Dear Faculty Colleagues:

top national venue for a global audience.

**June 2020** 

COVID-19: Research & Innovation Updates

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**MEMPHIS** 

Important Message to Faculty Researchers from the EVP for Research & Innovation

At a critical time when state support for our institution is likely to be reduced given declining state revenues, it is imperative that we as a common collective of faculty scholars take on the challenge of funding our own research to the greatest extent possible. This will help us keep our considerable momentum toward becoming a top-tier Carnegie R1 school in the near future and developing a resolute top-tier organizational research culture for the longer term.

I want to emphasize that being able to secure external support to fund one's own research

ideas, graduate students, galleries, labs and creative endeavors is just as academically meaningful and intrinsically rewarding as publishing a paper in a top research journal, securing a technology patent, publishing a book with a top publisher or having one's work exhibited at a

Despite the expected reduction in state support, the situation at the federal level is completely different in relation to research funding. Congress has ensured that there are significant new research funds now flowing into the federal research agencies, national labs and other federal departments. It is therefore vital that we work even harder now at getting an even bigger share of these new research funds. This will help us catapult into the top research tier and will help protect our research enterprise and infrastructure during a challenging time. So, I appeal to you to come work together to maximize our research applications at the federal level. Strong competitive research proposals that may not have been funded in the

past now have a much better chance of being funded given the fresh flow of new research funds from Congress. This is possibly the best it can get in terms of federal research funding, so please don't let this opportunity slip by as a research scholar who cares about funding your research activities, research students and post-doctoral fellows. We are here to support you! Best,

**University of Memphis** 

Dr. Jasbir Dhaliwal Resuming Research Safely To ensure a systematic, careful and safe resumption of research activities on campus in accordance with University policies and guidance for reopening (which will be released by the University

**RESEARCH** 

INNOVATIO Civil **Engineering Faculty Receives Grant** from USDA

Awarded \$482k to

study effects of

shortly), the Division of Research & Innovation is launching a support program for resuming research safely. The primary goal is to prioritize the safety of faculty, research students/staff as well as research subjects. Faculty and research leaders who have any questions or require support relating to resuming research safely are encouraged to use the Guidelines for Research Labs; the

Human Subjects Research Restart; or email



**UofM Receives** Third NSF **CAREER Award** in FY2020 Jennings awarded \$544k to create materials resistant microplastics in soil

Engineering, has received a 2020 National CAREER Development Award to design materials with a novel synthetic biofilmdisrupting molecules bound to their surfaces. Biofilms form when bacteria attach to surfaces. Because biofilms protect the bacteria, they are often more

Dr. Amber Jennings, assistant professor

surface and how they are released from the surface under various environmental conditions. The different types of surfaces tested will include those used often in engineering: metals, polymers, and ceramics. The engineered surfaces will also be evaluated to ensure that they are not harmful to human cells. In addition to research activities, students at the undergraduate, graduate and community college levels will also be trained in effective communication strategies for multiple audiences in order to overcome their fear of public speaking, a skill needed for success in advanced studies in science and engineering.

against bacteria while attached to the

**IIS Faculty Collaborates** with City to **Model COVID-**19 Olney leads initiative **Dr. Andrew Olney**, professor in Institute for Intelligent Systems and the Department of Psychology, volunteered on the Memphis/Shelby County Joint COVID Task Force throughout April. As part of that

work, Olney adapted a model developed

by Imperial College London for 50 states

other members of the computational

member of the Imperial team.

The model predicts mortality and estimates the effects of various

and Shelby County. He is now working with

modeling group to write it up, along with a

interventions on the reproduction rate of

the virus (the number of people each carrier infects), for example, closing

expect the virus to continue to spread.

on his research, visit <a href="https://olney.ai">https://olney.ai</a> >

Olney's primary research interests are in

Al and data science. For more information

**COVID-19 Economic Recovery Town Hall** Hosted by the FedEx Institute of Technology featuring the City of Memphis, University of Memphis and Greater Memphis Chamber of Commerce FedEx Institute of Technology

resilient Memphis moving forward. Register here> **UofM FedEx Institute of Technology & Graduate School** to Host Analytics Discussion

Designed to Engage UofM Students

Analytics and data-driven decisions have

become prevalent during the COVID-19

faculty member at the University of

on industry trends, how data-driven decisions are made, and how employers

can motivate employees by using

Register for this event here >

analytics.

