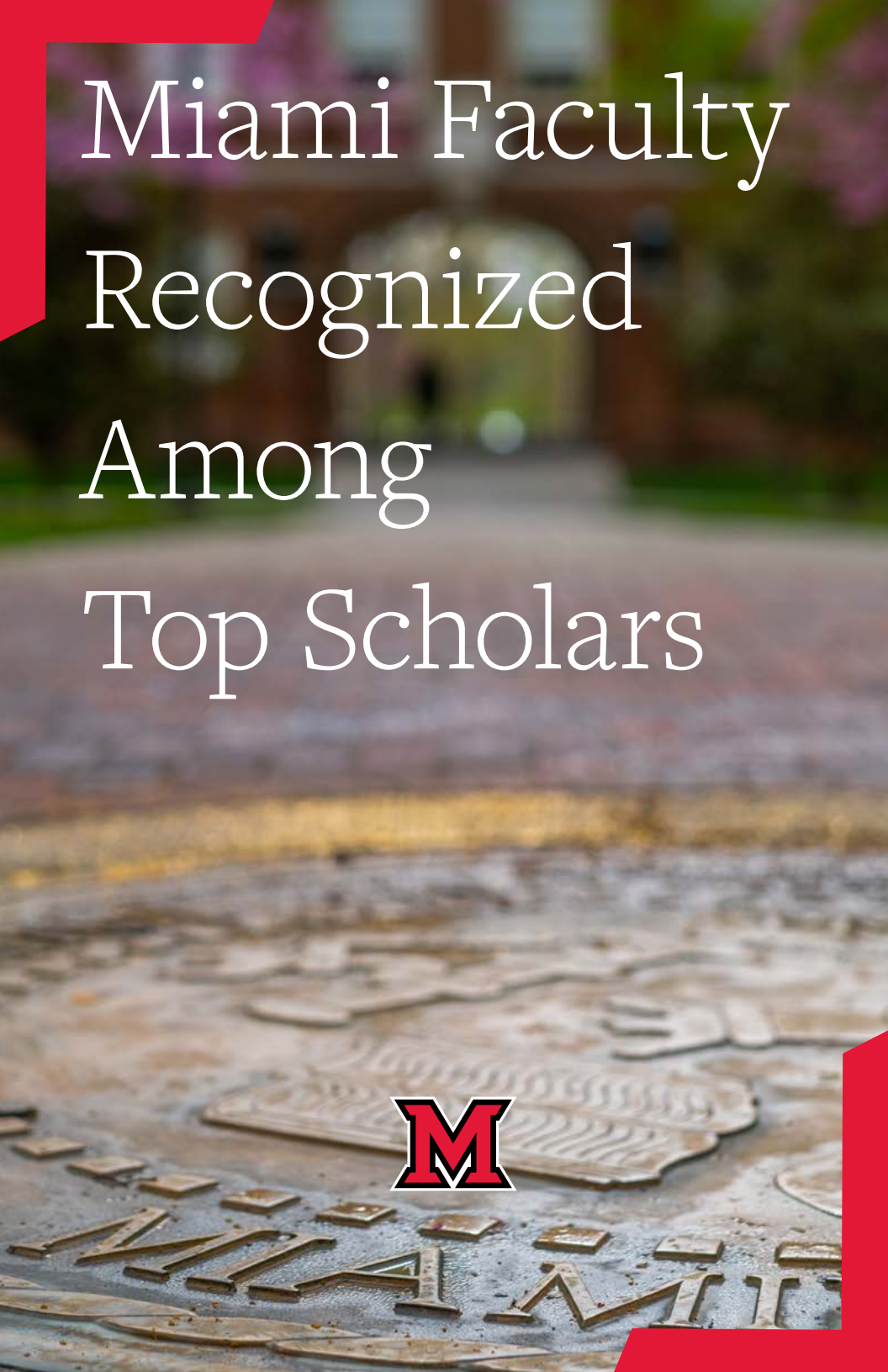
Miami Faculty Recognized Among Top Scholars



More than 20 Miami professors among top 2% of researchers based on analysis of citations

Recent Stanford study identifies top scholars

More than 20 Miami University faculty members are among the top 2% of the world's researchers, according to a recent Stanford University study. Based on an analysis of citations, the study identified the top scholars among nearly 8 million authors in 22 scientific fields and 176 sub-fields.

