

MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
LINCOLN LABORATORY

244 WOOD STREET  
LEXINGTON, MASSACHUSETTS 02420-9108

23 August 2016

Area Code 781  
981-2646

To: NSF SFS Review Panel,

MIT Lincoln Laboratory (MITLL) is a Federally Funded Research and Development Center (FFRDC) chartered to apply advanced technology to problems of national security. This letter is to express MITLL's interest in collaborating with the University of Arkansas in their NSF Scholarship for Service proposal entitled "Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food," led by Dr. Jia Di in the Computer Science and Computer Engineering Department.

As an FFRDC working in the security area, MITLL realizes the national need for security workforce. Such need encompasses many areas including cyber, transportation, critical infrastructure, and food. The huge amount of data generated by sensors and other internet-of-things (IoTs) has brought up new security opportunities and challenges. Given the nation-wide shortage of security experts, it is imperative for universities like the University of Arkansas to have NSF SFS support in recruiting, educating, and placing American undergraduate and graduate students in security. MITLL will be collaborating with the University of Arkansas on this SFS project to provide advice on security needs and through hiring the student scholars as summer interns. MITLL believes that this SFS project will be able to attract outstanding students in Arkansas and other states to join the future security workforce, which will address the security challenges nation-wide.

Lincoln Laboratory's mission is to provide advanced technology in support of national security. Our efforts span from basic and applied research through systems engineering, prototype construction and deployment, and data analysis. We have extensive efforts in the cyber security domain as well as other areas of national interest. The Laboratory offers numerous opportunities for students including summer internships and longer-term research opportunities. We are acutely aware of the difficulty in finding high-caliber students who meet the US citizenship requirement to work at the Laboratory, and we strongly support the University of Arkansas and the NSF for helping to address this issue.

Please let me know if any other information is needed.

Sincerely,



Steven A. Vitale  
Senior Technical Staff  
MIT Lincoln Laboratory  
Advanced Technology Division



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
Jefferson Laboratories

PHONE: 870-543-7547  
FAX: 870-543-7307  
E-MAIL: [steven.foley@fda.hhs.gov](mailto:steven.foley@fda.hhs.gov)

National Center for Toxicological Research  
Division of Microbiology  
3900 NCTR Road  
Jefferson, AR 72079-9502

September 7, 2016

To: NSF SFS Review Panel,

The Division of Microbiology at the FDA National Center for Toxicological Research performs fundamental and applied research in microbiology in areas of FDA's responsibility in toxicology and regulatory science. Areas of research conducted in the Division include food safety, antimicrobial resistance, environmental biotechnology, nanotechnology and virology. This letter is to express the Division scientists' interest in working with the academic team at the University of Arkansas in their NSF Scholarship for Service proposal entitled "Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food."

We realize the ubiquitous need for security in the modernized world. With the huge number of sensors and interconnected devices employed by industry and organizations in computing, transportation, smart grid, data centers, and food production, to name a few; big data has emerged as a major factor in security, including both data protection and big data analytics for security. Given the nationwide shortage of security experts within and outside the public sector, it is both critical and timely for universities to have NSF support in helping recruit, train, and place American undergraduate and graduate students in data security. The NCTR Division of Microbiology scientists will be working with the University of Arkansas on this SFS project in providing input on the government's security needs and hiring student scholars as summer interns. This SFS project at the University of Arkansas should be a highly effective mechanism in attracting outstanding students in Arkansas and other surrounding states to join the future security workforce in public and private settings.

The NCTR and the Division of Microbiology have a long and effective history of training undergraduate students in areas of food safety, microbiology and data analyses through our Summer Science Research Program (SSRP) and additional programs to train graduate and undergraduate students. The SSRP typically provides opportunities for 20-25 students each summer to work in the labs at NCTR, however for each intern accepted into the program, several interested students are unable to participate due to lack of funding. The NSF funds would be an additional source to support interested students in research and data analyses in our summer programs. In addition to the SSRP, students from the University of Arkansas have participated in internships here. For example, this past summer we had a student carryout a research project involving large data sets that will likely contribute to his degree completion in the area of food safety. If you have any further questions or concerns, please do not hesitate to contact me at [steven.foley@fda.hhs.gov](mailto:steven.foley@fda.hhs.gov) or 870-543-7547.