Sciences."

autism."

Reduce DBPs."

pandemic. Join us as Dr. Naveen Kumar,

Washington (and former faculty member

at the University of Memphis) as he deep

dives into the world of analytics, focusing

June 23 | 12:30-2 PM (CDT)

May 2020 Dr. Jessica Jennings, assistant professor in the Department of Biomedical Engineering, was awarded \$543,552 from the National Science Foundation for her project "CAREER: Tethered biofilm dispersal signals for long-term protection of engineering materials." Dr. Maryam Salehi Esfandarani, assistant professor in the Department of

Civil Engineering, was awarded \$482,080 from the U.S. Department of Agriculture

Transport in Agricultural Soil: Interrelation

Dr. D. Kimbrough Oller, professor and

Disorders, was awarded \$181,125 from the National Institutes of Health for his

Sclerosis Complex and its relation with

project "Early communication in Tuberous

Dr. Gary Emmert, professor and associate

dean in the Department of Chemistry, was

Spencer with the Tennessee Department of Environment & Conservation for his

Dr. John Sabatini, distinguished research

awarded \$149,991 from the City of

project "Spencer, TN Task Force to

of Communication Sciences and

Plough Chair of Excellence in the School

of Hydrodynamics, Chemistry, and Material

for her project "Microplastics Fate and

Department of Education for his project "Exploring and Assessing the Development of Students' Argumentation Skills." Dr. Donal Harris, associate professor in the Department of English, was awarded \$96,000 from the American Council of Learned Societies for his project "Citizens of Cossitt: The Legacies and Futures of Public Libraries in Memphis, Tenn." Dr. Jack Strahl, associate director in the Center for Research in Education Policy, was awarded \$46,500 from the Tennessee Alliance for Legal Service for his project

"Tennessee Alliance for Legal Services

2020 Evaluation of Case Management

Dr. Gavin Bidelman, associate professor in the School of Communication Sciences

and Disorders, was awarded \$45,520 from

\* Data reported the 18th of each

month. Awards finalized after the 18th

**5 QUESTIONS** 

**5 Questions Series** 

Interviews with UofM researchers

The FedEx Institute of Technology sits

will be reported the following month.

the National Institutes of Health for his

project "Neural bases of successful

Program."

auditory learning."

industry leaders in the Mid-South to answer five questions about their research, work and experiences. This is an ongoing series to highlight research across campus. The first session features Dr. Firouzeh Sabri, an experimental materials physicist. In addition to serving as the chair for the Department of Physics and Materials Science, her research focuses on

THE UNIVERSITY OF MEMPHIS. TO RESEARCH AND SPONSORED PROGRAMS **Reviewing, Submitting and Accepting Funded Research** A resource for faculty and staff Research Development and Sponsored Programs are the central research support

teams responsible for the review and

contracts, cooperative agreements, nonmonetary) to external sponsors and for the

review and acceptance of any sponsored project funds. The team includes Pre-Award Services, Contract and Award

Development. They are located in 315

news and happenings at the

submission of proposals (grants,

Services, Electronic Research Administration and Research

Administration Building.

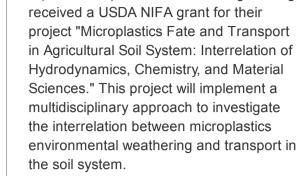
For the latest

research park,

umrfresearchpark.org

Quick Guide available here.

