

# AGI -08 Program

## Saturday, March 1<sup>st</sup>, 2008

### Opening Session

- Conference Introduction [Stan Franklin] 9:00–10:30
- Review of Past and Present AGI Research [Ben Goertzel]

### Coffee Break

10:30-11:00

### Technical Session I: Overview of AGI Research

[Session Chair: Eric Baum]

- Seven Principles of Synthetic Intelligence [Joscha Bach]
- Four Paths to AI [Jonathan Connell, Kenneth Livingston] 11:00-12:30
- Cognitive Architectures: Where Do We Go From Here? [Wlodzislaw Duch, Richard Oentaryo, Michel Pasquier]
- What Do You Mean by "AI"? [Pei Wang]

### Lunch (On Your Own)

12:30-2:00

### Technical Session II: Architecture of AGI Systems

[Session Chair: Sam S. Adams]

- Governing Lethal Behavior: Embedding Ethics in a Hybrid Deliberative/Reactive Robot Architecture [Ronald Arkin]
- LIDA and a Theory of Mind [David Friedlander, Stan Franklin]
- Learning from Inconsistencies in an Integrated Cognitive Architecture [Kai-Uwe Kühnberger, Peter Geibel, Helmar Gust, Ulf Krumnack, Ekaterina Ovchinnikova, Angela Schwering, Tonio Wandmacher] 2:00-4:00
- Extending the Soar Cognitive Architecture [John Laird]
- OSCAR: An Architecture for Generally Intelligent Agents [John Pollock]
- Cognitive Constructor: An Intelligent Tutoring System Based on a Biologically Inspired Cognitive Architecture [Alexei Samsonovich]

### Coffee Break

4:00-4:30

### Technical Session # 3: Language and Cognition

[Session Chair – Stephen Reed]

- Language Processing in Human Brain [Alexander Borzenko]
- A Cognitive Substrate for Natural Language Understanding [Nick Cassimatis, Arthi Murugesana]
- Anticipative Coordinated Cognitive Processes for Interactivist and Piagetian Theories [Jean-Charles Quinton, Jean-Christophe Buisson, Filippo Perotto] 4:30-6:00
- Using Decision Trees to Model an Emotional Attention Mechanism [Saman Harati Zadeh, Saeed Bagheri Shouraki, Ramin Halavati]

## Reception and Poster Session

[Session Co-chairs: Lee McCauley and Sidney D'Mello]

6: 15-8: 15

- Reasoning with Prioritized Data by Aggregation of Distance Functions [Ofer Arieli]
- Distance-Based Non-Deterministic Semantics [Ofer Arieli, Anna Zamansky]
- Fusing Animals and Humans [Jonathan Connell]
- Variac: an Autogenous Cognitive Architecture [J. Storrs Hall]
- Artificial General Intelligence via Finite Covering with Learning [Yong Hwang, Samuel Hwang, David Hwang]
- Cognitive Primitives for Automated Learning [Sudharsan Iyengar]
- Essential Phenomena of General Intelligence [Marc Pickett, Don Miner, Tim Oates]
- Analogy as Integrating Framework for Human-Level Reasoning [Angela Schwering, Ulf Krumnack, Kai-Uwe Kühnberger, Helmar Gust]
- Designing Knowledge Based Systems as Complex Adaptive Systems [Karan Sharma]
- Artificial General Intelligence: An Organism and Level Based Position Statement [Leslie Smith]
- Real-time Machine Deduction and AGI [Peter Tripodes]
- Text Disambiguation by Educable AI System [Alexander Voskresenskij]

# AGI -08 Program

## Sunday, March 2<sup>nd</sup>, 2008

### Technical Session # 4 : Reasoning

[Session Chair: Steve Omohundro]

- Probabilistic Quantifier Logic for General Intelligence: An Indefinite Probabilities Approach [Matthew Ikle, Ben Goertzel] 9:00-10:15
- Comirit: Commonsense Reasoning by Integrating Simulation and Logic [Benjamin Johnston, Mary-Anne Williams]
- Hybrid Reasoning and the Future of Iconic Representations [Catherine Recanati]

Coffee Break

10:15-10:45

### Technical Session # 5: Learning [Chair: J. Storrs Hall]

- Participating in Cognition: The Interactive Search Optimization Algorithm [Israel Gottlieb, Nadav Abkasis, Eliraz Itzchaki]
- Adversarial Sequence Prediction [Bill Hibbard]
- Artificial General Intelligence through Large-Scale, Multimodal Bayesian Learning [Brian Milch] 10:45-12:30
- A Computational Approximation to the AIXI Model [Sergey Pankov]
- Transfer Learning and Intelligence: an Argument and Approach [Matthew Taylor, Gregory Kuhlmann, Peter Stone]

Lunch (On Your Own)

12:30-2:00

### Technical Session # 6: Virtually Embodied AI

[Session Chair: Sibley Verbek]

- Toward Cognitively Robust Synthetic Characters in Digital Environments [Selmer Bringsjord, Andrew Shilliday, Micah Clark, Dan Werner, Joshua Taylor, Alexander Bringsjord, Ed Charpentier]
- An Integrative Methodology for Teaching Embodied Non-Linguistic Agents [Ben Goertzel, Cassio Pennachin, Nil Geissweiller, Moshe Looks, Andre Senna, Welter Silva, Ari Heljakka, Carlos Lopes] 2:00-3:15
- Temporal Action Logic for Question Answering in an Adventure Game [Martin Magnusson, Patrick Doherty]

Coffee Break

3:15-3:45

Discussion Session: Catalyzing the Coming AGI Renaissance [Session Chair: Stan Franklin]

3:45-5:15

Banquet [Holiday Inn]

6:00-8:00

Business Meeting [Chair:Stan Franklin] [Room 405]

8:00-9:30

# AGI -08 Program

## Monday, March 3<sup>rd</sup>, 2008

Technical Session # 7: Neural Network and Brain Modeling  
[Session Chair: Randal Koene]

- Recurrent Feedback Neuronal Networks: Classification and Inference Based on Network Structure [Tsvi Achler, Eyal Amir]
- The China-Brain Project: Building China's Artificial Brain Using An Evolved Neural Net Module Approach [Hugo de Garis]
- How Might Probabilistic Reasoning Emerge from the Brain? [Ben Goertzel, Cassio Pennachin]
- Vector Symbolic Architectures: A New Building Material for Artificial General Intelligence [Simon Levy, Ross Gayler]

9:00-10:30

Coffee Break

10:30-11:00

Panel Discussion: Future Directions for AGI Research  
[Session Chair: Ben Goertzel]

11:00-12:30