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CRUSER (Consortium for Robotics and Unmanned Systems Education and Research)

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2016-07

## CRUSER Technical Continuum 2016

Monterey, California: Naval Postgraduate School

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## TUESDAY 12 JULY

<b>900</b>	<b>905</b>	Dr. Ray Buettner: CRUSER Director	Welcome
<b>905</b>	<b>920</b>	C. Blais: NPS MOVES	Government-Owned Software for Robotics Education and Research
<b>925</b>	<b>940</b>	C. Blais: NPS MOVES	Challenges in Distinguishing Manned from Unmanned Systems in Combat Models
<b>945</b>	<b>1000</b>	R. Gamache: NPS PH	Electric Gun System
<b>1005</b>	<b>1020</b>	E. Gyde: BATTELLE	Interactive 360 Video for Autonomous and Unmanned Platforms
<b>1025</b>	<b>1040</b>	J. Reeder: SSC	Path Integral Control with Evolved Cost Functions for Control of Agile UAV Swarms
<b>1045</b>	<b>1100</b>	K. Song: NPS OC	Prototype Basic MCM UUV Search Mission Management AI Module Integration
<b>1105</b>	<b>1120</b>	D. Brutzman/D. Davis/C. Blais/R. McGhee: NPS MOVES	Ethical Mission Tasking and Execution for Maritime Robotic Vehicles
<b>1125</b>	<b>1140</b>	D. Mortimore: NUWC Keyport	Unmanned Systems Research and Experimentation Opportunities
<b>1145</b>	<b>1200</b>	H. Park/Tavora Romano/Yun:NPS MAE/ECE	Project MANICOPTER: Autonomous Aerial Vehicles with Robotic Manipulation Capability
<b>1205</b>	<b>1220</b>	J. Virgili-Llop/M. Romano: NPS MAE	Modeling and control of UxV with onboard robotic manipulators of similar size
<b>1225</b>	<b>1240</b>	K. Jones: NPS MAE	Aqua-Quad: Status and Future Developments
<b>1245</b>	<b>1300</b>	W. Kang: NPS MA	Observability and Optimal Sensor Placement for Mobile Sensor Networks
<b>1305</b>	<b>1320</b>	D. Boger/ S. Miller: NPS IS	Using Co-Active Design to Implement Marine Machine Interdependence in Squad Maneuvers
<b>1325</b>	<b>1340</b>	F. Alves: NPS PH	Bio-inspired MEMS acoustic sensor for robotic autonomous systems applications
<b>1345</b>	<b>1400</b>	S. Fahey: NPS CS	USV for Maritime Shield
<b>1405</b>	<b>1420</b>	S. Kragelund: NPS MAE	Experimentation in Extreme Environments: Recent Results by CAVR



## WEDNESDAY 13 JULY

		Dr. Brian Bingham: CRUSER	
<b>900</b>	<b>905</b>	Deputy Director	Welcome
<b>905</b>	<b>920</b>	B. Bingham: NPS MAE	Developing Single Sortie Detect to Engage Multi-Vehicle Autonomy with Ground-Based Testbed
<b>925</b>	<b>940</b>	J. Joseph: NPS OC	Acoustic Characterization of the New Arctic using Unmanned Systems in ICEX-16
<b>945</b>	<b>1000</b>	Y. Kwon/J. Klamo: NPS SE/MAE	Unsteady Loads on UUV during Near Surface Operation
<b>1005</b>	<b>1020</b>	P. Thulasiraman: NPS ECE	Evaluation of Security Algorithms in Cyber Defense of UAV Swarm Communications
<b>1025</b>	<b>1040</b>	G. Xie: NPS CS	Reliable Ad-hoc Communication through Multi-path Data Delivery
<b>1045</b>	<b>1100</b>	D. Brutzman: NPS IS/USW	RoboData Archive for JIFX/CRUSER Unmanned System Experimentation
<b>1105</b>	<b>1120</b>	J. Testa/V. Dobrokhodov: NPS MAE	Vision-Based Relative Navigation of Multicopter UAV in Maritime Interdiction Operation
<b>1125</b>	<b>1140</b>	X. Yun/J. Calusdian: NPS ECE	MATLAB Interface for the P3-DX Mobile Robot
<b>1145</b>	<b>1200</b>	C. Walton/ I. Kaminer: NPS MAE	Optimal Sensor Deployment and Information Gathering using UxSs
<b>1205</b>	<b>1220</b>	J. Metcalf/R.C. Olsen: NPS PH	Photogrammetric Point Cloud Fusion Using UAV Collected Thermal Imagery
<b>1225</b>	<b>1240</b>	R. Buettner/M. Jones: NPS IS	Swarm versus Swarm: Progress and Future Plans
<b>1245</b>	<b>1300</b>	K. Giammarco/M. Auguston/K. Giles: NPS SE/CS	Monterey Phoenix Behavior Modeling of Robotics and Unmanned Systems
<b>1305</b>	<b>1320</b>	P. Guest: NPS MR	Using Quad-rotor UAS to Perform Meteorological Measurements From Ships
<b>1325</b>	<b>1340</b>	S. Sanchez: NPS OR	Closing Capability Gaps: Data Farming Methods for New Concept Exploration in the CRUSER Community
<b>1345</b>	<b>1400</b>	S. Kragelund/ C. Walton/ I. Kaminer: NPS MAE	Sonar Detection Mission Planning Tool for Autonomous Vehicle Teams
<b>1405</b>	<b>1420</b>	D. Brutzman: NPS IS/USW	QR and DFL Optical Communications for Network Optional Warfare (NOW)