

Provost Award: Excellence in Research and Scholarship 2023 Award Winners

#### Tobias Gerken

Tobias Gerken is a broadly trained environmental and atmospheric scientist and an Assistant Professor in the School of Integrated Sciences. His research focuses on <u>land-atmosphere interactions</u>. He is particularly interested in the surface flux dynamics of water, energy and <u>carbon dioxide between ecosystems</u> and atmosphere ,along with their impacts on weather and

climate. He has also investigated the role of agricultural land management in the Northern Great Plains on rainfall and the role of feedbacks between land and atmosphere for rapid drought development.

Dr. Gerken has conducted field research in the Arctic, the Brazilian Amazon and the Tibetan Plateau to better understand the exchange of energy, water and carbon dioxide between ecosystems and the atmosphere and how this may be affected by environmental change and human activities. He is a co-Pl on an NSF-funded project to <u>study interactions between air</u> <u>quality and lightning activity</u> and a topic editor for the openaccess journal <u>Earth System Science Data</u>.

Dr. Gerken earned a Diplom (BSc & MSc equivalent) in Environmental Science and a doctorate in Environmental and Atmospheric Science at the University of Bayreuth in Germany. He formerly was an assistant research professor at Penn State's Department of Meteorology and Atmospheric Science and a research associate at Montana State University's Department of Land Resources and Environmental Science.



Tobias Gerken Assistant Professor School of Integrated Sciences College of Integrated Science and Engineering



Jessica Lantz Assistant Professor and Instructional Designer Instructional Design JMU Libraries

#### Jessica Lantz

Jessica Lantz is an Instructional Designer and Assistant Professor at James Madison Libraries. She earned her M.Ed. in Educational Technology from JMU, M.L.S. from the University of North Texas, and B.S. in Media Arts & Design and Anthropology from JMU. She has been in her current role since 2019, with her work focusing on discovering, sharing, and implementing best practices in online teaching and learning in collaboration with JMU faculty.

Jessica's research investigates emerging educational strategies and tools to figure out how they might be implemented effectively and sustainably. She believes that instructional technologies, when carefully researched and utilized, can be used as part of a strong strategy for engaging our diverse students in the learning process. Highlights of her scholarship include research on <u>artificial intelligence in education</u>, learning access through universal design, and coediting two books focused on online teaching and learning.

Through her work, Jessica has helped the university to further its strategic priorities of advancing diversity, equity and inclusion and attracting the students of tomorrow. She hopes that her continued research and scholarship in the field of instructional design and technology will help JMU students have the best possible experience in the classroom for many years to come.

#### Sarah Lupo

Dr. Sarah Lupo is an Assistant Professor in the Middle, Secondary, and Mathematics Education Department in the College of Education at James Madison University. She received her bachelor's degree from James Madison University and a master's and Ph.D. in Literacy Education from the University of Virginia. Prior to working at JMU, she worked as an English teacher, ESL teacher, reading specialist and literacy coach in Washington, D.C., Istanbul, Turkey, Phoenix, AZ and Charlottesville, VA.

Dr. Lupo's research explores the influence of various aspects of text complexity on readers' comprehension and how instruction can be scaffolded to support all readers' understanding of disciplinary texts. She positions all learners as capable, including bringing cultural and linguistic assets to the reading experience. Her research puts theory into practice to find practical ways teachers can improve literacy instruction for K-12 students. Dr. Lupo's work has been published in journals such as Review in Educational Research, Journal of Teacher Education, Reading Research Quarterly, Journal of Adult and Adolescent Literacy, Reading Teacher and Reading in Virginia. She recently published a book entitled *Teaching Disciplinary* Literacy in Grades K-6: Infusing Content with Reading, Writing, and Language (Routledge, 2021), and has another book forthcoming for middle and high school teachers about how to scaffold comprehension across the disciplines (Guilford, expected in 2024).



Sarah Lupo Assistant Professor Department of Middle, Secondary & Mathematics Education College of Education



Tobias Reynolds-Tylus Assistant Professor School of Communication Studies College of Arts and Letters

# Tobias Reynolds-Tylus

Tobias Reynolds-Tylus, Ph.D. is an Assistant Professor in the School of Communication Studies at James Madison University. He received his Ph.D. in Communication from the University of Illinois at Urbana-Champaign in 2018. He received both his BS and MA in Communication from the State University of New York at Buffalo.

Dr. Reynolds-Tylus' research interests include health communication, persuasion and health campaigns. His research addresses how individuals and organizations can encourage health behaviors through tailored messaging. To date, much of his work has focused on understanding resistance to public health guidance and how to reduce its occurrence.

Dr. Reynolds-Tylus has also conducted research on Americans' organ donation decision-making. He has utilized surveys and interviews to understand <u>Americans' beliefs and attitudes toward organ</u> <u>donation</u>. He has also worked on several projects evaluating the effectiveness of organ donor registration campaigns (e.g., direct mail, Department of Motor Vehicles).