NEWS TO FEATURE IN THE **RESEARCH + INNOVATION NEWSLETTER?** ++. ++-+++ We welcome the opportunity to +++ highlight the research infrastructure +++ and innovation capabilities at the University of Memphis. Email major +++ award notifications, conferences to +++ be held at the UofM, honors, +++. publications, research impact +++stories, initiatives, etc., for inclusion ++++ in an upcoming issue of the ++++ newsletter. We look forward to sharing the world-class ++++ accomplishments taking place at ++++ the University of Memphis. ++++. **CONTACT US** 



the interrelation between microplastics environmental weathering and transport in This grant has been awarded \$482,080 from NIFA under the Agriculture and Food Research Initiative Foundational and Applied Science Program in the area of Bioenergy, Natural Resources and Environment. This applied research project will provide the public, farmers,

industry stakeholders and policymakers

information regarding the sustainability

and eventual fate of agricultural plastic

For more information on this research,

products within the farmland.

email Salehi Esfandarani at

mssfndrn@memphis.edu.

Dr. Maryam Salehi Esfandarani, (PI)

Engineering, and Dr. Farhad Jazaei, (co-

PI) assistant professor in Civil Engineering,

assistant professor in Civil

**DOD Awards UofM ROTC Cyber Security Training Grant** Interdisciplinary researchers lead team A joint effort of Engineering Technology and Computer Science has been awarded a grant in the amount of \$318,000 to build a team consisting of students capable of effectively conducting research studies in the area of cyber security, pairing a variety of skills with organization and leadership to enhance research outcomes in ROTC program.

The goal of this grant is to develop a

technically sound ROTC program through

existing curriculum. The grant is two-fold:

to design and develop hands-on exercises based on the latest threats and social

engineering attacks and introduce those in ROTC existing curriculum, enhance the capabilities of students to detect and predict evolving threats whereby they can deploy the latest defense strategies and countermeasures in their workplace, and

provide a support network in order to

retain diverse and minority students within

the program through advising, mentoring,

the introduction of cyber security in the

networking, internships and workforce connections, tutoring, soft skills building, collegiality, etc. The project will be led by principle investigator (PI), Dr. James McGinnis, associate professor in Engineering Technology, and co-Pl Dr. Dipankar Dasgupta, Hill Professor in Cyber Security, and both are directors for the Center for Information Assurance. This grant is a part of the center's mission on education and outreach in cyber security. For more information on this effort, contact McGinnis at jmcgnnis@memphis.edu.

**UofM Launches DoD Research** 

The Department of Defense (DoD) is a

disciplines. While University of Memphis

faculty have great success with the NSF

sustaining our R1 goals. To enable this

potential, the Division of Research and

Innovation is providing training resources

to help all faculty understand how to apply for research funding from the DoD. We

and NIH, the DoD is an untapped reservoir

major supporter of research in all

of potential funding and is key to

Academy

encourage all faculty to join this initiative and apply for funding. **About the DoD Academy** The UoFM DoD Research Academy is offered in partnership with McAlister and Quinn, our partner in Washington, DC. It is designedto prepare faculty for writing and submitting grants to DoD agencies. The program will include two tracks - one for junior faculty seeking to apply to early career awards in the DoD (including

DARPA, ONR, ARO, AFOSR - details) and

one for all faculty interested in applying to

DoD solicitations more generally (including

To prepare for this workshop series and to help determine audience, best dates and interest, please fill out the form here>

BAAs, CDMRP, etc).

will host a series of one-hour webinars related to telehealth for vulnerable populations. The audience is an interdisciplinary group of health professionals, clinicians, and leaders of community-based organizations. The series will take place throughout June. Each webinar will last one hour and consist of panelists experienced in a certain topic related to telehealth. Webinars are free of charge, but registration is required. Partnering organizations include the

FedEx Institute of Technology; School of

School of Communication Sciences and

iIMPACT; the American Council for School

available for several professions: Behavior

Analysis, Public Health and Social Work.

Disorders; Department of Counseling,

Educational Psychology & Research;

Social Work; and the Tennessee

Association for Behavior Analysis.

