advisory Committee, chaired by Dean Janet A. Weiss, has selected three faculty members to receive Henry Russel Awards for 2011. 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 March 8, 2011.

The faculty members selected to receive this award are:

Anthony Grbic, Assistant Professor of Electrical Engineering and Computer Science, College of Engineering

David J. Harding, Assistant Professor, Department of Sociology, College of Literature, Science and the Arts

Anna M. Michalak, Associate Professor of Civil and Environmental Engineering and Associate Professor of Atmospheric, Oceanic, and Space Sciences, College of Engineering

Respectfully submitted:



Mary Sue Coleman
President

July 2010

Attachment

Anthony Grbic

Anthony Grbic is an Assistant Professor of Electrical Engineering and Computer Science in the College of Engineering. Professor Grbic came to the University in January 2006 after completing his Ph.D. in electrical engineering from the University of Toronto.

Professor Grbic heads a highly productive research program focused on the development of novel metamaterials: man-made structures that exhibit tailored, and often counterintuitive, electromagnetic properties. Complementing his research activities, he teaches undergraduate and graduate courses in electromagnetics, radiowave propagation, and electromagnetic metamaterials.

Current applications of metamaterials include “superlenses,” structures that focus electromagnetic waves and light to tiny spots much smaller than achievable by classical lenses. Professor Grbic was the first to develop a practical implementation of a metamaterial superlens. Some of Professor Grbic’s papers published in *Physical Review Letters* and the *Journal of Applied Physics* have been widely cited and are considered classics in the field.

Professor Grbic followed that work with a series of papers that proposed three-dimensional generalizations of his original, two-dimensional structure that, in contrast to previously proposed metamaterials, operate over broad frequency ranges and with low losses. These realizations of metamaterials offer the possibility of developing novel antennas and wireless devices.

In addition to his work on metamaterials, Professor Grbic collaborates with Professor Merlin from the UM Physics Department on new patterned planar surfaces that act as lenses which can focus three-dimensional electromagnetic waves to deep subwavelength resolutions. These surfaces hold promise in the areas of microscopy, lithography and wireless power transfer.

Professor Grbic has exemplary teaching skills. In his course EECS 430, he revamped the curriculum and attracted industry funding to support student design projects. For this effort the course was voted by Eta Kappa Nu (the ECE student honor society) as one of their favorite courses in 2009. His EECS 598 course on electromagnetic metamaterials attracts students from many departments. Having this course taught by one of the leaders in the field of metamaterials helps to solidify the University’s presence at the forefront of this emerging field of research. His unrelenting efforts toward teaching and advising excellence are shaping students entering the field of electromagnetics.

David J. Harding

David Harding is Assistant Professor of Sociology in the College of Literature, Science and the Arts. He obtained his Ph.D. in sociology and social policy from Harvard University in 2005. Following a year as a post-doctoral fellow at the University of Michigan's Population Studies Center, he assumed his current position in the Department of Sociology and became an Assistant Research Scientist at the Population Studies Center. Beginning in Fall 2010, he will be Associate Professor of Sociology, Associate Professor of Public Policy in the Gerald R. Ford School of Public Policy, and Research Associate Professor in the Population Studies Center and Survey Research Center at the Institute for Social Research.

Professor Harding's research interests revolve around general questions linking social contexts to the emergence and reproduction of inequality, focusing particularly on the sources of poverty and individual disadvantage that are rooted in the characteristics of communities and neighborhoods. During the five years since completing doctoral study, he has completed a major ethnographic study of urban inequality, *Living the Drama: Community, Conflict, and Culture among Inner-City Boys* (University of Chicago Press, 2010). He is co-editor of a special issue of the *Annals of the American Academy of Political and Social Science* (May 2010) that is devoted to culture and poverty and is a co-author of a book on the sources of school violence. His work has also appeared in the *American Sociological Review*, the *American Journal of Sociology*, *Social Forces*, and *Sociology of Education*, among other journals.

Professor Harding has demonstrated effectiveness as a teacher and mentor and works with a wide range of students, teaching the Sociology Department's required statistics courses at both the undergraduate and graduate levels. He serves on a dozen doctoral committees while also being committed to teaching undergraduates the craft of research, and has involved eighteen undergraduates in his ongoing research projects. In 2007 Professor Harding won the "Outstanding Faculty Mentor Award" from the University of Michigan's Summer Research Opportunity Program.

Professor Harding has an active service record. He has served on the Sociology Department Admissions Committee and as an elected member of the Department's Executive Committee. He has served on the brownbag committee at the Population Studies Center, where he is research assistant professor. He is also an active affiliate of the National Poverty Center. He is an active reviewer for journals, academic presses, and external granting agencies, and serves on two major editorial boards.

Anna M. Michalak

Anna Michalak is Associate Professor of Civil and Environmental Engineering and Associate Professor of Atmospheric, Oceanic, and Space Sciences in the College of Engineering. She obtained a Ph.D. in civil and environmental engineering from Stanford University in 2003. Following an appointment as a Climate and Global Change Postdoctoral Fellow at the National Oceanic and Atmospheric Administration in Boulder, Colorado, she joined the faculty of the University of Michigan in 2005.

Professor Michalak's research focuses on characterizing complexity and quantifying uncertainty in environmental systems in order to improve the understanding of environmental systems and the ability to forecast their variability. She has developed several research directions that apply statistical data fusion methods for optimizing what is often complex, sparse and limited data related to environmental conditions. She collaborates with researchers at over two dozen university and research institutions world-wide and has obtained funding from a large number federal agencies, including NSF, NASA, NOAA, EPA, NIH, and DoE.

Balancing her research and teaching responsibilities skillfully, Professor Michalak has developed three new courses, at both the undergraduate and graduate levels, on statistical methods and uncertainty modeling. She has also been involved in the development and teaching of short courses at the University of Michigan Biological Station, the Mathematical Research Sciences Institute at Berkeley, and the National Center for Atmospheric Research. In recognition of her contributions to education, she was awarded the 2008 Outstanding Educator Award for "Outstanding Teaching in Environmental Science and Engineering" by the Association of Environmental Engineering and Science Professors.

Professor Michalak co-directs the Carbon Cycle Science Working group that is developing the next U.S. Carbon Cycle Science Plan. She is co-chair of the scientific steering committee for the upcoming NASA Active Sensing of CO₂ Emissions over Nights, Days, and Seasons (ASCENDS) satellite mission. She serves as editor or reviewer for over a dozen journals. At the University of Michigan, she has served on the CEE graduate committee, its curriculum committee, the EWRE graduate student admissions committee, and the Spatial Analysis Certificate Committee. She has served on the College of Engineering Research Computing Executive Committee, the executive steering committee for the new Institute for Computational Science and Engineering, and chairs the CEE Information Technology Committee.