UNIVERSITY OF CALIFORNIA
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NATIONAL LABS DAY

Welcome to the 2019 UC Merced National Labs Day. National Labs Day is a one-day conference that showcases research and career pathways available at the National Labs. It is both a mini-conference with research talks, and also professional development for our graduate students, postdocs and junior researchers. Representatives from each of six national labs, will share their career and research experiences: Lawrence Livermore National Labs (LLNL), Sandia National Labs (SNL), Lawrence Berkeley National Labs (LBNL), the Joint Genome Institute (JGI), Los Alamos National Labs (LANL), and Idaho National Labs (INL).

JGI Joint Genome Institute Department of Energy

INL Idaho National Laboratory

Los Alamos National Laboratory Est. 1943

Sandia National Laboratories

Berkeley Lab

This event was made possible by contributions from the Center for Career and Professional Advancement, the Graduate Division, and the School of Natural Sciences

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Event Schedule:

8:30 AM	Check in and Light Breakfast
9:00 AM	Welcome Address
	Chris Kello, Associate Dean of Graduate Studies, Professor of Cognitive and Information Sciences
9:30 AM	Presentation: Tanja Woyke - DOE Joint Genome Institute
10:00 AM	Presentation: Manfred Auer - Lawrence Berkeley National Labs
10:30 AM	Break
11:00 AM	Presentation: Sara Del Valle - Los Alamos National Labs
11:30 AM	Presentation: Camron Proctor - Sandia National Labs
12:00 PM	Networking Lunch
1:30 PM	Presentation: Fidelma Giulia Di Lemma - Idaho National Labs
2:00 PM	Presentation: John Murphy - Lawrence Livermore National Laboratory
2:30 PM	Break
3:00 PM	Panel Discussion: Rita C. Kuo, Joint Genome Institute; Frank Trigueros, Lawrence Livermore National Labs; Terrence Buck, Idaho National Labs; Jon Ventura, Los Alamos National Labs; Cathy Ann Schott, Sandia National Labs; Billy Poon, Lawrence Berkeley National Labs
4:00 PM	Closing Address
	Marjorie S. Zatz, Vice Provost and Graduate Dean
4:15 PM	Networking Reception
6:00 PM	Adjourn

JGI JOINT GENOME INSTITUTE DEPARTMENT OF ENERGY
INL Idaho National Laboratory
Los Alamos NATIONAL LABORATORY EST. 1943
Sandia National Laboratories
BERKELEY LAB

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Presenters:

Tonja Woyke, PhD
Microbial Genomics Program Lead
DOE Joint Genome Institute

After studying the mechanism of action of antifungal natural products and their derivatives during her Ph.D. in Microbiology at the Eberhard Karls University of Tübingen (Germany), Dr. Woyke pursued her postdoctoral research at the JGI in 2004. The main object of her research was the symbiont community of a gutless oligochaete for which she deciphered function and host-symbiont interplay using metagenomics. Taking on a Research Scientist position in 2007, she switched gears from metagenomics to single-cell genomics, which is now her primary interest and passion. Dr. Woyke stepped into the microbial genomics program lead position in 2009.

Manfred Auer, PhD
Department Head, Cellular & Tissue Imaging
Division Deputy
Biophysicist Staff Scientist
Lawrence Berkeley National Labs

The goal of the research in the Auer lab is to determine the macromolecular and cellular multiprotein organization in a variety of different biological samples, and the Auer lab collaborates with a large number of groups within the US and worldwide. Past research ranged from our senses of hearing and balance over breast development and breast cancer, to plant cell walls and microbial communities, but recently the Auer lab has decided to re-focus its efforts on hair cells and the inner ear sense of hearing and balance. The Auer lab is renowned for faithful sample preparation, including high pressure freezing/freeze substitution and/or cryo-sectioning, as well as the vitrification of whole mount samples. In addition to faithful preservation of biological samples the Auer lab is experienced in three-dimensional electron microscopy, including (cryo-) electron tomography, Focused Ion Beam Scanning Electron Microscopy (FIB/SEM) and X-ray Microscopy Tomography as well as sophisticated 3D visualization, segmentation and quantitative analysis.

Sara Del Valle, PhD
Deputy Group Leader/Scientist
Information Systems & Modeling Group, A-1
Los Alamos National Labs

Sara Del Valle is a scientist and deputy group leader in the Information Systems and Modeling Group at Los Alamos National Laboratory. She has a Ph.D. in Applied Mathematics and works on developing, integrating, and analyzing mathematical, computational, and statistical models for the spread of infectious diseases such as smallpox, anthrax, influenza, malaria, zika, Chikungunya, dengue, and Ebola. In addition, she has modeled the potential effects of mass casualties on the Healthcare and Public Health Sector including resource allocation and dependencies on other infrastructures. Most recently, she has been investigating the role of heterogeneous data streams such as satellite imagery, social media, and climate on detecting, monitoring, and real-time forecasting of infectious diseases.

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Presenters Continued:

Camron Proctor, PhD
Systems Engineer, Mk21 Fuze Replacement Program
Systems Analyst, Alternative Energy Vehicle Analysis
UC Davis Campus Executive Deputy
Sandia National Labs

As a systems engineer, Camron provides test planning and execution for large scale hostile shock testing of high consequence systems. His most recent contributions support replacing aging fuzes for the Air Force ICBM program. As a systems analyst, Camron investigates and projects the impact of technology investments on personal and commercial vehicles. The effort focuses on the effects of alternative energy powertrains on pricing and emissions. His work is supported by a multi-lab effort for the US DOE Vehicle Technologies and Fuel Cell Technologies offices. Prior to his current efforts, Camron spent 2 years in the nuclear weapon rotation program. In that time he contributed to efforts to better understand how composite materials behave in fires, performed a trade study on a $100M+ facility upgrade, as well as leading the staff based diversity in hiring initiative. Camron holds a bachelor's degree in physics from the University of San Diego and master's and doctor of philosophy degrees in mechanical and aeronautical engineering from the University of California, Davis.

Fidelma Giulia Di Lemma, PhD
Instrument Scientist and Metallography Scientist
Idaho National Labs

Fidelma Di Lemma is currently working as a Metallography and instrument Scientist at Idaho National Laboratory, performing advanced characterization on nuclear fuel and cladding materials by the use of optical and scanning electron microscopes. In the past she worked at the Japan Atomic Energy Agency studying the behavior of materials during severe accidents, and at the European Commission performing source term characterization from Radiological Dispersion Events. She obtained a Ph.D. from TU Delft in 2015 and Master and Bachelor Diploma in Nuclear Engineering from L'Universita' di Roma "La Sapienza" in 2011. She is also active involved in professional societies with a focus on youth organizations.

John Murphy, PhD
Research & Development Engineer, Center for Micro and Nano Technology
Lawrence Livermore National Labs

Dr. Murphy is currently working on two research projects. His primary project is in the development of a three-dimensionally structured betavoltaic, which will use the large surface area of the semiconductor to realize higher power densities than are possible with a flat, co-planar device. He is also contributing to a project that is developing mid-IR sensors based on the use of nanoparticle quantum dots. He is interested in semiconductor device engineering from design and simulation to fabrication and characterization – primarily for energy harvesting and radiation detection applications and is also interested in the simulation of radiation transport and interaction with materials, especially as it is related to energy deposition and material degradation.