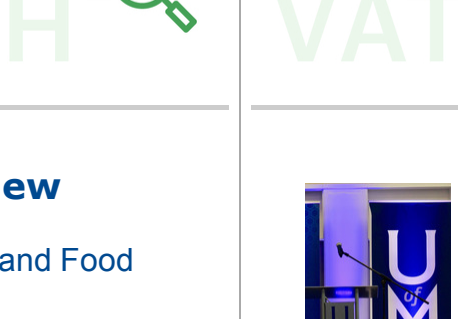
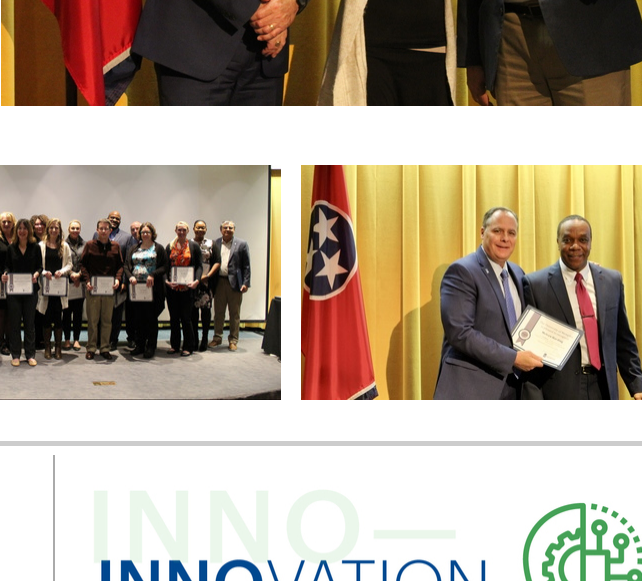


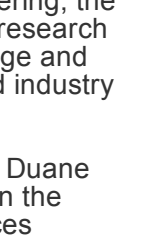


March 2019

## UofM Honors Faculty Accomplishments At Annual Celebration



### RESEARCH



**UofM Launches New Research Cluster Focusing on Agriculture and Food Technologies**

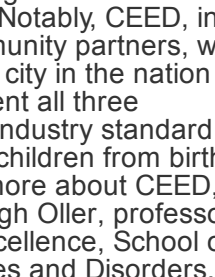
Leveraging expertise in core biological, chemical and environmental science research alongside expertise in big data, artificial intelligence and engineering, the UofM will seed interdisciplinary research that will contribute new knowledge and solutions to agriculture and food industry challenges.

The cluster will be co-led by Dr. Duane McKenna, associate professor in the Department of Biological Sciences and world-renowned entomologist who studies the evolution and genomic basis of plant-feeding and interactions between beetles and plant, and Dr. Pratik Banerjee, associate professor in the School of Public Health and expert on food safety, regulatory policy and the molecular, immunological and cell biological aspects of host-microbes and host-environmental hazard interactions. The cluster also includes faculty with expertise in plant/crop research, bioproducts development, food processing and packaging, immunology, water resources, computer and network security, and chemical analysis.

"This initiative supports the regional push to attract new agriculture and food technology companies and bring good jobs to our region," said Dr. Jasbir Dhalwal, executive vice president for Research and Innovation. "We are uniquely positioned to bring expertise that will help address opportunities within this field as it rapidly moves to adopt technology solutions to challenges in food safety and quality, fraud management, logistics and new product development in a highly regulated environment."

Read the full press release [here](#).

### CEED Project Working with Families: Early Talk Matters



In partnership with the Urban Child Institute, the Coordinated Effort to Enhance Development (CEED) project is a multi-disciplinary approach to enhance social and emotional development of young children across Memphis and Shelby County. Dr. Loretta Rudd, clinical associate professor and program coordinator for Child Development and Family Studies, leads CEED. The project began by conducting training series to educate childcare center employees on best practices to promote healthy child development. CEED has now expanded to hosting monthly meetings for childcare center directors to engage in network and expand their practices. Notably, CEED, in collaboration with community partners, will make Memphis the first city in the nation to simultaneously implement all three formats of LENA®, the industry standard for measuring talk with children from birth to age three. To learn more about CEED, click [here](#). Dr. Kimbrough Oller, professor and Plough Chair of Excellence, School of Communication Sciences and Disorders, is a scientific advisor to LENA®, was one of the developers of LENA Start™ and uses LENA® technology in his research.

