



MAD SCIENTIST CONFERENCE: DISRUPTION AND THE FUTURE OPERATIONAL ENVIRONMENT

April 24 & 25, 2019
The University of Texas at Austin
Livestreaming at: www.tradoc.army.mil/watch



WEDNESDAY, APRIL 24

All Times Central Time

0800-0840 **REGISTRATION / NETWORKING**

0840-0850 **ADMIN REMARKS**

Mr. Lee Grubbs, Director, Army Mad Scientist Initiative

0850-0905 **WELCOME REMARKS**

Lieutenant General James M. Richardson, Deputy Commanding General, U.S. Army Futures Command

0905-0920 **WELCOME REMARKS**

Dean Sharon Wood, University of Texas at Austin, Cockrell School of Engineering

0920-1005 **KEYNOTE SPEAKER**

Dr. James Canton, Global Futurist, Institute for Global Futures

1005-1030 **NETWORKING BREAK**

THEME: ROBOTICS

1030-1115 **AI and Future Warfare: The Rise of the Robots (and Army Futures Command)**

Mr. Robert O. Work, Senior Counselor for Defense and Distinguished Senior Fellow for Defense and National Security, Center for a New American Security (CNAS) and Owner, TeamWork, LLC

1115-1200 **System of System-Enhanced Small Units (SESU)**

Dr. Paul Zabolocky, Program Manager, Strategic Technology Office (STO), Defense Advanced Research Projects Agency (DARPA)

1200-1330 **NETWORKING LUNCH**

SENIOR LEADER LUNCH (Invitation only) AND OPTIONAL TOURS

1330-1415 **The Robocup Challenge (2050) and Human in the Loop Machine Learning**

Dr. Peter Stone, Professor, Computer Science, University of Texas at Austin
Dr. Garrett Warnell, Research Scientist, Army Research Lab South

1415-1500 **Transitioning Technology and People out of Academia**

Dr. Mitch Pryor, Research Scientist, Mechanical Engineering, University of Texas at Austin
Dr. Brian O'Neil, Research and Development Engineer, Los Alamos National Labs

1500-1545 **Reliable Autonomous Robotics: Perception, Learning, and Trust**

Dr. Maruthi Akella, Professor, Aerospace Engineering and Engineering Mechanics, University of Texas at Austin
Dr. Todd Humphreys, Associate Professor, Aerospace Engineering and Engineering Mechanics, University of Texas at Austin

1545-1600 **NETWORKING BREAK**

1600-1645 **Human-Robot Interaction and Disaster Robotics**

Mr. Coitt Kessler, Robotics for Emergency Deployment Team, Austin Fire Department
Dr. Julie A. Adams, Associate Director of Research, Collaborative Robotics and Intelligent Systems Institute, Electrical Engineering and Computer Science, Oregon State University

1645-1700 **CLOSING REMARKS**

Lieutenant General Theodore Martin, Deputy Commanding General, U.S. Army Training and Doctrine Command (Via Video)

1700-2000 *No-Host Social (directly following closing remarks)*



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THURSDAY, APRIL 25

All Times Central Time

0745-0800

Opening Remarks

Brigadier General James P. Bienlien, G 3/5/7 Futures and Concepts Center, U.S. Army Futures Command

0800-0845

Accurate Technology Forecasting to Enable Army Operational Overmatch into the Deep Future

Dr. Troy Alexander, Technology Forecasting Lead, Combat Capabilities Development Command (CCDC), Army Research Laboratory

THEME: FUTURE OF SPACE AND ETHICS

0845-0930

Robotics in Space

Dr. Julia Badger, Project Manager, Robotics Intelligence for Human Spacecraft Team, NASA

0930-1030

PANEL: Ethics and the Future of AI Innovation

Moderator: Dr. Ken Fleischmann, Associate Professor, School of Information, University of Texas at Austin

Dr. Jakki Bailey, Assistant Professor, School of Information, University of Texas at Austin

Dr. Danna Gurari, Assistant Professor, School of Information, University of Texas at Austin

Dr. Matt Lease, Associate Professor, School of Information, University of Texas at Austin

Ms. Evanna Hu, Fellow, International Security Program at New America, CEO and Partner of Omelas

1030-1045

NETWORKING BREAK

1045-1130

Hypersonics and Autonomy in Near Space

Dr. Alex Roesler, Deputy Director, Integrated Military Systems Center, Sandia National Labs

Dr. Gary Polansky, Chief Scientist for Hypersonic Technology Development and Applications, Sandia National Labs

1130-1230

Space Traffic Management and Situational Awareness

Dr. Moriba K. Jah, Associate Professor, Aerospace Engineering and Engineering Mechanics, University of Texas at Austin

Dr. Diane Howard, Adjunct Professor, School of Law, University of Texas at Austin

1230-1345

NETWORKING LUNCH (Briefing by Michael C. Sekora, Founding Director Socrates Project)

1345-1445

PANEL: Space Law Games

Moderator: Mr. Matt Bold, Lockheed Martin

Mr. Daniel Michon, J.D. Candidate, University of Texas at Austin School of Law

Ms. Cheyenne Williams, Student, University of Texas at Austin

+ Student Panelist

1445-1530

Planet Habitability and Life Forms:

Xenobiology for Military Applications

Dr. Andrew D. Ellington, Professor, Molecular Biosciences, University of Texas at Austin

Habitability of Icy Ocean Worlds and the Europa Clipper Mission

Dr. Krista Soderlund, Research Associate, Institute of Geophysics, University of Texas at Austin

1530-1545

NETWORKING BREAK

1545-1630

Science Fiction and the Future Operational Environment

Ms. Martha Wells, Science Fiction Author, *Murderbot Diaries*

1630-1645

CLOSING REMARKS

Mr. Thomas Greco

Director of Intelligence, Deputy Chief of Staff, G-2, U.S. Army TRADOC

1645

Conference Adjourns