

AI and Autonomy Workshop

25-28 October 2021

Johns Hopkins University/Applied Physics Laboratory
(JHU/APL) Laurel, MD

Monday, 25 October

0800 - 0815 **MORS Welcome**
Dr. Nate Bastian, Workshop Chair

	Room #1	Room #2	Room #3
0815 - 1000	Approachable AI Tutorial Dr. Nate Bastian <i>Room: Auditorium</i>	Creating AI Enabled Systems Tutorial Dr. John Piorkowski <i>Room: Classroom 3-4</i>	Data Cleaning and Knowledge Management Tutorial Dr. Jim Kyung-Soo Liew <i>Room: Classroom 7-8</i>

1000 - 1030 **Break**

	Room #1	Room #2	Room #3
1030 - 1200	Approachable AI Tutorial Dr. Nate Bastian	Creating AI Enabled Systems Tutorial Dr. John Piorkowski	Data Cleaning and Knowledge Management Tutorial Dr. Jim Kyung-Soo Liew

1200 - 1330 **Lunch**

1330 - 1530 **eXplainable AI Tutorial**
Dr. Rosina Weber
Room: Auditorium

1530 - 1600 **Break**

1600 - 1700 **eXplainable AI Tutorial**
Dr. Rosina Weber
Room: Auditorium

Tuesday, 26 October

- 0830 - 0835** **Welcome**
Dr. Nate Bastian, Workshop Chair
- 0835 - 0850** **MORS Presidents Welcome**
Mr. David Saranchak, MORS President
- 0850 - 0940** **Keynote Speaker**
LtGen Michael Groen, USMC
Director, DoD Joint Artificial Intelligence Center (JAIC)
- 0940 - 0945** **Introduction of Keynote Speaker**
- 0945 - 1035** **Keynote Speaker**
Ms. Rachael Martin
National Geospatial Intelligence Agency (NGA) Lead for Artificial Intelligence, Automation, and Augmentation (AAA)
- 1035 - 1100** **Break**
- 1100 - 1200** **Defense and Security Applications**
- 1100 – 1115: AI Maturity Introduction, Mr. Dave Saranchak
 - 1115 – 1200: Strategic Capabilities Office; From Research to Reality - Operationalizing Machine Learning and Artificial Intelligence, Lt Col Samuel Gray, USMC; Strategic Capabilities Office
- 1200 - 1330** **Lunch**
- 1330 - 1515** **Defense and Security Applications**
- 1330 – 1400: Dr. Trevor Bihl, Air Force Research Laboratory
 - 1400 – 1445: TRAuma Care in a Rucksack (TRACIR), Dr. Ronald K. Poropatich, MD, MS, Director of the Center for Military Medicine Research, University of Pittsburgh
 - 1445 – 1515: Dr. Daniel Felps, NGA Research
- 1515 - 1530** **Break**
- 1530 - 1700** **Defense and Security Applications**
- 1530-1630: Discussion: Systems Engineering of Mature Autonomy; Full Spectrum Considerations
 - Mr. Michael Woudenberg, Retired
 - Dr. John Piorkowski, JHU APL
 - 1630 – 1700: Mr. Martin Stanley, DHS, Strategic Technology, CTO, CISA
- 1700 - 2000** **No Host Social**
La Palapa Too
7500 Montpelier Rd., #101
Laurel, MD 20723

Wednesday, 27 October

0800 - 0815 **Review of Day 1**

Dr. Nate Bastian, Workshop Chair

0815 - 1000 **Ethics and Explainability**

- 0815 – 0830: Introduction: Dr. Antonio Giardina, A²I² and Dr. Eric Vorm, NRL
- 0830 – 0900: To AI or Not to AI, Dr. Dan Maxwell, KaDSci
- 0900 – 0930: A Method for Ethical AI in Defence, Dr. S. Kate Devitt and Mr. Michael Gan
- 0930 – 1000: Explainable AI Initiatives, Dr. Mark Stefik, Palo Alto Research Center

1000 - 1030 **Break**

1030 - 1200 **Ethics and Explainability**

- 1030 – 1100: Artificial Intelligence and the Concept of Explainability, Prof. Kon Mouzakis, Director, A²I²
- 1100 – 1200: Panel Discussion and Session Summary led by Dr. Antonio Giardina and Dr. Eric Vorm

1200 - 1330 **Lunch**

1330 - 1515 **Test and Evaluation Capabilities**

- 1330 – 1345: Introduction: Dr. Jane Pinelis, JAIC
- 1345 – 1415: Theoretical Issues in T&E of Autonomous Systems, Dr. David Tate, IDA
- 1415 – 1445: Practical Issues in T&E of Autonomous Systems, Dr. Galen Mullins, JHUAPL
- 1445 – 1515: Theoretical Issues in T&E of AI, Dr. Laura Freeman, VA Tech

1515 - 1545 **Break**

1545 - 1700 **Test and Evaluation Capabilities**

- 1545 – 1615: Practical Issues in T&E of AI, Dr. Chad Bieber, JHUAPL/JAIC
- 1615 – 1700: Panel Discussion and Session Summary

Thursday, 28 October

0800 - 0815 **Review of Day 2**

Dr. Nate Bastian, Workshop Chair

0815 - 1015 **Industrial and Academic Collaboration**

- 0815 – 0835: Introduction: Dr. Mae Seto, Dalhousie University
- 0835 – 0910: Towards the European Standard Unmanned Ground System: Dr. Mart Noorma, University of Tartu
- 0910 – 0945: Collaborative Persistent Unmanned Underwater Vehicles, Dr. Antoine Fagette, Thales R&T
- 0945 – 1020: Multi-Object Tracking in Elector-Optical (EO) and Light Detection and Ranging (LIDAR) Employing Deep Affinity Network, Dr. Mubarak Shah, UCF

1020 - 1050 **Break**

1050 - 1200 **Industrial and Academic Collaboration**

- 1050 – 1125: A New Approach to Simultaneous Perception-Action Design for Autonomous Agents, Dr. Takashi Tanaka, University of Texas Austin
- 1125 – 1200: Integrating First and Second Wave AI for Third Wave Effects, Dr. William Mandrick and Mr. Ian Featherstone, SAIC

1200 - 1330 **Lunch**

1330 - 1630 **Looking Five Years into the Future**

- 1330 – 1345: Introduction: Dr. Scott Littlefield
- 1345 – 1505: Government Panel
 - Dr. Deji Coker, Office of Naval Research Portfolio Manager for Autonomy
 - Mr. JC Lede, Air Force Research Lab Autonomy Technology Advisor
 - Dr. Garfield “Gary” Jones, DHS Associate Chief of Strategic Technologies, Office of the CTO CISA
 - Ms. Ryan Fitzgerald, MITRE
 - Dr. Tim Chung, DARPA
- 1505 – 1625: Industry Panel
 - Mr. Chris Covert, Director, New Market Enablement at Microsoft Federal
 - Dr. May Casterline, Senior Data Scientist, NVIDIA
 - Mr. Chad Hawthorne, Supervisor of the Ocean Systems Engineering Group, JHU/APL
 - Dr. Ian McCulloh, Accenture Federal
 - Mr. Brad Whittington, Raytheon

1625 - 1700 **Closing Remarks**