### Mandel's Research Featured in Nature Plants

New work from Jennifer Mandel and her collaborators appears in the Dec. 31, 2018 edition of prestigious journal *Nature Plants*. Mandel, assistant professor in Biological Sciences, is an evolutionary plant biologist who works to understand genetic, phenotypic and ecological diversity in plant species. She has a particular focus on the genetic variation of the sunflower, which is the largest family of flowering plants and important to the world's food supply. The project featured in this publication characterized genetic diversity in the sunflower by identifying 61,205 genes associated with cultivated sunflower species and will help us understand its resistance to globally challenging diseases in agricultural cultivation of sunflower. This is Mandel's second *Nature* publication related to Sunflowers attesting to the significance of her work. For more information on Mandel's work, visit her webpage. To download and view her article, visit: [nature.com/articles/s41477-018-0329-0](http://nature.com/articles/s41477-018-0329-0).

### UofM Office of Technology Transfer Begins 2019 With Expanding Patent Portfolio

The University of Memphis Office of Technology Transfer (OTT) within the Division of Research & Innovation kicked off 2019 with confirmation from the U.S. Patent and Trademark Office (USPTO) with notifications of the receipt of two U.S. patent allowances and one U.S.-issued patent, bringing the year's total to three so far.

Dr. Bashir Morshed received notification he was issued the U.S. patent for his submission "Multi-layer Additive Printed Circuit." Dr. Mohd Hasan Ali received notification for his patent allowance on "Mitigation of Adverse Effects of Geomagnetically Induced Currents on Transformers." And, Dr. Gary Bowlin and Dr. Isaac Rodriguez received a notice of allowance for "Compositions and Methods for Enhancing Healing and Regeneration of Bone and Soft Tissue."

For more information on these technologies, read the full press release [here](#).

### Research and Networking Breakfast Series Begins with Focus on 'Omics'

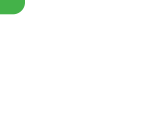
Collaboration is essential in today's research environment. To facilitate interactions among faculty from different disciplines around common themes of interest, this topical series features brief research updates and time for 1:1 conversations over breakfast. The first topic was 'Omics' and involved 11 faculty discussing interests in genomics, proteomics, metabolomics, microbiomics and bioinformatics. If you have an idea for a future topic, or would like more information on the series, contact Françoise Mireles at [fmireles@memphis.edu](mailto:fmireles@memphis.edu).

### FACULTY RESEARCH WORKSHOP SERIES

Finding Funding for STEM Disciplines	Commercialization and Tech Transfer
March 15   Noon-2 PM Fishbowl (203/305)	April 12   Noon-2 PM Fishbowl (203/305)

Join the Division of Research & Innovation Team for these free, monthly sessions designed to help faculty and doctoral students answer frequently asked questions, provide professional development around critical skills and create opportunities for networking and interdisciplinary collaboration across campus. Contact [research@memphis.edu](mailto:research@memphis.edu) with specific questions regarding the series, or to RSVP. A light lunch is provided.

### RESEARCH CLUSTERS



#### ADDITIVE MANUFACTURING

#### AGRICULTURE & FOOD TECHNOLOGIES

#### BIOLOGISTICS

#### CAST

#### DATA SCIENCE

#### DRONES

#### SMART CITIES

### New Awards: February

Dr. Bernie Daigle, Jr., assistant professor in the Departments of Biological Sciences and Computer Science, was awarded \$6,457.50 from the US Army Research Office for his project "Identification of Robust Biomarkers for Post-traumatic Stress Disorder Using Longitudinal Analysis."