"Studies such as this one continue to confirm that Miami has a world class faculty who are committed to furthering their disciplines, acquiring new knowledge, and using what they have learned to inspire the next generation of scholars," said Miami President Gregory Crawford. "Miami has a vibrant research community filled with thought leaders and pioneers who propel science and society forward."

Led by Stanford's John Ioannidis, a team of scientists created a database of standardized citation metrics for both career-long and single year (2019) impact. Metrics with and without self-citations and ratio of citations to citing papers are given. The resulting analysis "Updated science-wide author databases of standardized citation indicators" was published in the Public Library of Science Biology.

"I am so pleased to see Miami scholars recognized as some of the most cited scientists in the world," said Alicia Knoedler, Vice President for Research and Innovation. "I believe it is also important that we recognize that our faculty's impact and influence is not limited to academic journals. Publications and citations are just one dimension of Miami's thriving research enterprise, which includes a broad and diverse community of scientists, scholars, and creators whose work and influence contribute to the robust intellectual and creative environment that Miami provides to its students."

*For more information and links to the data and research, visit MiamiOH.edu/news/top-stories.

Helaine Alessio, Ph.D.

Chair and Professor of Kinesiology, Nutrition and Health

Alessio's research interests include investigating gene expressions and health-related phenotypes such as tumor growth, blood lipids, and oxidative stress, in animals comparing physically active and sedentary models. Her collaborative research with Ann Hagerman, Ph.D., (Chemistry and Biochemistry) has been funded by the National Institute on Aging, National Institutes of Health, and the National Cancer Institute. She also collaborates with Kathleen Hutchinson, Ph.D., and Susan Baker-Brehm, Ph.D., on speech, hearing, and exercise research using human models.

A. John Bailer, Ph.D.

University Distinguished Professor and Chair of Statistics

Bailer's work includes the design and analysis of occupational health studies and enhancing connections between statistics and journalism. His other research interests include quantitative risk estimation, gerontological data analysis, and promoting quantitative literacy. Bailer is also an affiliate member of the Departments of Media, Journalism and Film, Biology, and Sociology and Gerontology at Miami. He also created the Stats+Stories podcast, sponsored by the American Statistical Association.

James Bielo, Ph.D.

Associate Professor of Anthropology

Bielo's work primarily focuses on the contemporary United States, specializing in Linguistic Anthropology, Ethnographic Methods, Anthropological Theory, and the Anthropology of Global Christianity. He is the author of *Words upon the Word: An Ethnography of Evangelical Bible Study* (NYU Press, 2009), *Emerging Evangelicals: Faith, Modernity, and the Desire for Authenticity* (NYU Press, 2011), and *Anthropology of Religion: The Basics* (Routledge, 2015), and the editor of *The Social Life of Scriptures: Cross-Cultural Perspectives on Biblicism* (Rutgers Press, 2009).

Michelle Boone, Ph.D.

Associate Professor of Biology

Boone's laboratory is currently examining the effects of pesticides on the full life cycle to determine sensitive periods during development, the role of the amphibian chytrid fungus on individual performance in the presence of other environmental factors, and the impact of habitat change on amphibian movement and dispersal. Her laboratory uses amphibians as a model for understanding how organisms can be affected by chemical contamination, habitat change/alteration, disease pathogens, and invasive species in the presence of factors known to regulate natural amphibian communities—competition, predation, and pond drying.

M.M. (Kelly) Cowan, Ph.D.

Professor Emerita of Microbiology

Cowan has published several book chapters, a major review article, and two dozen research articles stemming from her work on bacterial adhesion mechanisms and plant-derived antimicrobial compounds. Her anti-adhesion research has been externally funded and is the subject of two patents. She has also served as president of the Ohio Branch of the American Society for Microbiology. From 2003-2005 she served as the Associate Dean for Academic Affairs of Miami University Middletown; and was the campus Dean from 2005-2009. Cowan is the recipient of a Celebration of Teaching Award sponsored by the Greater Cincinnati Consortium of Colleges and Universities.

