

NEWS FROM THE ACADEMIC ALLIANCE

FEBRUARY 2018



A QUARTERLY LOOK AT ACADEMIC ALLIANCE PARTNERSHIP NEWS, SUCCESSES, OPPORTUNITIES, AND EVENTS

*"The relationship between Sandia and **UIUC** provides our students with transformative learning experiences, our alumni with incredible careers, and our faculty with opportunities for innovation and collaboration in national security."*

*—Andreas Cangelaris, **University of Illinois at Urbana-Champaign** Vice Chancellor for Academic Affairs and Provost*

SFO APPROVES ACADEMIC ALLIANCE, ON-CAMPUS PARTNERSHIP MANAGERS

Renewing its support for the Academic Alliance program, the DOE/NNSA Sandia Field Office (SFO) has approved the program through 2020. With SFO support in hand, the AA program at Sandia is getting fully organized, with office space, new staff, new on-campus partnership managers, and a renewed focus on enabling Sandia's mission through partnerships. Tom Corbet, a former infrastructure-systems analyst, is now the on-campus partnership manager at **UIUC**. David Minster, who has worked in technical intelligence, explosives training, and renewable energy, is now the on-campus manager for **UT-Austin**. The partnership managers serve as Sandia's on-campus interface to students, faculty, and administrators; support joint Sandia-university R&D program development; and build new recruiting pipelines for students and postdocs interested in Sandia opportunities. "I'm excited to support Sandia by managing the AA program at **UT**," says Minster. "This is a great opportunity to build joint R&D efforts and show new students the creative scientific research opportunities Sandia's missions create."

GAME THEORY COMES TO NETWORK CYBERSECURITY

The National Science Foundation's Secure and Trustworthy Cyberspace program awarded **Purdue University** a three-year, \$500K grant to investigate how to harness game theory for large-scale network cybersecurity. The project stems from a conference paper and a chapter in the upcoming book, *Static & Dynamic Game Theory: Foundations and Applications* by Ashish Hota, Saurabh Bagchi, Shreyas Sundaram, and Sandia's Abraham Clements. The effort also engaged Academic Alliance connections to support Bagchi and Sundaram to partner with Sandians John Richards and Alex Roesler on a successful proposal to investigate algorithms and defenses in large-scale autonomous systems.

GEORGIA TECH GRAD STUDENT JOINS SANDIA DIODE PROJECT

Elaine Rhoades, a physics graduate student at **Georgia Tech**, is at Sandia this year to work on new high-performance Schottky diodes. Rhoades will work with Sandia's Bob Kaplar on the characterization of GaN-AlGaN Schottky diodes for energetic particle detection, advancing the diodes' role in nuclear spectroscopy. Rhoades' time at Sandia is part of an Office of Science Graduate Student Research program award.

SANDIA AND UNM DEVELOPING WEARABLE SENSORS FOR SOLDIERS, PATIENTS

Researchers at Sandia and **UNM** are collaborating on a promising wearable technology that would collect interstitial (inter-cellular) fluid from users to monitor their health conditions. The technology uses 1.5 mm-long needles to collect a user's interstitial fluid, combined with sensors that detect important biomarkers like glucose, lactate, and electrolytes. Because the needles are so small, the technology is virtually painless and can be worn to continuously sense physiological conditions. The sensor has applications from national security—monitoring soldiers in the field—to health care—helping medical personnel quickly and accurately assess patients for severe dehydration, sepsis, and other life-threatening conditions.

Upcoming Events

Sandia (CA)

May 22-23

Early Career Faculty Field Day



Sandia National Laboratories is a multimission laboratory managed and operated by National Technology and Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International, Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525. SAND2018-1706 M