Dr. Mark LeDoux, affiliate research professor in the Department of Psychology, was awarded \$40,000 from the Dystonia Medical Research Foundation for his project "Banking of Myoclonus-Dystonia Biological Materials."

Dr. Latrice Pichon, associate professor of Social and Behavioral Sciences in the School of Public Health, was awarded \$10,000 from the Tennessee Department of Health (TDOH) for her project "The Headliners Whole You University: Capacity Building Efforts to Address Social Determinants of HIV."

Dr. Irma Quiñones-Maurás, Health Sciences Librarian, was awarded \$1,671 from the National Institutes of Health (NIH) in collaboration with the University of Maryland for her project "NNLM SEA All of US Community Engagement."

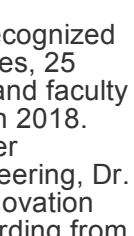
Dr. Deborah Moncrieff, assistant professor, School of Communication Sciences and Disorders, was awarded \$107,198 from the National Institutes of Health (NIH) in collaboration with University of Colorado-Denver, for her project "TACIT Teletherapy."

Dr. Matthew Smeltzer, assistant professor in the Department of Epidemiology, Biostatistics and Environmental Health in the School of Public Health, was awarded \$27,213 from the Memphis Research Consortium (MRC) in collaboration with the University of Tennessee Health Science Center (UTHSC) for his project "ECOSYSTEM."

Dr. Danielle Vance-McMullen, assistant professor in the Department of Public and Nonprofit Administration, was awarded \$27,213 from the National Philanthropic Trust for her project "DAF Report."

\* Data is reported on the 18th of each month. Any awards finalized after the 18th of each month will be reported in the following month's report.

### INNOVATION



### Annual Research Celebration Honors Faculty Accomplishments

On Feb. 28, the University of Memphis hosted its annual Research Celebration. This year's event recognized three new faculty as PI Millionaires, 25 first-time principal investigators and faculty who authored or edited a book in 2018.

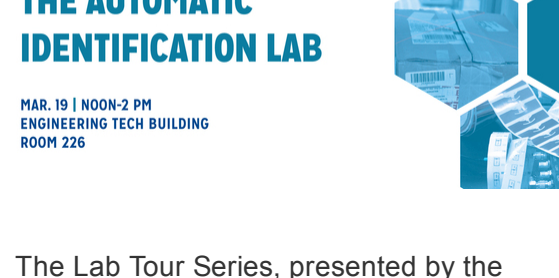
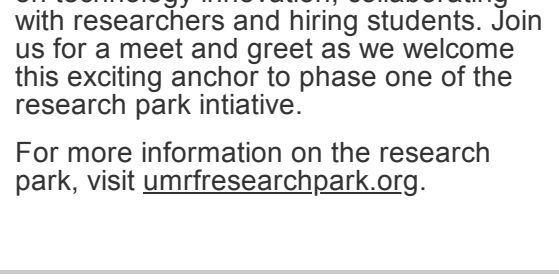
New PI Millionaires are Dr. Amber Jennings from Biomedical Engineering, Dr. Richard Irwin from Academic Innovation and Support, and Dr. Melvin Harding from Student Affairs. Assistant Professor of Physics and Materials Science, Dr. Thang Ba Hoang received special recognition as the 2018 recipient of the prestigious Oak Ridge Associated Universities Ralph E. Powe Junior Faculty Enhancement Award for his project, "Dual-band plasmonic nanostructures for efficient light absorbing and emitting devices."

For more information on this event or the awards, please contact Deborah Hernandez at [dherndz@memphis.edu](mailto:dherndz@memphis.edu).

