Advances in Cognitive Systems 2017

Collected papers: http://www.cogsys.org/proceedings/2017

Friday, May 12th

8:00-8:45am	Registration and Continental Breakfast
8:45am	*Welcome and Administrative Remarks*, Hui Su, Paul Bello
9:15am – 10:30am	Session: *Planning 1*
	Invited Talk: *Refinement Planning and Acting*, Dana Nau
	Invited Talk: *Goal Reasoning: From Assistance to Rebellion*, David Aha
	Generating, Executing and Monitoring Plans with Goal-Based Utilities in Continuous Domains, Dongkyu Choi, Pat Langley and Mike Barley
	Coffee Break (30 minutes)
11:00am – 12:40pm	Session: *Language*
	Managing Casual Spoken Dialogue Using Flexible Schemas, Pattern Transduction Trees, and Gist Clauses, Seyedeh Zarah Razavi, Lenhart Schubert, Mohammad Rafayet Ali, and Mohammed Ehsan Hoque
	Invited Talk: *Deliberate Concept Learning*, Sergei Nirenburg
	Kinesthetic Mind-Reader: A Method to Identify Image Schemas in Natural Language, Dagmar Gromann and Maria Magdalena Hedblom
	Treating Unexpected Input in Incremental Semantic Analysis, Marjorie McShane, Kevin Blissett, and Irene Nirenburg
	Catered Lunch (80 minutes)
2:00pm – 3:40pm	Session: *Planning 2*
	Invited Talk: *Building Helpful Virtual Agents Using Planning, Plan Recognition, and Shared*

Representations, Christopher Geib

Invited Talk: Computational Processes of Creativity, Ashok Goel

Invited Talk: *Human Problem Solving*, Alexandra Kirsch

Invited Talk: *Title Learning to Reach and Grasp: A Developmental Robotics Approach,* Benjamin Kuipers

Coffee Break (30 minutes)

4:10pm – 5:50pm	Session: *HRI and Taskability*
	Invited Talk: *Title KnowRob 2.0: A 2nd Generation Knowledge Processing Framework for Cognition-Enabled Robotic Agents*, Michael Beetz
	Invited Talk: *Grounding and Learning about Human Environments and Activities for Autonomous Robots*, Anthony Cohn
	A Combined Architecture for Discovering Affordances, Causal Laws, and Executability Conditions, Mohan Sridharan and Benjamin Meadows
	Invited Talk: *Recent Advances in Interactive Task Learning*, John Laird
6:00pm	**Day 1 Wrap-Up**

Saturday, May 13th

8:00am -9:00am	**Registration and Continental Breakfast**
9:00am	*Welcome and Administrative Remarks*, Paul Bello
9:15am – 10:30am	Session: *Moral Cognition and Computation*
	Invited Talk: *Exploring Constraints on Humanly Possible Moralities*, Shaun Nichols
	Invited Talk: *Cognitive Properties of Norms in Humans (and Eventually Robots)*, Bertram Malle
	Invited Talk: *Attention and Control: How Intentions Beget Intentional Action*, Paul Bello

Coffee Break (30 minutes)

11:00am – 12:40pm	**Session:** *Reasoning*

Invited Talk: *The Logical Depth of Reasoning About Other Minds*, Ernie Davis

Simple Rules for Probabilistic Commonsense Reasoning, Adam Purtee and Lenhart Schubert

Invited Talk: *A 13-Strength-Valued Cognitive Calculus That Subsumes Both Quantified BDI Logics and Dempster-Shafer-Based Uncertain First-Order Logic*, Selmer Bringsjord and Naveen Sundar Govindarajulu

Invited Talk: *The Provenance of Modal Inference*, Sangeet Khemlani

Catered Lunch (80 minutes)

2:00pm – 3:40pm	**Session:** *Cognitive Systems: Philosophical Issues 1*

Invited Talk: *Bootstrapping Cognitive Systems*, Kenneth Forbus

Invited Talk: *Intending, Attending, and Acting in a Computational Cognitive System*, Will Bridewell

Invited Talk: *Implicit and Explicit Cognition in a Psychologically Realistic Cognitive Architecture*, Ron Sun

Invited Talk: *Mental Models as Mental Simulations: The Case of Counterfactual Thinking*, Felipe De Brigard

Coffee Break (30 minutes)

