

Tuesday, September 16

8:00 – 8:10	Welcome Elena Messina and Alex Meystel	
8:10 – 8:30	Dale Hall, NIST Manufacturing Engineering Laboratory Director -- Introduction	
8:30 - 9:30	Morning Plenary James Albus, NIST - Performance Metrics Evaluation: From Theory to Practice	
9:30-10:00	Coffee Break	
10:00-12:00	<p>TuAM1 Machine Intelligence: Measures & Issues I Co-chairs: R. Madhavan and J. Spall <i>Quantifying Uncertainty Towards Information-Centric Unmanned Navigation</i>, Madhavan, R., Messina, E. <i>The Fisher Information Matrix: Performance Measure and Monte Carlo-Based Computation</i>, Spall, J. <i>Exercising a Native Intelligence Metric on an Autonomous On-Road Driving System</i>, Horst, J. <i>Towards Quantification of the Need to Cooperate between Robots</i>, Krishna, K., Hexmoor, H.</p>	<p>TuAM2 Metrics in Control and Planning Co-chairs: K. Pathak and A. Suri <i>A Computationally Efficient Scheme for Hierarchical Predictive Control</i>, Pathak, K., Agrawal, S., Messina, E. <i>Calibration of A 6-DOF Cable Robot Using Two Inclinometers</i>, Joshi, S., Surianarayan, A. <i>A New Performance-Based Motion Planner For Nonholonomic Mobile Robots</i>, Guo, Y., Qu, Z., Wang, J. <i>Contributors to Postural Stabilization: A Modeling – Simulation Study</i>, Roy, A., Iqbal, K.</p>

1:30 – 2:30	Afternoon Plenary Lotfi Zadeh, U. C. Berkeley - Protoform Theory and Its Basic Role in Human Intelligence, Deduction, Definition, and Search	
2:30 – 3:00	Coffee Break	
3:00 – 5:00	<p>TuPM1 Invited Session: Performance Metrics for Perception Systems Co-Chairs: T. Hong and M. Shneier <i>Results and Lessons Learned from the Quantitative Evaluation of Road Detection and Tracking Algorithms</i>, Dufourd, D., Dalgalarondo, A. <i>Face Recognition Vendor Test 2002</i>. Phillips, P., Grother, P., Micheals, R., Blackburn, D., Tabassi, E., Bone, M. <i>Some Issues Relating to Performance Evaluation of LADARs</i>, Cheok, G., Stone, W., Witzgall, C. <i>A Perturbation Method for Evaluating Background Subtraction Algorithms</i>, Chalidabhongse, T., Kim, K., Hardwood, D., Davis, L. <i>Performance Evaluation of Sensors on Mobile Vehicles Using a Large Data Repository and Ground Truth</i>, Hong, T., Chang, T., Takeuchi, A., Shneier, M.</p>	<p>TuPM2 Measuring Autonomy of a System Co-Chairs A. Yavnai and H. Huang <i>Toward a Generic Model for the Autonomy Levels for Unmanned Systems (ALFUS)</i>, Huang, H., Messina, E. <i>Autonomy Level Specification for Intelligent Autonomous Vehicles – Interim Progress Report</i>, Huang, H., Messina, E. <i>Methods for Determining the Level of Autonomy to Design into a Human Spaceflight Vehicle: A Functional Specific Approach</i>, Proud, R., Hart, J., Mrozinski, R. <i>An Information-Based Approach for System Autonomy Metrics: Part I: Metrics Definition</i>, Yavnai, A.</p>

Welcoming Reception (Hotel)

Wednesday, September 17

8:30-9:30	Morning Plenary Charles Shoemaker, Army Research Laboratory	
9:30-10:00	Coffee Break	
10:00-12:00	<p>WeAM1 Machine Intelligence: Measures & Issues II Co-Chairs: L. Arata and R. Cottam <i>Mom! The Vacuum Cleaner is Chasing the Dog Again!</i>, Gunderson, J., Gunderson, L. <i>MIQ: Understanding a Machine through Multiple Perspectives Analysis</i>, Ulinwa, C. <i>A Pragmatic Approach to Discussing Intelligence in Systems</i>, Berg-Cross, G. <i>Abstract Or Die: Life, Artificial Life And (V)Organisms</i>, Cottam, R., Ranson, W., Vounckx, R. <i>Interactive Measures and Innovation</i>, Arata, L.</p>	<p>WeAM2 Invited Session: Technology Readiness Level Assessment of an Intelligent System Co-Chairs: A. Jacoff and A. Lytle <i>Experimental Design for Technology Readiness Level Assessment of Autonomous Mobility</i>, Bodt, B., Camden, R. <i>An Evaluation of Operator Workload, During Partially-Autonomous Vehicle Operations</i>, Schipani, S. <i>Evaluation of Operator Interventions in Autonomous Off-Road Driving</i>, Sholtz, J., Antonishek, B., Young, J. <i>Terrain Characterization from Ground-Based LADAR</i>, Witzgall, G., Cheok, G., Gilsinn, D.</p>

