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COVID-19: Research Guidance and Updates

ONE-STOP SUPPORT SERVICE FOR RESUMING RESEARCH

To ensure a systematic, careful and safe resumption of research activities on campus in

accordance with University policies and guidance for reopening, the Division of Research & Innovation is launching a one-stop support program for resuming research safely. The primary goal is to prioritize the safety of faculty, research students/staff as well as research

Resuming Research Safely

subjects. Faculty and research leaders who have questions or require support relating to resuming research safely are encouraged to use guidelines posted below or can email research@memphis.edu. Dr. Jasbir Dhaliwal is also available to discuss any aspect at 901.283.9988. **Research Guidelines**

The Division of Research & Innovation Guidelines for Research Labs here> Human Subjects Research Restart Guidelines here> U.S Office of Management and Budget Guidance here> **Publication Raises International Profile of UofM** Research Over 100,000 unique reads in July

Conversation (theconversation.com), an independent source for informed commentary and analysis, written by the academic and research

In spring of 2020, the University of Memphis subscribed to The

article here>

community and edited by journalists for the general public. The platform is designed to help raise the general readership profile of researchers by creating an avenue for publication in the world's preeminent news sources. Three recent articles by UofM faculty highlight the power of this resource: Dr. Elena Delavega, MSW program director & associate professor in the

School of Social Work, is a scholar who studies poverty, particularly poverty in urban areas. Delavega's article, "Mexico City buried its rivers to prevent disease and unwittingly created a dry, polluted city where COVID-19 now thrives", was recently published in The Conversation. Read full **Dr. Katy Ramsey Mason**, assistant professor of Law & director of the Medical-Legal Partnership Clinic, recently appeared in the publication with her article, "Landlord-leaning eviction courts are about to make the coronavirus housing crisis a lot worse." Read full article <a href="https://example.com/her-ex-recently-september-e

Dr. Roger Kreuz, associate dean, College of Arts & Sciences, Professor, Experimental (Cognitive) in Psychology, published "Why 'I was just being sarcastic' can be such a convenient excuse". Read full article here> A sample of the publications and news outlets that have include these faculty stories:

US News and World Report; Mexico News Daily; Popular Science; Channel News Asia; Business Insider; The Raw Story; Courier Japan; Rapid City Journal; Videnskab The Conversation is an independent source for informed commentary and analysis, written by the academic and research community and edited by journalists for the general public. The Division of Research & Innovation is seeking additional faculty members to pitch articles to *The Conversation*. If you would like additional information about this publication, contact Dr. Cody Behles at cbehles@memphis.edu.

RESEARCH INNOVATION

UofM Receives Named Data Network Used to \$5.9 Million From Address Funds a National Center Challenges in **National mHealth** in Al-based mHealth **Initiative** Research Wang leads efforts

The mGuard project (<u>mguard.md2k.org</u>)

challenges encountered by the NIH Center

aims to address two major data access

of Excellence for Mobile Sensor Data-to-

Knowledge (MD2K) in its pursuit to share

researchers who investigate a wide range

expose privacy-sensitive information about

a user, they should only be accessed by

authorized users: currently, this access

incurring high overhead and subject to

human errors. Second, to enable real-time

intervention for certain medical conditions,

researchers need to retrieve and process

the sensor data in real-time, which is not

above challenges by utilizing the results

data.net), in particular, the solutions that

(name-based access control, or NAC) and

from the NSF-supported Named Data

Networking (NDN) initiative (named-

management for data access control

the solutions that enable real-time

synchronization among distributed

utilizes and extends NDN NAC to

confidential data to authorized

datasets (NDN Sync). First, mGuard

to provide real-time data production

notification; based on this, it enables

applications to publish and subscribe to

data in real time by directly using MD2K

data names. These new capabilities will be

deployed in the MD2K cyberinfrastructure.

This enables the MD2K center to share its

data securely and in real time with a large

number of mHealth researchers. The

extends across many types of digital

train the next generation, mGuard is

creating undergraduate and graduate

education materials including concrete

online seminars, conference tutorials, mHealth training institute and summer camps. This will also support two postdocs and eight graduate students. Dr. Lan Wang (PI) and Dr. Santosh Kumar, both

in the department of Computer

Research."

Science, will lead this project "CC*

Integration-Large: mGuard: A Secure

For more information on this project,

Real-time Data Distribution System with

Fine-Grained Access Control for mHealth

contact Wang at lanwang@memphis.edu.

