Preliminary Advances in Cognitive Systems 2020 Conference Schedule

Note: All Times Pacific (GMT-7)

Monday August 10th

8:00-8:30 Welcome and Logistics

8:30-9:30 Invited Talk 1: Andrew Gordon

9:30-10:30 Poster Session 1

1. Instructing a Cognitive Agent to Perform Sensemaking in Intelligence, Surveillance and Reconnaissance. Gheorghe Tecuci, Dorin Marcu, Mihai Boicu and Louis Kaiser.
2. Learning Hierarchical Task Networks with Landmarks and Numeric Fluents by Combining Symbolic and Numeric Regression. Morgan Fine-Morris, Bryan Auslander, Michael W. Floyd, Greg Pennisi, Héctor Muñoz-Avila and Kalyan Moy Gupta.
3. Adaptive Event Retrieval for Episodic Memory. Colm Flanagan and Claude Sammut.
4. Dempster-Shafer Theoretic Learning of Indirect Speech Act Comprehension Norms. Ruchen Wen, Mohammed Aun Siddiqui and Thomas Williams.
5. Andrew Gordon

10:30-12:00 Technical Talks 1: Language

1. Content-Centric Computational Cognitive Modeling. Sergei Nirenburg, Marjorie McShane, and Jesse English.
2. Neurosymbolic AI for Situated Language Understanding. Nikhil Krishnaswamy and James Pustejovsky.
3. A Broader Range for 'Meaning the Same Thing': Human Against Machine on Hard Paraphrase Detection Tasks. Jamie Macbeth, Ella Chang, Yining Hua, Gin Chen, Sandra Grandic, and Winnie Zheng.

12:00-12:30 Break

12:30-2:00 Technical Talks 2: Learning and Planning

1. The Visual Narrative Engine: A Computational Model of the Visual Narrative Parallel Architecture. Chris Martens, Rogelio E. Cardona-Rivera, and Neil Cohn.
2. Learning Procedures by Augmenting Sequential Pattern Mining with Planning Knowledge. Melinda Gervasio and Karen Myers.
3. Learning Hybrid Models for Variable Impedance Control of Changing-Contact Manipulation Tasks. Saif Sidhik, Mohan Sridharan, and Dirk Ruiken.

2:00-2:30 Break

3:00-4:00 Invited Talk 2: Fireside chat - Gary Marcus with Ken Forbus

3:00-4:00 Poster 2

1. Policy Regression for Monitoring Execution in Goal Reasoning Systems. Noah Reifsnyder and Hector Munoz-Avila.
2. What Possible Use Could Consciousness Be?. Jousha Bensemann and Michael Whitbrock.
3. Modeling Gestalt Visual Reasoning on Raven's progressive Matrices Using Generative Image Inpainting Techniques. Tianyu Hua and Maithilee Kunda.
4. Forgetting-Sensitive Referring Expression Generation for Integrated Robot Architectures. Tom Williams, Torin Johnson, Will Culpepper and Kellyn Larson.
5. Gary Marcus

5:00-6:00 Business meeting

Tuesday August 11th

8:30-9:30 Invited Talk 3: Cynthia Matuszek

9:30-10:30: Poster 3

1. OntoAgent: Implementing Content-Centric Cognitive Models.Jesse English and Sergei Nirenburg.
2. Computing Numeric Expectations for Cognitive Agents. Noah Reifsnyder and Hector Munoz-Avila.
3. Anticipatory Thinking: A New Frontier for Automated Planning. Adam Amos-Binks, Dustin Dannenhauer, Gene Brewer and Rogelio E. Cardona-Rivera.
4. A Model and a Method to Study Agency, Adaptation and Adult Development. Roger Gould.
5. Cynthia Matuszek

10:30-12:15: Technical Talks 3: Goals

1. The CREDO Stack: From Theory to Parctice in Cognitive Systems Design. John Fox. (short talk)
2. Goal Elicitation Planning: Reasoning and Acting to Reveal Another Agent's Goal. Adam Amos-Binks and Rogelio E.Cardona-Rivera.
3. Recognizing the Goals of Uninspectable Agents. Irina Rabkina, Pavan Kantharaju, Jason Wilson, Mark Roberts, Kenneth Forbus, and Laura Hiatt.
4. The Problem with Problems. Michael Cox.

12:15-12:45: Break

12:45-2:30: Winston Colloquium

2:30-3:30 Poster 4

1. Toward Givenness Hierarchy Theoretic Natural Language Generation. Poulomi Pal and Tom Williams.
2. General Intelligence Requires Autonomous, Cognitive, Intentional Agents. Sean Kugele and Stan Franklin.
3. Analogy versus Rules in Cognitive Architecture. Kenneth Forbus, Tom Hinrichs, Maxwell Crouse and Joseph Blass.

4. Strategies for Visuospatial Reasoning: Experiments in Sufficiency and Diversity. James Ainooson, Joel Michelson, Deepayan Sanyal, Joshua Palmer and Maithilee Kunda.

3:30-4:30 Technical Talks 4: Short Talks

1. System-wide Monitoring for Anomaly Detection. Leilani Gilpin.
2. Quotation for Real-Time Metacognition. Matthew D. Goldberg, Darsana Josyula, and Don Perlis.
3. Model-Based Novelty Adaptation. Matt Klenk, Wiktor Piotrowski,and Roni Stern.
4. Dempster-Shafer Theoretic Learning of Indirect Speech Act Comprehension Norms. Ruchen Wen, Mohammed Aun Siddiqui, and Thomas Williams.

4:30-5:00 Break

5:30-6:30 Student Mentoring

Wednesday August 12th

8:30-9:30 Invited Talk 4: Chad Jenkins

9:30-10:30 Poster 5

1. Integrating Declarative Long-Term Memory Retrievals into Reinforcement Learning. Justin Li.
2. Implementing a Task-Oriented Time-Situated Agent. Darsana Josyula, Anthony Herron and Kenneth M'Bale.
3. Towards Goal Inference for Human-Robot Collaboration. Shree Gotteti, Matthew Molineaux and Michael Cox.
4. Complexity of Agents in Non-stationary Environments: A Partial Computational Model.Vadim Bulitko and Valeriy K. Bulitko.

10:30-12:00 Technical Talks: Cognitive in Tasks

1. A Cognitive Task Analysis of Rapid Procedure Acquisition from Written Instruction. Pat Langley, Howard Shrobe, and Boris Katz.
2. Characterizing an Analogical Concept Memory for Architectures Implementing the Common Model of Cognition. Shiwali Mohan, Matthew Klenk, Matthew Shreve, Kent Evans, Aaron Ang, and John Maxwell.
3. Not Quite Any Way You Slice It: How Different Analogical Constructions Affect Raven's Matrices Performance. Yuan Yang, Keith McGreggor, and Maithilee Kunda.
4. Optimizing Human Performance using Individualized Computational Models of Learning. Christopher Maclellan, Kimberly Stowers, and Lisa Brady.

12:00-12:30 Break

12:30-2:00 Academic Panel

2:00-3:00 Poster 6

1. Enabling Morally Sensitive Robotic Clarification Requests. Ryan Blak Jackson and Tom Williams.
2. Coordination in Homogeneous and Heterogeneous Teams. Othalia Larue, Ion Juvina, Michael Cox, Matt Molineaux, Brue Howard, Eric Nichols, and Brad Minnery.
3. A Measure of Visuospatial Skills: Painting the Big Picture. Joel Michelson, Deepayan Sanyal, James Ainooson and Maithilee Kunda

3:00-4:30 State of ACS