Sincerely,

A handwritten signature in blue ink that reads "Steve Foley".

Steven Foley, PhD  
Research Microbiologist



**Nathaniel J. Evans, PhD**  
Cyber Operations Analysis and  
Research Group Lead

**Global Security Sciences Division**  
Argonne National Laboratory  
9700 South Cass Avenue, Bldg. 221  
Argonne, IL 60439

1-630-252-3733 phone  
1-515-451-1289 mobile  
nevans@anl.gov

Monday, August 22, 2016

Dear NSF Program Officers,

I am writing this letter to express my support for the University of Arkansas' National Science Foundation's Scholarship for Service Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food proposal. As the Cyber Operation, Analysis and Research Group Leader at Argonne National Laboratory, I am very supportive of new and innovative efforts to increase the workforce capacity for cybersecurity related programs. Argonne National Laboratory, specifically the Cyber Operations Analysis and Research Group, has a continuing need for innovative cyber security professionals. The team at Argonne National Laboratory is committed to providing subject matter expertise and workforce data in helping this partnership achieve their stated goals and objectives. Our current team has much experience collaborating and mentoring students amongst multiple schools and looks expand with internships within the University of Arkansas. The team at Argonne works on the cutting edge of protecting the nation's information systems and critical infrastructure. Expanding cybersecurity programs to include security intelligence will better enable our nation's public and private organizations to share intelligence. The Cyber Operations Analysis and Research group is always looking for novel ideas and workers within the cyber security field.

Sincerely,

A handwritten signature in black ink, appearing to read "Nathaniel J. Evans". The signature is fluid and cursive, with a long horizontal stroke at the end.

Nathaniel J. Evans, PhD  
Cyber Operations Analysis and Research Group Lead  
Argonne National Laboratory



**Agricultural Research Service**

Research, Education and Economics  
United States Department of Agriculture

Date: 09/06/2016

To: NSF SFS Review Panel,

USDA-ARS is the USDA's nationally-coordinated research arm that solves agricultural problems that affect Americans daily. This letter is to express USDA-ARS's interest in working with the academic team at the University of Arkansas in their NSF Scholarship for Service proposal entitled "Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food."

USDA-ARS realizes the ubiquitous need for security in the modernized world. With the huge number of sensors and interconnected devices employed by industry and organizations in computing, transportation, smart grid, data centers, food production, etc., big data has emerged as a major factor in security, including both data protection and big data analytics for security. Given the nation-wide shortage of security experts (which is especially true in the U.S. government), it is both critical and timely for universities to have NSF support in helping recruit, train, and place American undergraduate and graduate students in security. USDA-ARS will be working with the University of Arkansas on this SFS project in providing advices on the government's security needs and hiring the student scholars as summer interns. USDA-ARS believes that this SFS project at the University of Arkansas will be a highly effective mechanism in attracting outstanding students in Arkansas and other surrounding states to join the future security workforce for the U.S. government and the society.

The U.S. National Poultry Research Center is the USDA-ARS facility in Athens, GA. Which houses seven research units covering different aspects of food safety and animal health related to poultry production. My laboratory is located in the Egg Safety and Quality Research unit, and our lab's research focuses on identifying the environmental drivers of foodborne pathogen ecology throughout the poultry production and processing continuum, specifically focused on local, multi-use, all natural farming systems. This project takes a systems-based approach, combining cultural and molecular microbiology with soil science, chemistry, and farm management, offering a breadth of scientific opportunity and experience.


Please let me know if any other information is needed.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Rothrock Jr.", written over a light blue horizontal line.