UofM Faculty

Department of

Services Grant

Funds will allow for

risk youth

Dr. Onyejebose Okwumabua, received \$102,000 from the Tennessee Department

of Mental Health and Substance Abuse

Services (TDMHSAS) to continue

implementing the "Substance Use

1) to deter substance use and the

program; 2) to reduce negative

example, violation of the program's

by successful program completion,

resolution and decision-making skills,

For more information on this grant or

UofM Creates Center

for Transportation

Innovation,

C-TIER

The University of Memphis has created the Center for Transportation Innovation,

Education and Research to address

critical issues affecting the planning,

and to increase its economic

racial and gender inequality.

development that improves

simulation. It will also focus

C-TIER will focus on research and

information technology, network,

multimodal connections, system

design, operation, safety and equity of the

nation's multimodal transportation system

competitiveness and reduce economic,

mobility, accessibility and safety through

operations and land-use modeling and

on transportation sustainability that will

integration and security, data modeling

and freight movements and improve

and analytical tools to optimize passenger

All partners of C-TIER are encouraged to embrace innovative, interdisciplinary research projects and curriculum development, and engage with the

industry to enhance collaborations. The center will be led by founding members

from the Herff College of Engineering and the Department of City and Regional Planning. In addition to Dr. Sabya Mishra,

associate professor and Faudree Professor of Civil Engineering, other

founding members include Dr. Charlie Santo, associate professor and chair of

City and Regional Planning; Dr. Mihalis

M. Golias, professor in Civil Engineering;

promote smart, equitable cities, improve

Education and Research

these services, contact Bloomer at

substance use risk perceptions and

enhanced protective factors.

rbloomer@memphis.edu.

Prevention Among Vulnerable Youth"

project. The aim of this work is three-fold:

associated disciplinary problems among youth participating in a local job training

separations from the program, due to, for

substance use policies; and 3) to foster positive youth development, as measured

positive health and life-enhancing conflict

Receives Tennessee

Mental Health and

continuing services for at-

College of Health Sciences

Substance Abuse

transformative potential of mGuard thus

interventions and many health domains.

mGuard also encourages researchers in

other areas of data-intensive applications

to explore NDN's data-centric solutions. To

examples and hands-on exercises, as well as training and outreach activities through

automate fine-grained access control of

researchers. Second, it utilizes NDN Sync

automate the cryptographic key

supported at this time. mGuard tackles the

control is largely handled manually,

mobile health (mHealth) data among

Because wearable sensor data may

of health and wellness issues.

awarded a grant for the creation of a national biomedical technology resource

center (BTRC), called the mHealth Center for Discovery, Optimization & Translation of Temporally-Precise Interventions (mDOT). mDOT will be headquartered at the MD2K Center of Excellence at the University of Memphis FedEx Institute of Technology.

The multidisciplinary mDOT team consists

of leading researchers in artificial

intelligence (AI), mobile computing,

The National Institutes of Health (NIH) has

wearable sensors, privacy and precision medicine from the University of Memphis (lead), Harvard University, Georgia Institute of Technology, Ohio State University, the University of Massachusetts-Amherst, the University of California at Los Angeles (UCLA) and the University of California at San Francisco (UCSF). The mDOT Center will be a new national technology resource for improving people's health and wellness. It will conduct cutting-edge AI research to

produce easily deployable wearables,

a companion cloud system. mDOT's

choices necessary to prevent and/or

of multiple chronic conditions.

apps for wearables and smartphones and

innovative technology will enable patients

to initiate and sustain the healthy lifestyle

successfully manage the growing burden

To ensure mDOT's innovative technology

can be used by scientists to solve real-

world problems, mDOT will be working closely with more than a dozen other federally funded projects to engage in joint technology development, testing and large-scale real-life deployment. To fuel mHealth technology innovation in the industry, mDOT will establish a new industry consortium to provide access to mDOT's latest research and seek feedback to inform its ongoing research. The center will be administered by the National Institute of Biomedical Imaging and Bioengineering (NIBIB). To learn more about the mDOT Center, visit here>

Read full press release here>

Neuroscience Lab Dr. Gavin Bidelman, associate professor in the Institute for Intelligent Systems and School of Communication Sciences & Disorders, received a grant from the National Institutes of Health for his project entitled "Neuroimaging biomarkers of speech processing deficits in MCI". The new award supplements Bidelman's two other brain imaging projects funded by the NIH, providing \$300K to expand the research and explore whether mild cognitive impairment (MCI), an early stage in the progression of Alzheimer's disease and related dementias, impacts the brain's electrical response to speech sounds.