1:30-2:30	Afternoon Plenary Douglas Gage, Defense Advanced Research Projects Agency – Making What’s Countable Count	
2:30-3:00	Coffee Break	
3:00 – 5:00	<p>WePM1 Invited Session: Performance Metrics for Driving Systems Co-Chairs: C. Schlenoff and J. McKnight <i>Motor Vehicle Technology: Automation of Driving Tasks</i>, McKnight, J., McKnight, S. <i>Performance Metrics for Cybercars</i>, Yang, M., Parent, M.A <i>Developing World Model Specification and Metrics for Sensory Processing for On-road Driving Tasks</i>, Barbera, T., Horst, J., Schlenoff, C., Aha, D., Wallace, E. <i>Performance Evaluation of Tools & Techniques for Representing Cost-Based Decision Criteria for On-Road Autonomous Driving</i>, Zimmerman, N., Schlenoff, C., Balakirsky, S., Wray, R.</p>	<p>WePM2 Invited Session: Modeling and Simulation Support for Performance Evaluation Co-Chairs: S.Balakirsky and M. Fields <i>Evaluating Rules Learned from Simulated Environments</i>, Headen, W., Maloof, M. <i>Advanced Robotic Simulation</i>, Pettitt, B. <i>Developing a Chemical Reconnaissance Behavior for Unmanned Ground Vehicles Using the OneSAF Battlefield Simulation Tool</i>, Fields, M., Haug, T. <i>Developing a Robotic Overwatching Fires Mission</i>, Fields, M.</p>

<p>Banquet (Hotel) Plenary: Alexander Meystel, Drexel University</p>

Thursday, September 18

8:30-9:30	Morning Plenary Dennis Leedom, Evidence-Based Research – Advancing the State-of-the-Art Intelligent Systems: Scientific Rigor in Our Methods of Experimentation	
9:30-10:00	Coffee Break	
10:00-12:00	ThAM1 Evaluation of Human and Robot Interactions Chair: J. Drury <i>Measuring the Intelligence of a Robot and its Interface</i> , Crandall, J., Goodrich, M. <i>Evaluating Human-Robot Interaction in a Search-and-Rescue Context</i> , Drury, J., Riek, L., Christiansen, A. <i>Metrics for Evaluating Human-Robot Interactions</i> , Olson, D., Goodrich, M.	ThAM2 Evaluating Algorithms & Tools for Intelligence Co-Chairs: B. VerDuin and A. Guez <i>Analysis of Performance Evaluation Metrics to Combat the Model Selection Problem</i> , VerDuin, W., Huang, S. <i>NOT (Faster Implementation ==> Better Algorithm), A Case Study</i> , Balakirsky, S., Kramer, T. <i>Stopping Stochastic Approximation</i> , Hutchison, D., Spall, J. <i>Multiple Objective Optimization Approach To Distributed Intelligent Agents</i> , Guez, A. <i>Using an Ontology to Evaluate a Large Rule Based Ontology: Theory and Practice</i> , Jarrold, W.

1:30-2:30	Afternoon Plenary Harold Szu, Office of Naval Research – How to Endow Machine IQ with Unsupervised Learning	
2:30 -- 3:00	Coffee Break	
3:00 -- 5:00	ThPM1 Applied Performance Evaluation Co-Chairs: A. Clerentin and W. McBride <i>Imprecision And Uncertainty Quantification for the Problem of Mobile Robot Localization</i> , Clerentin, A., Delahoche, L., Brassart, E., Izri, S. <i>Evolution of Metrics and Performance for USAR competitions</i> , Jacoff, A. and Weiss, B. <i>Measurement and Prediction of the Off-Road Mobility of Small Robotic Ground Vehicles</i> , McBride, W., Longoria, R., Krotkov, E. <i>Real Time 3-D Discrimination of Buried Object in Subsurface Soil</i> , Chin, D.	ThPM2 Government Panel Session on Machine Intelligence Quotient Chair: H. Szu