Position Papers

How Has AI Computational Modeling Contributed to the Study of Other Domains?
Kevin D. Ashley, University of Pittsburgh

Representation as a Fluent: An AI Challenge for the Next Half Century
Alan Bundy and Fiona McNeill, University of Edinburgh

Multimodal Cognitive Architecture: Making Perception More Central to Intelligent Behavior
B. Chandrasekaran, The Ohio State University

The Newell Test Should Commit to Diagnosing Dysfunctions
William J. Clancey, NASA Ames Research Center

Thinking Is Reliving
Randall Davis, MIT CSAIL

What Is a Knowledge Representation?
Randall Davis, Howard Shrobe, and Peter Szolovits, MIT CSAIL

Natural Language: It's All About Meaning
Scott E. Fahlman, Carnegie Mellon University

The Watershed in Artificial Intelligence
Kenneth D. Forbus, Northwestern University

Puppetry Versus Creationism: Why AI Must Cross the Chasm
Rick Hayes-Roth, Naval Postgraduate School

Computers Play Chess; Humans Play Go
Jim Hendler, University of Maryland College Park

Deconstructing Planning as Satisfiability
Henry Kautz, University of Washington

Understanding Human Experience
Henry Kautz, University of Washington

Learning About Space, Motion, Objects, and Actions from Blooming, Buzzing Confusion
Benjamin Kuipers, University of Texas at Austin

Artificial Intelligence and Intelligent Systems
Pat Langley, Stanford University, and John E. Laird, The University of Michigan

AI Has Already Succeeded — Or Do I Mean Failed?
Drew McDermott, Yale University

Learning Language from Perceptual Context: A Challenge Problem for AI
Raymond J. Mooney, University of Texas at Austin

Towards Chemical Universal Turing Machines
Stephen Muggleton, Imperial College London

Bootstrapping AI
Jacques Pitrat, LIP6 Université Paris 6

Neuroscience and AI: New Insights?
Tomaso Poggio

Agents, Decisions, Beliefs, Preferences, Science and Politics
David Poole, University of British Columbia

The Approach of Modern AI
Stuart Russell, University of California, Berkeley

Software Infrastructure, Methodology, and Retrospection
Erik Sandewall

Co-Designing Agents: A Vision
Stuart C. Shapiro, University at Buffalo, The State University of New York

Grand Challenge 5: The Architecture of Brain and Mind: Integrating Low-Level Neuronal Brain Processes with High-Level Cognitive Behaviours in a Functioning Robot
Aaron Sloman, University of Birmingham

Polyflaps as a Domain for Perceiving, Acting and Learning in a 3-D World
Aaron Sloman, University of Birmingham

Getting Meaning Into the Machine
Yorick Wilks, University of Sheffield

American Association for Artificial Intelligence
Fellows Symposium

Celebrating Fifty Years of Artificial Intelligence

July 15–16, 2006

Norton's Woods Conference Center
The American Academy of Arts and Sciences
Cambridge, Massachusetts

Program

Saturday, July 15

8:30 AM
BREAKFAST
Atrium

9:00 AM
Opening Remarks
Auditorium

9:10 AM
Panel #1: Visions of AI From the First Round of Graduate Students
Moderator: Raj Reddy
Panelists: Danny Bobrow, Don Loveland, Robert Kahn, and Nils Nilsson

10:30 AM
COFFEE
Atrium

11:00 AM
General Discussion

12:00 PM
LUNCH
Blue & Green Dining Rooms

1:00 PM
Birds of a Feather #1

2:45 PM
COFFEE
Atrium

3:00 PM
Panel #2: Inflection Points
Moderator: Ron Brachman
Panelists: Rod Brooks, Randy Davis, Jim Hendler, Tom Mitchell, Candy Sidner

General Discussion

5:00 PM
FELLOWS RECEPTION
Atrium

6:00 PM
Invited Speaker: Ray Kurzweil
Auditorium

7:00 PM
ANNUAL FELLOWS' DINNER
Blue & Green Dining Rooms

Sunday, July 16

8:30 AM
BREAKFAST
Atrium

9:00 AM
Panel #3: The Founders' Forum
Moderator: Nils Nilsson
Panelists: Edward Feigenbaum, John McCarthy, Marvin Minsky, Oliver Selfridge, and Karen Sparck-Jones

10:30 AM
COFFEE
Atrium

11:00 AM
General Discussion

12:00 PM
LUNCH
Blue & Green Dining Rooms

1:00 PM
Birds of a Feather #2

2:45 PM
COFFEE
Atrium

3:00 PM
Panel #4: Summary Session
Moderator: James Hendler
Discussants: One Participant from each of the Birds-of-a-Feather Sessions

General Discussion

4:45 PM
Closing Remarks

Proposed Birds of a Feather Topics*
AAAI Fellows Symposium
Cambridge, Massachusetts
July 15-16, 2006

The purpose of the "Birds of a Feather" sessions at the AAAI Fellows meeting is to provide an opportunity for subgroups to discuss particular AI challenges and how to achieve them, then report back to the full group on the outcome of their discussion. Our expectation is that most groups will report back on a specific AI goal which they feel is ripe for major progress, describe that goal, and explain why it is ripe and how to pursue it.

How Relevant Is Game Theory to AI?
Organizer: Yoav Shoham.

Can We Design an Architecture for Human-Level Intelligence?
Organizer: Stuart Russell

How Has AI Computational Modeling Contributed to the Study of Other Domains?
Organizer: Kevin Ashley

Can We Design a Never-Ending Learner to Solve The Natural Language Understanding Problem?
Organizer: Tom Mitchell

What Can We Learn from Linguistic Semantics about KR&R?
Organizer: Len Schubert (may merge with the "never-ending learner for NLP' session")

How Must Logic Be Modified for Representing Common Sense?
Organizer: John McCarthy

Do We Need a Common Framework for Investigating Architectures?
Organizer: Aaron Sloman

How Can a Robot Learn the Foundations of Commonsense Knowledge from Its Own Experience with "Blooming, Buzzing Confusion"?
Organizer: Ben Kuipers

New Challenge Problems for Research in Heuristic Search
Organizer: Richard Korf

Research on Integrated Systems for Human-Level Intelligence
Organizer: Pat Langley

Promoting AI
Organizer: Eugene Freuder

Is It Time to Resurrect the Original Shakey Robot Project Using Current Technology?
Organizer: Marty Tenenbaum

** As of July 10, 2006*

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Scientific Reasoning and Artificial Intelligence
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