Murphey Neurological Clinic will

Bidelman's lab has previously established

that MCI in older adults is associated with

subtle changes in how the brain precisely

encodes the acoustic details of speech.

Declines in those neural signatures are independent of hearing loss, which also

measure structural and functional brain

accompanies the aging process and affects hearing skills. The project will

project.

Bidelman Receives

NIH Grant

Funding work in the

Auditory Cognitive

scans from roughly 75 older adults with early-stage Alzheimer's and related dementias. The work aims to establish a new EEG diagnostic to detect early cognitive decline via subtle changes in the brain's ability to process speech, potentially before the onset of more obvious memory and cognitive deficits. The research is jointly funded by the National Institute on Deafness and Other

Brainstem correlates of cochlear nonlinearity measured via the scalp-recorded frequency-following response A new study led by Dr. Gavin Bidelman's group (Bidelman & Bhagat, 2020) was featured on the cover of the July issue of NeuroReport (Vol 31, Issue 10). The study reports that neural distortion produced by the auditory system (a hallmark of a normal functioning cochlea) is detectable in a scalp-recorded brain potential known as the frequency-following response (FFR). In theory, FFR distortion could provide a new assay to detect subtle changes in auditory function due to hearing loss before they arise in conventional audiological tests. Bidelman is an associate professor in the Institute for Intelligent Systems and School of Communication Sciences & Disorders. For more information on Bidelman and his research, visit his website> Access full article here>

Government regulations for export controls intersect with many activities beyond research such as student visas, mail, and travel. Please email researchcompliance@memphis.edu to express an interest. **Human Subjects** The Institutional Review Board (IRB) is excited to see research continue on campus during these difficult times, but that research must only continue with human subjects in the safest manner that is reasonably possible. Because all human

Export Controls

Research Compliance is looking for

interested stakeholders across the

development of an Export Controls policy.

University to collaborate on the

study and take in the world on a day-today basis. Researchers and faculty at the University of Memphis are making an impact in the global fight against the COVID-19 pandemic. Dr Marian Levy | COVID-19 Response

Poverty and COVID-19

campus

Center for Discovery, Optimization & Translation of Temporally-Precise Interventions (mDOT)." Dr. Gavin Bidelman, associate professor in the School of Communication Sciences & Disorders, was awarded \$996,832 from the National Institute of Health for his project "Neuroimaging biomarkers of speech processing deficits in MCI." Dr. Lan Wang, department chair and

professor in the Department of Computer

Science, was awarded \$825,000 from the

project "CC* Integration-Large: mGuard: A

Secure Real-time Data Distribution System

Dr. Kathryn Howell, associate professor

Studies Research, was awarded \$310,000

and clinical director of Child and Family

National Science Foundation for her

with Fine-Grained Access Control for

mHealth Research."

Curriculum Leadership, was awarded \$200,000 from the University of Memphis Research Foundation with the Urban Child Institute for his project "University of Memphis Behavior, Research, & Language Alliance (UMBReLA)." Dr. Mihalis M. Golias, professor in the Department of Civil Engineering, was awarded \$149,994 from the Tennessee Department of Transportation for his project "Understanding freight impacts on

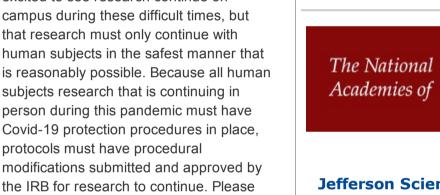
and support services for homeless women in Tennessee by Mending Hearts." **Dr. Richard Bloomer**, dean and professor in the College of Health Sciences, was awarded \$48,720 from Deerland Probiotics & Enzymes, Inc for his project "Blood amino acid profile following acute resistance exercise in trained men and women: impact of whey protein ingestion with and without ProHydrolase®." Dr. Mohd Ali, associate professor in the Department of Electrical and Computer

RESEARCH CLUSTERS ADDITIVE MANUFACTURING

University of Memphis Research + Innovation Magazine Leading Through Innovation Read Here »