Dr. Michael J. Rothrock Jr.  
(USDA-ARS-USNPRC, Research Microbiologist)

USDA-ARS  
Southeast Area  
U.S. National Poultry Research Center  
Athens, GA 30605  
An Equal Opportunity Employer

 <b>Lawrence Berkeley National Laboratory</b>	ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY
	Environmental Energy Technologies Division 1 Cyclotron Road MS 90R1121 Berkeley, CA 94720

8/30/2016

Jia Di, Professor and Associate Director  
Cybersecurity Center for Secure Evolvable Energy Delivery Systems (SEEDS)  
Department of Electrical Engineering  
University of Arkansas  
Cato Springs Research Center  
1475 West Cato Springs Road  
Fayetteville, AR 72701

**Letter of Support**

**University of Arkansas' National Science  
Foundation's Scholarship for Service Data-Enabled Security in Cyber, Transportation, Critical  
Infrastructure, and Food proposal**

Dear NSF Program Officers:

Lawrence Berkeley National Laboratory (LBNL) is establishing a collaborative relationship with colleagues at the University of Arkansas, Cato Springs Research Center to examine the state-of-the-art technologies in cyber security for electric power system monitoring. In particular, we are very excited in this upcoming National Science Foundation (NSF) Scholarship proposal plan that will provide University of Arkansas with the funds to support students in this research program. As someone closely associated with the cyber-security program at Lawrence Berkeley National Laboratory, I am very aware of the need for new and innovative efforts to increase the workforce capacity for cyber-security related programs. LBNL does have a continuing need for skilled cyber-security professionals. Our team would be excited to partner with the University of Arkansas in order to promote the goals of this program. We would be very supportive of a student coming to LBNL to provide additional richness to their existing program, and develop new novel research around the work at the lab.

Sincerely,



Emma Stewart, Ph.D.  
Deputy Group Leader, Grid Integration Group  
Lawrence Berkeley National Laboratory  
1 Cyclotron Road MS 90R1121  
Berkeley CA 94720  
Phone: (510) 486-5564  
E-mail: estewart@lbl.gov



United States Department of Agriculture

Research, Education and Economics  
Agricultural Research Service

September 6, 2016

To: NSF SFS Review Panel,

The USDA/ARS Food and Feed Safety Research Unit is a government research laboratory located at the Southern Plains Agricultural Research Center in College Station, Texas. This letter is to express my interest in working with the academic team at the University of Arkansas in their NSF Scholarship for Service proposal entitled "Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food."

I realize the ubiquitous need for security in the modernized world. With the huge number of sensors and interconnected devices employed by industry and organizations in computing, transportation, smart grid, data centers, food production, etc., big data has emerged as a major factor in security, including both data protection and big data analytics for security. Given the nation-wide shortage of security experts (which is especially true in the U.S. government), it is both critical and timely for universities to have NSF support in helping recruit, train, and place American undergraduate and graduate students in security. I will be working with the University of Arkansas on this SFS project in providing advices on the government's security needs and hiring the student scholars as summer interns. I believe that this SFS project at the University of Arkansas will be a highly effective mechanism in attracting outstanding students in Arkansas and other surrounding states to join the future security workforce for the U.S. government and the society.

Project scientists within the Food and Feed Safety Research Unit have an established history of working with the University of Arkansas' research team on a number of food safety/food security issues. For instance, our laboratory has hosted within our facilities a number of undergraduate and graduate students from the University of Arkansas' team whose work has led to impactful findings pertaining to environmental and managerial factors affecting the carriage and dissemination of foodborne pathogens and antimicrobial resistant bacteria within the animal and their production environment. Further work is needed, however, to incorporate these findings into logistics networks so that processing centers have the information they need to effectively manage potential incoming risks and coordinate timely and effective recalls should safety issues develop after processing. The University of Arkansas' NSF Scholarship for Service proposal entitled "Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food" will clearly help meet this need.

Please let me know if any other information is needed.

Sincerely;

A handwritten signature in black ink that reads "Robin Anderson".