4:10pm – 5:50pm	**Session:** *Cognitive Systems: Philosophical Issues 2*

Invited Talk: *Attention is More Important for AI Than You Think*, John Tsotsos

Invited Talk: *Categorical Perception: An Interface for Perception and Cognition*, Henry Shevlin

Invited Talk: *The Linguistic Nature of Human Visual Perception and its Consequences for Building*

Cognitive Systems, Jeffrey Siskind

Invited Talk: *If any of us were Shakespeare, our title would be better than: Toward Meeting the Acute Challenge of Counteridenticals*, Rikhiya Ghosh, Naveen Sundar Govindarajulu, James Payne-Joyce, and Selmer Bringsjord

6:00pm – 7:30pm	**Poster Session and Catered Reception with Cash Bar**

IBM/RPI CISL Research Presentation (Studio 2)

Sunday, May 14th

8:00am – 9:00am	**Registration and Continental Breakfast**
9:00am	*Welcome and Administrative Remarks*, Paul Bello
9:15pm – 10:30am	**Session:** *Learning 1*

Invited Talk: *A Standard Model of the Mind*, Paul Rosenbloom, John Laird, and Christian Lebiere

Deep Learning of Ravens Matrices, Can Serif Mekik, Ron Sun, and David Yun Dai

Believe It or Not: Modeling Adversary Belief Formation in Stackelberg Security Games with Varying Information, Debarun Kar, Subhasree Sengupta, Ece Kamar, Eric Horvitz, and Milind Tambe

Coffee Break (30 minutes)

11:00pm – 12:15pm	**Session:** *Learning 2*

Invited Talk: *Fast Zero-shot and One-shot Learning and Knowledge Sharing from Natural Language Instructions*, Matthias Scheutz

Approximate Graph Matching for Mistake-Tolerant Skill Assessment, Melinda Gervasio, Christian Jones, and Karen Myers

Invited Talk: *Temporal Abstractions and Deep Reinforcement Learning*, Tejas Kulkarni

Catered Lunch (60 minutes)

1:15pm – 2:55pm	Session: *Personality, Traits, and Narrative*
	Character-Building Stories, Dylan Holmes and Patrick Winston
	Invited Talk: *Solving Interpretation with Etcetera Abduction*, Andrew Gordon
	A Cognitive Systems Analysis of Personality and Conversational Style, Pat Langley
	Cognitive Support for Rebel Agents: Social Awareness and Counternarrative Intelligence, Alexandra Coman
	Coffee Break (20 minutes)
3:15pm - End	**Discussion and Departure**

Poster Session

1. Perceptual Goal-Monitors for Cognitive Agents in Changing Environments,
Michael Cox and Zohreh Dannenhauser

2. Hypothesizing Method Structure for HTN Learning from Demonstration,
Michael Leece and Arnav Jhala

3. Improving Sequential Decision-Making with Cognitive Priming,
Mark Roberts and Laura Hiatt

4. A High-Level Language for Human-Robot Interaction,
Chitta Baral, Barry Lumpkin, and Matthias Scheutz

5. Emotional Appraisal: A Computational Perspective,
Suman Ojha and Mary-Anne Williams

6. Explainable Content Recommendation for Self-Directed Learning,
Michael Freed, Melinda Gervasio, Aaron Spaulding, and Louise Yarnall

7. Acquiring Business Rules: A Challenge for Semantic Parsing,
Vinay Chaudhri, Jason Freeman, Gautam Shine, and Pakapol Supaniratisai

8. Establishing Social Presence with a Voice-Only Chatbot,
Mei Si and Rahul Divekar

9. Accurate Distortion: Perception, Truth, and Utility,
Rebecca Traynor

10. Demonstration-Based Solution Authoring for Skill Assessment, Melinda Gervasio, Karen Myers, and Michael Wessel

11. *A Theory of Emotions in a Cognitive Calculus*, Rikhiya Ghosh, Naveen Sundar Govindarajulu, Steven Scally, and Selmer Bringsjord

12. *Computational Exploration of Gödel's Speedup Theorem*, Atriya Sen, Naveen Sundar Govindarajulu, Erik Bergland, John Licato, and Selmer Bringsjord

13. *Toward Formalizing the Darwin's-Mistake Debate*, Selmer Bringsjord, Atriya Sen, Christina Elmore, and Naveen Sundar Govindarajulu

14. *Toward Plan Recognition that Incorporates Theory of Mind*, Matt Peveler, Atriya Sen, Naveen Sundar Govindarajulu, and Selmer Bringsjord