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Geography, GIS, and COVID-19 Watch Now | View & Download | Contact Dr. Xinhua Yu | Urban/Rural Inequalities in the COVID-19 Pandemic Watch Now | View & Download | Contact COVID-19 FAQs

Data-to-Knowledge, and Lillian and Morrie Moss Chair of Excellence in the Department of Computer Science, was awarded \$1,334,467 from the National Institutes of Health for his project "mHealth

Dr. Santosh Kumar, director of the NIH

Research Awards

July 2020

from the University of Memphis Research Foundation with the Urban Child Institute for her projects "Promoting Health and Well-being in Children and Families: **Evaluating a Prenatal Intervention** Program and Promoting Resilience in Memphis: An Outcome Evaluation of iIMPACT Services for the Health and Well-Being of Urban Children." Dr. Xiaohua Huang, associate professor in the Department of Chemistry, was awarded \$291,784 from the National Institute of Health for her project "Single exosome protein profiling with SERS imaging."

Tennessee Communities." Dr. Sabyasachee Mishra, associate professor and Faudree professor in the Department of Civil Engineering, was awarded \$149,294 from the Tennessee Department of Transportation for his project "Towards Sustainable Tourism Transportation Systems and Services in Tennessee." Dr. Thang Hoang, assistant professor in the Department of Physics and Materials

Science, was awarded \$123,957 from the

National Institutes of Health for his project "Single exosome protein profiling with

Dr. Enrica Ruggs, assistant professor in

the Department of Management, was

awarded \$111,999 from the National

SERS imaging."

Engineering, was awarded \$24,999 from the Idaho National Laboratory with the US Department of Energy for his project "Exploring Cybersecurity Issues and Solutions for 5G Technology in Smart Power Grids." Dr. Rhema Fuller, associate professor in the Department of Sport Commerce and director of Graduate Programs for the Kemmons Wilson School of Hospitality and Resort Management, was awarded \$2,013

from NASSM for his project "Perceptions in

Dr. Angela Madden, associate professor in the Department of Criminal Justice, was awarded \$83,000 from the Shelby County District Attorney General's Office with the

US Department of Justice for her project

Esports."

AGRICULTURE & FOOD TECHNOLOGIES **BIOLOGISTICS** CAST DATA SCIENCE **DRONES**

and Dr. Andrew Guthrie, assistant professor in City and Regional Planning. For more information on this initiative. contact Mishra

efficiency.

at smishra3@memphis.edu; Santo at casanto@memphis.edu; Gkolias at mgkolias@memphis.edu; or Guthrie at guthrie1@memphis.edu. Read full press release here>

SCIENCES

MEDICINE

ENGINEERING

Jefferson Science Fellows Program Applications Open August 3 The contribution of state-of-the-art science, technology, engineering and medicine to the formulation and implementation of U.S. government policy an international development has been recognized throughout the second half of the 20th-century as a critical element in reaching sound, comprehensive conclusions that reflect "good governance." The JSF program at the U.S. Department of State and the U.S. Agency for International

Development (USAID) serves as an

U.S. foreign policy and international

The National Academies of Sciences,

Engineering and Medicine administers the Jefferson Science Fellows (JSF) program.

The JSF program is open to tenured, or

institutions of higher learning who are U.S.

citizens. Jefferson Science Fellows spend

similarly ranked, faculty from U.S.

one year on assignment at the U.S.

development.

American academic science, technology,

engineering and medical communities in

innovative model for engaging the

Department of State or USAID contributing to the work of foreign policy or international development issues. Assignments are tailored to the needs of the hosting office, while taking into account the Fellows' interests and areas of expertise. Following the fellowship year, Fellows will return to their academic career but remain available to the U.S. government as experienced consultants for short-term projects. For information on terms and the selection process, read here>. Apply here> **CALENDAR**

TECH Meetup: Code Together | North MS

August 1 | 1-3 PM | Teleconference

TECH Meetup: Setup a Website with WordPress and Amazon Web Services

with DevMemphis & WordPress Memphis

August 4 | 6-7:30 PM | Teleconference

Community Session

August 13 | 5:30-7:30 PM | Teleconference TECH Meetup: Memphis Python August 17 | 6:30-8:30 PM | Teleconference TECH Meetup: Memphis M365 August 20 | 3-5 PM | Teleconference Professional Development Training: SAFe for Architects August 24-27 | 8 AM-NOON | Teleconference **TECH Meetup: Syncfusion Essential** Studio: Create Complex User Interfaces with Memphis Xamarin August 25 | 6-8 PM | Teleconference TECH Meetup: Code Co-op | A free coding help & hack night August 25 | 6:30-8 PM | Teleconference