James Cox, Ph.D.

Professor Emeritus of Chemistry and Biochemistry

Cox's research areas of interest include analytical chemistry, nanostructured materials, environmental chemistry, and catalysis. He has performed studies on sensors and detectors using electrocatalysis and materials chemistry. A former Chair of the Chemistry Department, Cox has been at the university since 1987.

Gregory Crawford, Ph.D.

President and Professor of Physics

Crawford's research is transdisciplinary, including nano, photonics, thin-film conductors, nanoparticles, and biomedical devices, and his leadership focuses on transdisciplinary research and education. Throughout his career, Crawford has elevated entrepreneurship pedagogy, interdisciplinary research, and the character development of students. He has championed and co-developed entrepreneurship programs at both the undergraduate and graduate levels at multiple institutions, including PRIME (Master's Program in Innovation Management & Entrepreneurship) at Brown University, ESTEEM (Engineering, Science, and Technology Entrepreneurship Excellence Master's Program) at the University of Notre Dame, and MEET (Master's in Entrepreneurship and Emerging Technology) at Miami University. In these programs, graduate students take a technology idea, often from the university's research enterprise, and create a commercialization plan for their capstone. Crawford's work includes more than 400 research and education publications, review articles and book chapters, and 21 U.S. patents and patent applications. He has researched and fundraised extensively for Niemann-Pick Type C disease. He currently serves as a member of the Board of Directors at Cintrifuse, the incubator and accelerator dedicated to creating a stronger technology presence in Greater Cincinnati.

Thomas Crist, Ph.D.

Professor and Chair of Biology

Crist is a terrestrial ecologist with interest in how landscape changes by human activities influence biodiversity, species interactions, and ecosystem services. His research lab focuses on insects and their interactions with plants, soils, and other animals. Recently, Crist has focused on ecosystem services provided by diverse insect communities, including pollination, biological control, and cultural services. A long-term experimental study in the Miami Natural Areas is aimed at understanding how litter-dwelling invertebrates are influenced by the interactions among deer, an invasive understory shrub, and exotic earthworms. Past research projects have spanned a wide range of spatial scales from experimental to landscape studies, and habitats including conservation grasslands, forests, and agroecosystems. In the laboratory, he uses a wide range of quantitative tools including statistical modeling, spatial analysis, and geographic information systems.

Michele Dickey, Ph.D.

Professor of Educational Psychology

Dickey's current areas of research include the design of interactive and game-based learning environments and the use of emerging technologies for education. She is program coordinator for the Instructional Design and Technology Program at Miami University. She teaches both undergraduate and graduate courses in educational technology and instructional design.

Yildirim Dilek, Ph.D.

University Distinguished Professor of Geology and Environmental Earth Science

Dilek's research interests are extensive, including structure, petrology, and geochemistry of ophiolites in Albania, California, Cyprus, Egypt, Greece, Oman, Turkey, Norway, California, China, Tibet, and peri-Caribbean; mid-ocean ridge tectonics and ocean crust generation in the MARK area (Mid-Atlantic Ridge) and the Costa Rica Rift (Eastern Equatorial Pacific Ocean); microbial alteration of oceanic lavas; active margin and strike-slip tectonics of the Caribbean region. He was honored by the Geological Society of London as an Elected Honorary Fellow and received the Distinguished Career Award of the Geological Society of America.

Lisa Ellram, Ph.D.

University Distinguished Professor of Management and James Evans Rees Distinguished Professor of Supply Chain Management

Ellram teaches courses on logistics management, purchasing, and supply chain management. Her primary areas of research interest include sustainability; buyer-supplier relationships; services purchasing and supply chain management; offshoring and outsourcing; and supply chain cost management. She's been published in numerous top journals spanning a variety of disciplines, including *Journal of Supply Chain Management, Academy of Management Journal, Journal of Operations Management, California Management Review,* and *MIT Sloan Management Review.* She has presented her work on five continents and in more than 30 countries. Ellram's publications have been cited over 30,000 times in Google Scholar. She was named one of the "100 Most Influential Women in Supply Chain 2020" by B2G and one of the top 10 most influential Supply Chain Management Scholars in top SCM journals.