Robin Anderson, PhD



DEPARTMENT OF THE AIR FORCE  
AIR FORCE RESEARCH LABORATORY (AFMC)

September 12, 2016

NSF SFS Review Panel

To Whom It May Concern,

I am writing to express interest and commitment in working with the academic team at the University of Arkansas in their NSF Scholarship for Service proposal entitled "Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food," led by Dr. Jia Di.

With headquarters at Rome, NY, the Information Directorate research vector develops novel and affordable Command, Control, Communications, Computing, Intelligence (C4I) and Cyber technologies. RI is recognized as a national asset and leading research lab in C4I and Cyber. Refining data into information and knowledge for decision makers to command and control forces is what we do. This knowledge gives our air, space, and cyberspace forces the competitive advantage needed to protect and defend this great nation. We are very well aware of the need for security in government, industry, and society. With the huge amount of data produced by sensors and computational devices in cyber world, transportation processes, critical infrastructures, and food production/logistics/retail, data-enabled security challenges not only exist in one single area, but encompass across the boundaries of technical areas, which demand security workforce equipped with knowledge and skills for securing multiple disciplines. Given the nation-wide shortage of security experts, it is both critical and timely for universities to have NSF support in helping recruit, train, and place American undergraduate and graduate students in security. I will be working with the University of Arkansas on this SFS project in providing advices on the government's security needs and hiring the student scholars as summer interns. I believe that this SFS project will be an effective and unique mechanism in attracting outstanding students in Arkansas and the surrounding states to join the future security workforce for the US government and the society.

Please feel free to contact me if any other information is needed.

Sincerely,

A handwritten signature in black ink, appearing to read "Qing Wu", is located below the "Sincerely," text.

Dr. Qing Wu  
Principal Electronics Engineer  
US Air Force Research Laboratory  
Information Directorate  
525 Brooks Road  
Rome, NY, 13441-4505  
Email: Qing.Wu.2@us.af.mil  
Tel: 315-330-3129

# ARKANSAS STATE HIGHWAY COMMISSION



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SCOTT E. BENNETT, P.E.  
DIRECTOR OF  
HIGHWAYS AND TRANSPORTATION

September 12, 2016

National Science Foundation  
CyberCorps(R) Scholarship for Service (SFS) Program  
4201 Wilson Boulevard  
Arlington, VA 22230

## NSF Review Panel:

The Arkansas State Highway and Transportation Department (AHTD) seeks to provide a safe, efficient, aesthetically pleasing and environmentally sound intermodal transportation system for users. As safety is one of our main goals, we are pleased to offer our support of the University of Arkansas' effort to create an interdisciplinary plan of study with includes both *transportation* and *cyber security*.

Recent trends suggest that data and computer security is a significant threat to our nation. We understand that this threat extends clearly into the efforts of federal and state organizations to ensure safety for passengers and cargo utilizing our systems. Therefore, the proposed effort "Data-Enabled Security in Cyber, Transportation, Critical Infrastructure, and Food," is both timely and appropriate.

Our organization is excited by the opportunity to benefit from the proposed program and will welcome opportunities to utilize students from this effort during and after graduation.

Sincerely,

Scott E. Bennett, P.E.  
Director of Highways  
and Transportation

- c: Deputy Director and Chief Operating Officer  
Heather Nachtmann, Ph.D., University of Arkansas  
Chase Rainwater, University of Arkansas



**Jia Di**

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**From:** Saundry, Claire M. Dr. (Fed) [<mailto:claire.saundry@nist.gov>]

**Sent:** Friday, September 09, 2016 12:39 PM

**To:** Jia Di

**Subject:** RE: Letter Request for NSF SFS

Dear Dr. Ji,

Thank you for your inquiry regarding NIST participation in your grant proposal. NIST has had a long history of accepting students from the SFS program and NIST stands prepared to work with any university selected by the NSF, subject to applicable policies, regulations, and Federal laws. NSF is aware of NIST's willingness to work with students through the SFS program and we will continue to participate to the extent allowed.

Best regards,

Claire Saundry