Continuing education credit will be

Public Health; School of Social Work;

Mendez, M.A., CCC-SLP Tuesday, June 9 Telehealth in School-based Programming: Tips, Techniques and Best Practices Susan E. Elswick, EdD, LCSW; Dr. Sarah Caliboso-Soto, LCSW; and ACSSW Thursday, June 11 Training Health Profession Students via Remote Learning Anne Cornelius, BCBA; Susan E. Elswick, EdD, LCSW; Belinda Fleming, PhD, MSN Tuesday, June 16 Opportunities in Telehealth Laura Baylot Casey, PhD, BCBA-D; Matthew Davidson, MS, BCBA, LBA

TECH Virtual Meetup: Memphis Web **Workers** June 9 | 6-8 PM | Teleconference

June 23 | 6:30-8 PM | Teleconference TECH Virtual Meetup: Code Co-op: A free coding help & hack night June 23 | 6:30-8 PM | Teleconference TECH Virtual Meetup: Memphis Agile

June 25 | 6-7:30 PM | Teleconference

TRAINING

**Agile Coaching** 

Online

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techniques.

TECH Virtual Meetup: Memphis .Net June 25 | 6-8 PM | Teleconference

ALL TRAINING NOW HELD VIRTUALLY

Agile

Coaching

June 8-11 | 8 AM-NOON (CDT)

A coach's primary goal is to enhance their client's awareness of practice and behavior - enabling and empowering the client to realize objectives, which may be just outside of their reach. Through thoughtful and deliberate engagement, the coach strives to enhance team practices, in a measurable and sustainable fashion, in order to provide focus on the business

WEBINAR SERIES **Telehealth for Vulnerable Populations** 

**Telehealth Webinar Series for** 

The University of Memphis FedEx Institute

of Technolgy and School of Public Health

**Vulnerable Populations** 

Hosted throughout June

Webinar series schedule: All webinars will take place from 11 AM-NOON (CDT). Marian Levy, DrPH, RD, FAND will moderate the sessions. Tuesday, June 2 Delivering Telehealth to Underserved/Vulnerable Client Populations: Best Practices

Rosie Phillips Davis, PhD, ABPP, Espi

Ralston, MA, MAT, MA, CMI-Spanish,

CHTM; Larita Taylor, PhD, MPH, CLC

Engaging Caregivers/Setting Up the Home

Environment/The How To" of Telehealth

Gregory Washington, LCSW, PhD, Laura

Baylot Casey, PhD, BCBA-D, Katherine

Thursday, June 4

Delivery

Thursday, June 18 Billing and Technology in Telehealth Sarah E. Warren, AuD, PhD; Rachel Lauletta, MS, BCBA, LBA; Sharon Lusk, JD, CPA, CMC, **CMCO** To register for any or all sessions, visit here >

CALENDAR

Webinar Series: Delivering Telehealth to

June 2 | 11 AM-NOON | Teleconference

Learning/Data Science/R | NuPIC-Sparse

Webinar Series: Engaging Caregivers and

Setting Up the Home Environment: A

Webinar Series: Telehealth in Schoolbased Programming: Tips, Techniques

June 9 | 11 AM-NOON | Teleconference

**TECH Virtual Meetup: Memphis Game** 

June 10 | 6-8 PM | Teleconference

TECH Virtual Meetup: MemDevOps

June 10 | 2-4 PM | Teleconference

Profession Students Via Remote Learning

June 11 | 11 AM-NOON | Teleconference

TECH Virtual Meetup: MemPASS/Power BI

June 11 | 5:30-7:30 PM | Teleconference

TECH Virtual Meetup: Go Lang Crash

June 11 | 6:30-8 PM | Teleconference

TECH Virtual Meetup: Code Together

**TECH Virtual Memphis: Memphis Python** 

June 15 | 6:30-8:30 PM | Teleconference

June 16 | 11 AM-NOON | Teleconference

Webinar Series: Billing and Technology in

June 18 | 11 AM-NOON | Teleconference

Economic Recovery Town Hall with City of Memphis, UofM and the FedEx Institute of

TECH Virtual Meetup: Memphis M365 June 18 | 3-5 PM | Teleconference

Course with GDG Memphis

Memphis Community Session

June 14 | 1-3 PM | Teleconference

Webinar Series: Opportunities in

Telehealth

**Telehealth** 

<u>Technology</u>

**Practitioners** 

Webinar Series: Training Health

and Best Practices

**Developers** 

TECH Virtual Meetup: DevMemphis

June 2 | 6-7:30 PM | Teleconference

**TECH Virtual Meetup: Machine** 

June 2 | 7-8 PM | Teleconference

**Density Representation** 

Telehealth Delivery How-to

**Under-served/Vulnerable Client** 

Populations: Best Practices

June 4 | 11 AM-NOON | Teleconference TECH Virtual Meetup: Code Together North MS Community Session June 6 | 1-3 PM | Teleconference Training: Agile Coaching June 8-11 | 8 AM-NOON | Teleconference