Gilbert Gordon, Ph.D.

Distinguished Research Professor Emeritus of Chemistry and Biochemistry

Gordon specializes in drinking water research, dynamics of chemical reactions, reactions of chlorine dioxide, chlorine and ozone, and all aspects of analytical chemistry. Some of Gordon's major career accomplishments include developing an experimental methodology for the determination of "free" and "complexed" labile transition metal ion species in aqueous solutions. He also directed research to measure the rates of reaction and the rates of decomposition of chlorine dioxide in aqueous solutions. The chemical details of these studies continue to be used extensively by the water treatment industry throughout the world, to provide higher quality drinking water when using chlorine dioxide. During his 45-year research and teaching career, Gordon has taught more than 10,000 undergraduate students and has published more than 200 peer-reviewed papers. He has presented more than 400 research papers at national and international meetings and his research efforts have attracted more than $6 million in funding.

Benjamin Gung, Ph.D.

Professor of Chemistry and Biochemistry

Gung and his research group have focused their work around two areas: organic synthesis including total synthesis of natural products and the development of methodology; and study of nonbonding interaction involving aromatic rings. He and his research team have accomplished the total synthesis of a dozen of different natural products and have also made contributions in the understanding of the nonbonding interactions involving aromatic rings. Specifically, his research interests include: Synthetic Organic Chemistry; Organometallic Chemistry: Preparation of New Gold Catalysts with N-heterocyclic carbenes (NHC); Synthetic Methodology: Gold-Catalyzed Cycloadditions, Transannular [4+3] Cycloadditions; Total Synthesis: Minquartynoic acid, Adociacetylene, Diplynes, Duryne, Cicutoxin, etc; and Physical Organic Chemistry: Study of Noncovalent Interactions Involving Aromatic Rings.

Ann Hagerman, Ph.D.

Professor of Chemistry and Biochemistry

Hagerman's research has centered around tannins, plant polyphenols, and antioxidants. Specifically, her work focuses in the bioactivities of tannins found in the human diet (tea, wine, chocolate, fruits) and in the ecological significance of tannins found in natural systems (soils, plant herbivory). In particular, she and her research group use purified tannins to establish structure-activity relationships with the long-term goal of understanding of tannins as individual bioactive compounds.

Dominik Konkolewicz, Ph.D.

Robert H. and Nancy J. Blayney Associate Professor of Chemistry and Biochemistry

Konkolewicz's research focus areas include polymers, supramolecular, and dynamic covalent chemistry, organic chemistry, photochemistry, bioconjugates and biomaterials, soft materials, materials science, and engineering. He and his research group have examined ways to expand techniques similar to those used to make simple commodity polymers, and apply these techniques to the synthesis of polymers with useful functional groups and complex architectures.

Richard Lee, Ph.D.

University Distinguished Professor Emeritus of Biology

Lee is internationally recognized for his research on physiological and ecological mechanisms of cold tolerance, dormancy, and the winter ecology of temperate and polar insects and other ectotherms. His field research includes work on Ellesmere Island in the High Arctic and 10 field seasons on the Antarctic Peninsula. He was also part of a team that sequenced the genome of B. antarctica — the first for an Antarctic animal. Lee's research in Antarctica has been funded continuously by the National Science Foundation with more than $3 million since 2004. He has published more than 300 refereed journal articles, reviews, and book chapters and he has edited or authored four books. He holds a patent for the use of ice nucleating microorganisms for biological control. His honors include the Benjamin Harrison Medallion from Miami University, and election as a Fellow of the Royal Entomological Society of London and the American Association for the Advancement of Science.

Allen McConnell, Ph.D.