# Christina Rost

Dr. Christina Rost is currently an Assistant Professor of Physics at James Madison University and an extramural member of the Center for Nanoscale Science at Penn State University. She graduated with a Ph.D. in Materials Science and Engineering from North Carolina State University in 2016, following both a B.S. and an M.S. in Physics from Indiana University of Pennsylvania. Her Ph.D. focused on the development and phasecharacterization of a novel class of complex oxide systems stabilized through configurational disorder, named "Entropy Stabilized Oxides." Rost was Postdoctoral Research Associate with the Experiments and Simulations in Thermal Engineering (ExSITE) group in the Department of Mechanical and Aerospace Engineering at the University of Virginia. There, her work focused on experimental methods to test thermal properties at extremely high temperatures and thermal transport in complex and high-entropy oxides and carbides. At JMU, her undergraduate research group focuses efforts on complex oxide synthesis and local structure characterization using X-ray based spectroscopies. Dr. Rost serves as a reviewer for several academic journals and the Spectroscopy: CMP/Magnetism proposal panel for the Advanced Photon Source at Argonne National Laboratory. She is also an active member of the American Ceramic Society, and participates in "Letters to a Pre-Scientist" as a pen pal to middle school students from underprivileged communities interested in learning more about life in STEM.



Christina Rost Assistant Professor Department of Physics & Astronomy College of Science and Mathematics



Hannah Sions Assistant Professor School of Art, Design and Art History College of Visual and Performing Arts

# Hannah Sions

Hannah Kim Sions, Ph.D (she/ella), is Assistant Professor of Art Education in James Madison University's School of Art, Design and Art History. Sions was an elementary art teacher for six years before pursuing her Ph.D. As an itinerant art teacher, she taught at four schools over the course of her six years, teaching in rural, suburban and urban settings. Her experiences helped her recognize the complexities of inequality and inspired her to learn more about how to better serve her student population. Sions' research foci are equity-and justice-centered pedagogy through an intersectional and critical race lens. She has published on these topics in *Art Education*, *Journal of Cultural Research in Art Education*, and *Journal of Social Theory in Art Education*.

# Nara Yoon

Dr. Yoon is an Assistant Professor in the School of Strategic Leadership Studies at JMU's College of Business. Dr. Yoon earned her Ph.D. in Public Administration from the Maxwell School of Citizenship and Public Affairs at Syracuse University. Dr. Yoon's primary research areas include board governance, collaborative governance and volunteerism. Her research draws on organizational theory and behavior to examine intraand inter-organizational relationships in addressing complex managerial leadership issues in public, nonprofit, and for-profit sectors. Her research has garnered awards from Academy of Management, Association for Research on Nonprofit Organizations and Voluntary Action, and American Society for Public Administration. Dr. Yoon's work has been published in leading journals including Journal of Public Administration Research and Theory, American Review of Public Administration, Nonprofit and Voluntary Sector Quarterly, Nonprofit Management & Leadership, and Public Performance & Management Review. Prior to joining academia, she worked as a research analyst for a foundation and nonprofit organizations.



Nara Yoon Assistant Professor School of Strategic Leadership Studies College of Business



Emily Zane Assistant Professor <u>Department of</u> <u>Communication Sciences</u> <u>and Disorders</u> <u>College of Health and</u> <u>Behavioral Studies</u>

### **Emily Zane**

Emily Zane is a psycholinguist and an Assistant Professor of Communication Sciences and Disorders at James Madison University. Dr. Zane studies how language behaviors interact with other areas of cognition; how human beings use, understand, and acquire language; and what those processes tell us about the human mind. Dr. Zane's research specifically focuses on patterns of language use, understanding, processing and acquisition by autistic people. She believes that understanding the linguistic code used by autistic individuals may help to forestall the "double empathy problem" (Milton, 2012), which proposes that unsatisfactory cross-neurotype interactions result from communication differences on both sides (i.e., nonautistic people struggle to understand autistic people and vice versa). To better support this goal, her research also investigates how autists produce and comprehend extralinguistic communicative signals, like facial expressions and gestures. JMU students have been intrinsically involved in all aspects of Dr. Zane's research, including co-authoring peer-reviewed publications and presentations.

Dr. Zane earned her BA in Linguistics Studies at University of Nevada Las Vegas in 2006. She then earned her MA (2010), MPhil (2014) and PhD (2016) in Linguistics from the Graduate Center at City University of New York (CUNY). Under the mentorship of Dr. Ruth B. Grossman at Emerson College, Dr. Zane completed postdoctoral training in autism from 2015 to 2018. <u>Her full list of publications is available here</u>.

#### **Research and Scholarship**

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