

# BRIMS 2011 AGENDA

## Monday, 21-March

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- 9:00 - 12:00 pm     **3-Hour Tutorial**  
Cognitive Robotics using SS-RICS – The Symbolic and Subsymbolic Robotics Intelligence Control System  
.....*Troy Kelley and Eric Avery, Army Research Laboratory*
- 2:00 - 5:00 pm     **3-Hour Tutorial**  
Instance-based Learning Tool: Making Instance-based Learning Theory Usable, Transparent, and Understandable  
.....*Coty Gonzalez and Varun Dutt, Carnegie Mellon*
- 9:00 - 5:00 pm     **Full Day Tutorial**  
Multi-Agent Activity Modeling with the Brahms Environment  
.....*Maarten Sierhuis, Palo Alto Research Center (PARC)*

## Tuesday, 22-March

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- 7:30 - 8:00 am     **Refreshments**
- 8:00 - 9:00 am     **Welcome/Sponsor Panel**

**TECHNICAL SESSION 1:  
PUSHING THE LIMITS ON SCALE, MODEL ROBUSTNESS,  
INTEGRATION, AND REUSE**

- 9:00 - 10:00 am     **Plenary** - TacAir-Soar: The Next Generation  
.....*John Laird, University of Michigan*
- 10:00 - 10:30 am     **Break**
- 10:30 - 10:50 am     Characterizing the Performance of Applied Intelligent Agents in Soar (*Randolph Jones, Steve Furtwangler, & Mike van Lent*)
- 10:50 - 11:10 am     Using Domain-Specific Languages to Improve the Scale and Integration of Cognitive Models (*Scott Douglass & Saurabh Mittal*)
- 11:10 - 11:30 pm     Easing Behavior Authoring of Intelligent Entities for Training (*Brad Rosenberg, Michael Furtak, Sean Guarino, Karen Harper, Max Metzger, Scott Neal Reilly, James Niehaus, & Peter Weyhraunch*)

- 11:30 – 11:50 pm Performance Evaluation of Declarative Memory Systems in Soar  
(*John Laird, Nate Derbinsky, & Jonathan Voigt*)
- 11:50 – 12:10 pm Towards Robust Agent Behaviors in Modeling and Simulation:  
Situation Filling In With Commonsense Knowledge (*Hoe Wai Leong  
& Kenneth Kwok*)
- 12:10 – 12:35 pm **Short Talks**  
An Abstract Spatial Device for Human Behavior Models, User  
Performance Data Collection, and Game Control User Interface  
(*Bruno Emond*)
- Simulating Cognitive Phenomena with a Symbolic Dynamical  
System (*Othalia Larue, Pierre Poirier, & Mickaël Camus*)
- Mathematical Capture of Human Crowd Behavioral Data for  
Computational Model Building, Verification, and Validation  
(*Elizabeth Mezzacappa, Gordon Cooke, Gladstone Reid, Robert  
DeMarco, Charles Sheridan, & John Riedener*)
- Pilot Behavior Representation for Designing Dynamic Distributed  
Cooperative Systems on Future Flight Decks (*Frank Rister*)
- A3FT- Advanced Accelerated Aircraft Transition Flight Crew  
Training: A Cognitive Pilot Model – Based Approach (*Frank Rister  
& Daniel Vogel*)
- 12:35 – 2:00 pm **Lunch (Provided)**

**TECHNICAL SESSION 2:  
COMPUTATIONAL AND COGNITIVE MODELS OF HUMAN  
MEMORY, LEARNING, AND DECISION MAKING**

- 2:00 – 3:00 pm **Plenary** – Grounding Simple Heuristics in ACT-R  
.....*Lael Schooler, Max Planck Institute for Human Development*
- 3:00 – 3:10 pm **Break**
- 3:10 – 3:30 pm Inferring User Intent with Bayesian Inverse Planning: Making Sense  
of Multi-UAS Mission Management (*Brian Riordan, Sylvain Bruni,  
Nathan Schurr, Jared Freeman, Gabriel Ganberg, Nancy Cooke, &  
Noel Rima*)
- 3:30 – 3:50 pm An Instance of What? Determining Cues, Attributes, and Goals in a  
Virtual Task Environment (*Bradley Best & Nathan Gerhart*)

- 3:50 – 4:10 pm      The Situation Model in the Synthetic Teammate Project (*Stuart Rodgers, Christopher Myers, Jerry Ball, & Mary Freiman*)
- 4:10 - 4:40 pm      **Break**
- 4:40 – 5:00 pm      A Cognitive Decision Making Model and Its Evaluation on the Radar Task Problem (*Ali Orhan Aydin & Mehmet Alil Orgun*)
- 5:00 – 5:20 pm      A Predictive Model for Self-Motivated Decision-Making Behavior (*Nisheeth Srivastava & Paul Schrater*)
- 5:20 – 5:45 pm      **Short Talks**  
 Modeling a Robotics Operator Manager’s Responsibilities in ACT-R (*Daniel Cassenti, Varun Dutt, Cleotilde Gonzalez, Regina Pomranky, & Bruce Hunn*)
- Two-Asset Coalition Games as a Model for Asymmetric Warfare (*Jonathon Kopecky, Nathan Bos, & Ariel Greenberg*)
- A Multi-Strategy Spatial Navigation Model in a Text-Based Environment (*Changkun Zhao, Jeremiah Hiam, Jonathan Morgan, & Frank Ritter*)
- Multi-layered Logic Bases for Attention Systems in Robotics (*Frederick Ackers, Eric Avery, Darush Davani, & Troy Kelley*)
- A Soar Agent for Searching Indoor Environments using a Mobile Robot (*Scott Hanford & Lyle Long*)
- 5:45 – 7:30 pm      **Break (Dinner on your own)**
- 7:30 - 9:30 pm      **Reception and Poster Session**  
 (See back of agenda for content details)