June 19 | 10:30 AM-NOON | Teleconference Data Driven Decisions & Analytics: Dr. Naveen Kumar & UofM Graduate School June 23 | 12:30-2 PM | Teleconference TECH Virtual Meetup: Featuring Sam Basu from Telerik Memphis Xamarin June 23 | 6-8 PM | Teleconference TECH Virtual Meetup: Memphis PHP

goals and objectives of the team and organization. This course is designed to teach, practice and reinforce the core coaching competencies of the Agile coach, enabling the coach to succeed at reaching team and organizational outcomes. Join us as the Institute brings together the best

minds in Agile research and development to provide superior instruction in Agile

To learn more, contact Rami Lotay at

rslotay@memphis.edu. To join this

June15-19 | 8 AM-NOON (CDT)

training, register here >

**DevSecOps** 

research@memphis.edu. Dr. Dhaliwal is also available to discuss at 901.283.9988.

in the department of Biomedical Engineering at the Herff College of Science Foundation Faculty Early resistant to traditional antimicrobial treatments and evade immune systems, making them a serious health risk in the fields of health care, environmental engineering, chemical engineering, food preparation, and more. Jennings' research will explore whether tethered biofilm inhibitors are active

school students through interactive activities in hopes of promoting the advancement of underrepresented and socioeconomically disadvantaged groups in science and engineering careers. Engagement efforts will be achieved by collaborating with existing programs including the year-round Girls Experiencing Engineering program sponsored by the Women's Foundation for a Greater Memphis and held at the Herff College of Engineering and with tnAchieves Job Shadow Days for high school students across the state. Read more on Jennings here >

The project will engage middle and high

schools and lockdown. The model shows that lockdown has been the key intervention keeping the reproduction rate below 1, and that without other interventions to replace lockdown, we can

**Hosts Virtual Town Hall** City of Memphis, UofM and the **Greater Memphis Chamber of** Commerce talk recovery Countries, states and cities across the globe are beginning the process of reopening their economies. Now, more than ever, the intersection of the public and private sectors will be invaluable in ensuring not only a safe reopening, but

also one that reflects how an event like COVID-19 can ultimately transform ideals, innovations and services to improve the

Join the FedEx Institute of Technology as

Memphis Chamber of Commerce and the City of Memphis for a discussion on local economic impact, the recovery outlook,

and collaboration efforts that will nurture a

lives of the citizens they serve.

we bring together leaders from the

University of Memphis, the Greater

**Research Awards** 

professor in the Department of Psychology and the Institute for Intelligent Systems, was awarded \$147,206 from the Educational Testing Service with the U.S.

down with the cutting-edge researchers on the University of Memphis campus and synthesis, characterization and understanding of bulk and surface

properties of nanomaterials and aerogels.

Learn more about her research by

watching the segment here >

RESEARCH

**CLUSTERS** 

COVID-19 FAQs

DATA SCIENCE

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June 8-11 | 8 AM-NOON (CDT) |

and pre-production environments; and

Fed Ex. NSTITUTE OF MEMPHIS.

even security reviews and scans. However, implementing DevSecOps goes far beyond tools and processes. It is a cultural change involving most aspects of software development. For more information, contact Rami Lotay at rslotay@memphis.edu. Register here >

The DevSecOps movement seeks to resolve these competing objectives by creating truly cross-functional teams that are empowered to do everything involved with creating and operation software without involving other teams. This is achieved through extensive automation of most manual tasks: building, testing, and deploying code; provisioning production

Contact us: 365 Innovation Drive Memphis, Tennessee 38152 901.678.1596

research@memphis.edu fedex@memphis.edu

emma

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