### Building a Publishing Pipeline: Concrete Strategies for Increasing Your Writing Productivity Workshop



In partnership with the UofM Office of Diversity, the Division of Research & Innovation brought the *Building a Publishing Pipeline: Concrete Strategies for Increasing Your Writing Productivity* workshop to the UofM conducted by the National Center for Faculty Development and Diversity. The event focused on building pipelines, analyzing and identifying patterns, how to effectively plan writing projects and managing multiple writing projects for successful outcomes. Approximately 50 faculty from across campus signed up and participated.



### UMRF Research Park Welcomes Green Mountain Technology Company Officially Moves In

Mar 18 | 460 S. Highland St. | 2-3:30 PM

On March 18 UMRF Research Park will celebrate the grand opening of phase 1.1 at the Highland facility. Green Mountain Technology is a data driven parcel delivery management solution that works with the biggest retailers in the United States. Their new facility at the research park will focus on technology innovation, collaborating with researchers and hiring students. Join us for a meet and greet as we welcome this exciting anchor to phase one of the research park initiative.

For more information on the research park, visit [umrfresearchpark.org](http://umrfresearchpark.org).

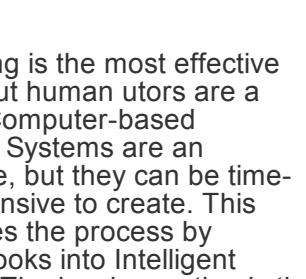
### LAB TOUR THE AUTOMATIC IDENTIFICATION LAB

MAR. 19 | NOON-2 PM  
ENGINEERING TECH BUILDING ROOM 226

The Lab Tour Series, presented by the FedEx Institute of Technology, hosts their next tour at the Auto Identification Lab March 19. Located in room 226 of the Engineering Technology Building, Dr. Kevin Berriso and his team of researchers investigate the collection of data from bar codes, radio frequency ID and magnetic strips on the back of credit cards. Register [here](#).

### Cognitive Science Seminar Talk

MICHAEL MOZER, PH.D.  
PROFESSOR  
UNIVERSITY OF COLORADO  
MARCH 20 | 4-6 PM  
FEDEx INSTITUTE OF TECHNOLOGY ROOM 405



Dr. Michael Mozer, professor with the Department of Computer Science and the Institute of Cognitive Science Behavior at the University of Colorado, will speak on March 20, as part of the Cognitive Science Seminars series on "Boosting inductive learning of visual concepts". He is currently working with Google AI on their Google Brain Team, which focuses on advancing the state of the art in artificial intelligence through research, systems engineering and collaboration with other teams across Alphabet.

Register [here](#) for this talk.

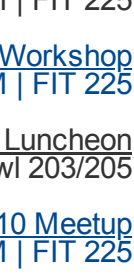
### DATA SCIENCE SUMMIT Inauguration of Innovation

March 29 | 8 AM – 5 PM | FIT MPT (103)

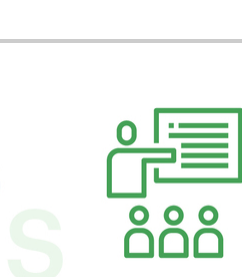
On March 29, The Data Science Institute of Technology is hosting the 2019 Data Science Summit. The summit is meant to support the Data Science Initiative and bring together the local community, train future data scientists and to create an environment to foster research in this area. It will help to grow a data science community of practice that will include members from both public and private sectors in West Tennessee and the Mid-South.

Register at <http://memphis-data.org/>.

### PATENT SPOTLIGHT



### Tech Transfer: System and Method for Automatic Extraction of Conceptual Graphs

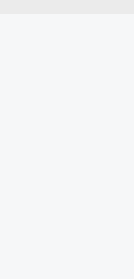


UofM faculty, Dr. Andrew McGregor Oney, associate professor in the Department of Psychology, was issued a U.S. patent for his submission "System and Method for Automatic Extraction of Conceptual Graphs."