## ***Wednesday, 23-March***

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7:30 - 8:00 am      **Refreshments**

**TECHNICAL SESSION 3:  
 SOCIOCULTURAL, ORGANIZATIONAL AND COLLECTIVE  
 BEHAVIOR MODELING**

8:00 - 9:00 am      **Plenary** – Networks of Learners: Linking Network Science and Agent Based Modeling  
 .....*Kathleen Carley, Carnegie Mellon University*

9:00 - 9:10 am      **Break**

- 9:10 - 9:30 am Coalitions in Conflict: Reproducing the Inverted 'U' Pattern of Civil Violence (*Ariel Greenberg, Nathan Bos, Jonathon Kopecky, & Max Thomas*)
- 9:30 - 9:50 am Modeling Cultural Frame Shifting (*Michael Young*)
- 9:50 - 10:10 am Exploring the Impact of a Stochastic Hiring Function in Dynamic Organizations (*Geoffrey Morgan & Kathleen Carley*)
- 10:10 – 10:30 pm Securing Harbors by Modeling and Classifying Ships' Behaviors (*Salma Zouaoui, Valerie Roy, Jean-Paul Marmorat, & Nadia Maizi*)
- 10:30 - 11:00 am **Break**
- 11:00 – 12:30 pm **Symposium**  
Scaling Individual Decision Making Models to Models of Social Networks (*Organizers: Coty Gonzalez & Christian Lebiere; Panelists: Ion Juvina, Ido Erev, Martin Zinkevich, & David Reitter*)
- 12:30 – 2:00 pm **Lunch (Provided)**

**TECHNICAL SESSION 4:  
COGNITIVE MODERATORS, HUMAN FACTORS, AND  
VERIFICATION/VALIDATION ISSUES FOR M&S**

- 2:00 – 3:30 pm **Symposium**  
Workload as a Performance Shaping Factor for Human Performance Models (*Organizer: Brian Gore; Panelists: Christopher Wickens, Joe Armstrong, Andrew Belyavin, Robert McCann, & Brian Gore*)
- 3:30 - 4:00 pm **Break**
- 4:00 – 4:20 pm Linking Models of Team Neurophysiologic Synchronies for Engagement and Workload with Measures of Team Communication (*Ronald Stevens, Trysha Galloway, Chris Berka, & Adrienne Behneman*)
- 4:20 – 4:40 pm Automatically Generating Temporal Logic Properties from Task Analytic Models to Validate Human-device Interfaces Using Model Checking (*Matthew Bolton*)
- 4:40 – 5:00 pm Cognitive constraints and communication policies: information flow in human peer-to-peer networks (*David Reitter, Katia Sycara, Christian Lebiere, Jerry Vinokurov, Antonio Juarez, & Michael Lewis*)

- 5:00 – 5:20 pm Modeling Human-Automation Interaction in a Unified Cognitive Architecture (*Junya Morita, Kazuhisa Miwa, Akihiro Maehigashi, Hitoshi Terai, Kazuaki Kojima, & Frank Ritter*)
- 5:20 – 5:40 pm Validating an HBR Simulation for Training within a Virtual Environment (*Brad Cain, Lochlan Magee, & Andy Belyavin*)
- 5:40 – 6:00 pm Predicting and Validating Workload in Human-Robot Teams (*Caroline Harriott, Tao Zhang, & Julie Adams*)
- 6:00 – 7:30 pm ***Executive Committee Business Meeting***

## ***Thursday, 24-March***

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7:30 - 8:00 am ***Refreshments***

**TECHNICAL SESSION 5:  
COMPLEX SYSTEMS, NETWORK SCIENCE, AND INTELLIGENT  
AGENT MODELING**

- 8:00 - 9:00 am ***Plenary*** – Scalable Representations of Interacting Intentional Agents  
.....*Chris Barrett, Virginia Tech*
- 9:00 - 9:10 am ***Break***
- 9:10 - 9:30 am Visual Awareness in Combat Models (*Paul Evangelista, John Ruck, Imre Balogh, & Christian Darken*)
- 9:30 – 9:50 am Interactive Behavior Modeling for Large-Scale Crowd Simulations (*Ming Lin, Dinesh Manocha, Latika Eifert, & Angel Rodriguez*)
- 9:50 – 10:20 am ***Break***
- 10:20 – 10:40 am Formative Evaluation of an IUI for Supervisory Control of CGFs (*Glenn Taylor, Brian Stensrud, & Jeffrey Maddox*)
- 10:40 - 11:00 am Easy Authoring of Intelligent Tutoring Systems for Synthetic Environments (*Stephen Gilbert, Shrenik Devasani, Sateesh Kodavali, & Stephen Blessing*)

11:00 – 12:30 pm ***Symposium***  
Human Behavior Modeling in Network Science II (Organizers:  
Jeffrey Hansberger & Sibel Adali; Panelists: Sahin Cem Geyik,  
Boleslaw Szymansk, Simon Parsons, & Peter Pirolli)

12:30 – 12:45 pm ***Closing Remarks and Award Presentations***

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***For travel and other planning purposes, please note that tutorials will begin at  
approximately 9:00 on Monday, March 21 and the Technical program  
will end at approximately 12:45 on Thursday, March 24.***  
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