University Distinguished Professor and Chair of Psychology

McConnell's research explores: how nonconscious and conscious feelings and beliefs affect judgment and behavior; the well-being benefits of socially constructed relationships with family and pets; how people decode others' nonverbal displays; and the psychology of conservation. Over the years, his work has been supported by grants from the National Institute of Mental Health and the National Science Foundation. In addition to conducting basic research, his expertise in these areas has been applied to consumer behavior, medical behavior, and legal consulting, and his scholarship has been presented in many legal venues, including briefs argued before the U.S. Supreme Court. McConnell teaches courses in social psychology, the self, psychology of conservation, attitudes, judgment and decision making, and intergroup relations at the graduate and undergraduate levels.

Jason Osborn,e Ph.D.

Provost and Executive Vice President for Academic Affairs and Professor of Statistics

Osborne is a widely cited scholar in applied statistics and education. His seven books and 80 peer reviewed articles have been cited over 20,000 times. He is an Accredited Professional Statistician™, credentialed by the American Statistical Association.

Ann Rypstra, Ph.D.

University Distinguished Professor of Biology and Biological Sciences and Director of the Ecology Research Center

Rypstra's research group focuses on exploring the behavior, ecology, and diversity of arthropod predators. They employ a broad array of approaches aimed to understand the mechanisms behind species coexistence patterns. Spiders are the focus of most of the research in the group because they are a common, but very diverse, group of generalist predators and are relatively easy to manipulate both in the laboratory and the field. Her ongoing projects explore the competitive success of invasive predators, the effects of anthropogenic stressors on spider abundance and activity, the sensory priorities of spiders and their prey, and the behavioral versatility of spiders in response to predators, prey and conspecifics.

Garold Stasser, Ph.D.

Professor Emeritus of Psychology

Stasser's research interests include collective decision-making and problem-solving, participation and influence in teamwork, coordination of action, and models of social interaction. He has received several professional recognitions as a Fellow and Charter member of the Association for Psychological Science, a Fellow of the Society of Experimental Social Psychology, a Fellow of the Midwestern Psychological Association, and has been recognized by Miami University as a University Distinguished Scholar. Stasser has been a principal investigator on eight major grants from the National Science Foundation and the Department of Defense. He is currently the principal investigator on a National Science Foundation grant regarding participation in collective decision-making.

Michael Vanni, Ph.D.

Professor of Biology

Vanni examines the ecology of food webs, ecosystems, and watersheds. His current research areas examine: Animal-mediated nutrient cycling, including understanding variation among individuals using principles of ecological stoichiometry and metabolic ecology, and the importance of animals at the ecosystem scale; long-term response of a lake (reservoir) ecosystem to changes in agricultural practices, and how internal processes such as animal-mediated nutrient cycling provide resilience in terms of the lake response; and how nutrients, light, and other factors mediate energy and nutrient flow through food chains.

Robert Weinberg, Ph.D.

Professor Emeritus of Kinesiology, Nutrition and Health

Weinberg's research focus is on mental skills and abilities and performance. The specific skills that he focuses on include goal setting, arousal regulation, imagery, confidence, and attentional focus. In the past several years, Weinberg has been especially concentrated on mental toughness both in athletes and other performers (e.g., business, military). The aim of this research is to try to help individuals develop their mental skills so that they can become more mentally tough and thus improve their performance. He has used both qualitative and quantitative modes of inquiry as well as interventions to help learn more about what is mental toughness and how can individuals build it.

Craig Williamson, Ph.D.

Ohio Eminent Scholar of Ecosystem Ecology

Williamson's research examines how water transparency structures lakes and alters ecosystem function. His research projects include field work across the globe from Argentina, New Zealand, and the Canadian Rockies, to regions of the U.S. in northeastern Pennsylvania, Alaska, Lake Tahoe, and the Beartooth Mountains. Through his work, in the Global Change Limnology Laboratory, he and his team investigate how water transparency structures lake ecosystems by using their extensive global UV database and advanced sensors to see how transparency changes daily, seasonally, and annually; and how this affects other abiotic factors such as dissolved oxygen, as well as aquatic biota such as zooplankton and fish, and the development of disease and harmful algal blooms (HABs).

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