One-on-one tutoring is the most effective form of learning, but human tutors are a scarce resource. Computer-based Intelligent Tutoring Systems are an effective alternative, but they can be time-intensive and expensive to create. This invention automates the process by transforming textbooks into Intelligent Tutoring Systems. The key innovation is the extraction of conceptual graphs from textbooks. Conceptual graph represent the relationships between concepts in the textbook, and the can be used to assess student understanding, provide explanations, an even answer questions. Using this technology can substantially reduce the cost of creating Intelligent Tutoring Systems and realize the dream of providing one-on-one tutoring to every child.

For more information on UofM technologies available for commercialization, visit the tech transfer website or contact Dr. Hai Trieu [htrieu@memphis.edu](mailto:htrieu@memphis.edu).

### CALENDAR



DevMemphis Meetup  
Mar 5 | 6-7:30 PM | FIT 226

Machine Learning/Data Sciences/R  
Mar 5 | 7-8 PM | FIT 225

Memphis Web Workers User Group  
Mar 14 | 6-8 PM | FIT 225

Memphis Game Developers Meetup  
Mar 13 | 6-8 PM | FIT 225

MEMPass / Power BI Meetup  
Mar 14 | 5:30-8:30 PM | FIT 225

Faculty Workshop Series: STEM  
Mar 15 | Noon – 2 PM | Fishbowl 203/205

Python User Group Meetup  
Mar 17 | 6:30-8:30 PM | FIT 225

Lab Tour: Auto Identification Laboratory  
Mar 19 | Noon – 2 PM | Engineering Tech Building 226

IIS Talk: Cognitive Science Seminar Talk  
Mar 20 | 4-6 PM | FIT 405

Tableau Meetup  
Mar 21 | 3-5 PM | FIT 225

SAS: SQL 1: Essentials  
Mar 25-26 | 8 AM – 5 PM | FIT 313

PHP User Group Meetup  
Mar 26 | 6:30-8 PM | FIT 225

R Immersion Workshop  
Mar 27-28 | 8 AM – 5 PM | FIT 225

MWIT Luncheon  
Mar 28 | 3-6 PM | Fishbowl 203/205

M10 Meetup  
Mar 28 | 6-8 PM | FIT 225

Data Science Summit  
Mar 29 | 8 AM – 5 PM | FIT MPT (103)

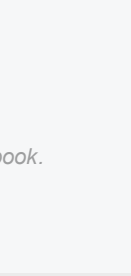
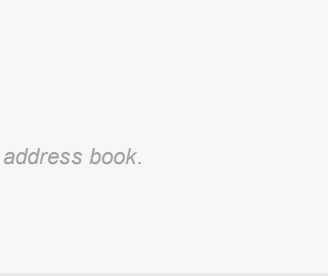
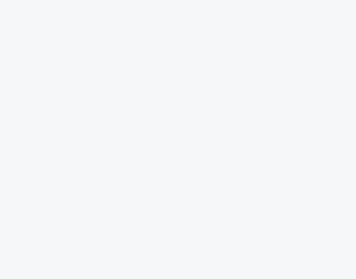
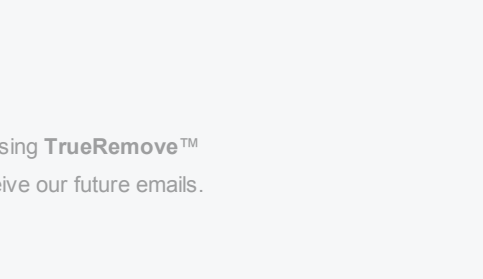
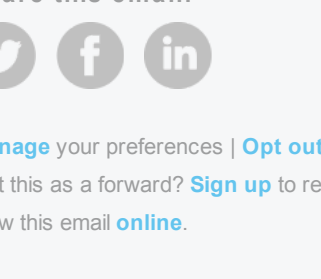
### TRAININGS



SAS: SQL 1: Essentials  
Mar 25-26 | 8 AM – 5 PM | FIT 313

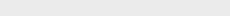
R Immersion Workshop  
Mar 27-28 | 8 AM – 5 PM | FIT 225

### GIVE CAMP MEMPHIS 2019



### Division of Research and Innovation Leading Through Innovation

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