SAFe for Architects August 24-27 | 8:30 AM-5:30 PM (CDT) The leading framework for scaling Agile across the enterprise, SAFe sustains and

drives faster time-to-market, dramatic

increases in productivity and quality, and

improvement in employee engagement.

continuously and more efficiently deliver value on a regular and predictable

schedule. It provides a knowledge base of

proven, integrated principles and practices

SAFe is designed to help businesses

For more information or to register,

to support enterprise agility.

contact Rami Lotay at

rslotay@memphis.edu.

NEWS TO FEATURE IN THE **RESEARCH + INNOVATION** ++ **NEWSLETTER?** We welcome the opportunity to +++ highlight the research infrastructure and innovation capabilities at the

FedEx.

TECH Meetup: Machine Learning/Data Sciences/R August 4 | 7-8 PM | Teleconference TECH Meetup: Code Together | Memphis Community Session August 9 | 1-3 PM | Teleconference TECH Meetup: Memphis Web Workers August 11 | 6-8 PM | Teleconference TECH Meetup: Animating in Unity: Past, Present and Future with Memphis Game **Developers** August 12 | 6-8 PM | Teleconference TECH Meetup: MemPASS/Power BI

TECH Meetup: MemphisPHP August 25 | 6:30-8 PM | Teleconference TECH Meetup: Memphis Agile -Visualizing the Why-Strategy and Roadmaps in Context August 27 | 11:30 AM-1 PM | Teleconference TECH Meetup: Microservices - The Easy Way is the Wrong Way with Memphis .Net August 27 | 6-8 PM | Teleconference TECH Meetup: Code Connector Virtual **Networking** August 31 | NOON-1 PM | Teleconference

TRAINING

SAFe° for Architects

AUG 24-27 | 8:30 AM-5:30 PM

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, non-

monetary) to external sponsors and for

includes Pre-Award Services, Contract

Development. They are located in 315

The Quick Guide is available here.

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

the University of Memphis.

CONTACT US

accomplishments taking place at

and Award Services, Electronic Research

submission of proposals (grants,

the review and acceptance of any

Administration and Research

Administration Building.

sponsored project funds. The team

Sept 11-12, 2020 | Virtual Hackathon

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MEMPHIS.

Clinical neuropsychologists at the Semmes collaborate to provide neuropsychological faculty, Dr. Richard Bloomer, Dr. Theresa testing and MRI "brain scans" on the Okwumabua (image unavailable) and

Communication Disorders (NIDCD) and the National Institute on Aging (NIA). For more information about the Bidelman lab, visit the ACNL website. **Faculty Featured on** NeuroReport **Cover of NeuroReport**

RESEARCH COMPLIANCE

COVID-19 Lightning Talks Virtual Series FedEx Institute of Technology

COVID-19 Lightning Talks:

Featuring faculty research across

COVID-19 has changed the way we work,

Watch Now | View & Download | Contact

Watch Now | View & Download | Contact

Dr. Elena Delavega | Older Adults in

Dr. Andrew Olney | Estimating the

Interventions during COVID-19

Effect of Social Distancing

reference our Human Subjects Research

protocols must have procedural

Restart guide here>

Watch Now | View & Download | Contact Dr. Esra Ozdenerol | Medical

Center of Excellence for Mobile Sensor

Dr. Loretta Rudd, clinical associate professor in the Department of Child Development, was awarded \$290,000 from the University of Memphis Research Foundation with the Urban Child Institute for her project "Coordinated Effort to Enhance Development." Dr. James Meindl, associate professor in the Department of Instruction and

Science Foundation for her project "RAPID: Systemic Differences in Employee Outcomes from COVID-19 and the Effectiveness of Organizational Response." Dr. Satish Kedia, professor in the Division of Social and Behavioral Sciences and SBS PhD program coordinator, was awarded \$80,000 from Mending Hearts, Inc. with the Substance Abuse & Mental Health Services Administration for his project "Expanding integrated housing, substance abuse/co-occurring treatment,

"Innovative Prosecution Opioid Grant." * Data reported the 18th of each month. Awards finalized after the 18th will be reported the following month.

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For the latest

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