

# 2021 Computational Cognition & Machine Intelligence Program Review

Dr. Hal Greenwald | November 8-10, 2021 | Virtual

## Agenda Day 1 | November 8, 2021 ~ Times US Eastern

Time	Topic	Speaker
8:45	Zoom Login	
9:00	Opening Remarks	Hal Greenwald, Program Officer, Computational Cognition & Machine Intelligence; Col Michelle Ewy, Deputy Director, AFOSR
9:15	Explaining the Space of Plans	Martim Brandao (PI: Amanda Coles), King's College London
9:45	Adversarial Multi-Unit Planning	Brayden Hollis, AFRL/RI
10:15	Learning to Plan in Hybrid Spaces	Leslie Kaelbling, MIT
10:45	<b>BREAK</b>	
11:00	Learning in Large-scale Models of Biological Cognition	Chris Eliasmith, University of Waterloo
11:30	Choosing a Direction: Neural Models of Decision Making	Roger Mailler, University of Tulsa
12:00	Exploiting Memristors and the Local Activity Principle	Leon Chua, UC Berkeley
12:30	<b>Lunch/Networking in Wonder</b>	
13:30	Discovering Optimal Strategies for Bounded Agents	Tom Griffiths, Princeton/UC Berkeley
14:00	Flexible and Resilient Autonomous Systems	Katia Sycara, Carnegie Mellon University
14:30	Testing a Common Model for Human and Human-Like Intelligence	Andrea Stocco, University of Washington
15:00	Discussion: Human Cognition & Machine Intelligence	Facilitator: Tom Griffiths, Princeton
<b>MEETING ADJOURNED FOR THE DAY</b>		

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## Agenda Day 2 | November 9, 2021 ~ Times US Eastern

Time	Topic	Speaker
8:45	<b>Zoom Login</b>	
9:00	Visual Perception and Reasoning: Integrating Cognitive Programs, Working Memory, Attention Control and Visual Processing	John Tsotsos, York University
9:30	Empowering the Problem Solving Team through a Computer-human Partnership	Jonathan Cagan, Carnegie Mellon University
10:00	Optimizing Autonomous and Human-Assisted Experimentation in Materials Development	Mark Pitt, Ohio State University
10:30	<b>Coffee/Networking in Wonder</b>	
11:00	(YIP) Towards Preference-Aware Autonomy: Specification, Synthesis, and Interactive Planning	Jie Fu, Worcester Polytechnic Institute/University of Florida
11:30	Reasoning for Social Autonomous Agents; Towards Software Apprentices that Learn in Dynamic Domains	Ken Forbus, Northwestern University
12:30	<b>Lunch/Networking in Wonder</b> <i>Reserved area in Wonder for graduate students &amp; postdocs organized by UVA</i>	
13:30	Counterfactuals and Multiple Rewards: Inducing and Explaining Good Team Behavior for Effective Agent-Human Teaming	Kagan Tumer, Oregon State University
14:00	Implicit Communication in Human-Machine Collaboration	Anca Dragan, UC Berkeley
14:30	(YIP) Supporting Information Foraging by Utilizing Agents' Collective Foraging Behavior	Sandeep Kuttal, University of Tulsa
15:00	Discussion: Machine Learning	Facilitator: Leslie Kaelbling, MIT
<b>MEETING ADJOURNED FOR THE DAY</b>		

# 2021 Computational Cognition & Machine Intelligence Program Review

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## Agenda Day 3 | November 10, 2021 ~ Times US Eastern

Time	Topic	Speaker
8:45	<b>Zoom Login</b>	
9:00	(YIP) Active Formalization in Artificial and Human Reasoners	John Licato, University of South Florida
9:30	Automatically Inferring Human Machine Interaction Properties and Predicting and Adapting to their Violation	Sebastian Elbaum, UVA
10:00	A Human-machine Symbiotic System for the Extraction of High-level Behaviors from a Macroscopic View of Swarms	Panos Artemiadis, University of Delaware/Arizona State
10:30	<b>Coffee/Networking in Wonder</b>	
11:00	Toward Cognitive Realism in Game Theoretic Models of Social Behavior	Alan Wagner, Penn State University
11:30	Applications of Quantum Probability Theory to Human-machine Communication Networks	Jerome Busemeyer, Indiana University
12:00	Great Computational Intelligence, Mature and Further Applied	Selmer Bringsjord, Rensselaer Polytechnic Institute
12:30	<b>Lunch/Networking in Wonder</b>	
13:30	Networked Nonlinear Decision-Making: Opportunism, Explanations, and Learning Echo-Chambers	Eugene Santos, Dartmouth
14:00	Interactive Task Learning	John Laird, University of Michigan
14:30	(DURIP) Humanoid Robotics Platform for Investigating the Sensorimotor Basis of	George Konidaris, Brown University
15:00	Discussion	
<b>MEETING ADJOURNED</b>		