ICCM Workshop on

**Interactive Task Learning**

**April 8, 2015**

**Organizers:** John Laird (University of Michigan)

Kevin Gluck (U.S. Air Force Research Laboratory)

**Abstract:**

Advances in Artificial Intelligence, Cognitive Science, and Robotics are leading us to future autonomous systems that will have the cognitive and physical capabilities to perform a wide variety of tasks, with applications across science, health care, business, military, home, and entertainment. How will these robotic and agent systems learn the unanticipated and evolving complex tasks we want them to perform? Although many related areas of science and technology will play a role in answering this question, the focus of this workshop is on how cognitive modeling research can inform the quest for achieving *interactive task learning* – agents and robots acquiring new tasks through natural interactions with humans. What capabilities can we identify and model in humans that enable (and are potentially necessary for) interactive task learning, what are the most important relevant successes so far, and what are the most important research challenges that need to be addressed?

**Duration:** Full Day (6 hours of content)

**Speakers:** Michael Beetz (Robotics; University of Bremen)

Ken Forbus (Artificial Intelligence; Northwestern University)

**Structure:** We seek a balance between thought-provoking keynote-style presentations and active participation by workshop attendees in producing answers to the three questions mentioned above in the abstract. Our initial schedule will be:

0900 – Introduction: John Laird & Kevin Gluck

0930 – Invited Presentation: Michael Beetz

1030 – Break

1045 – Discussion Groups (Cognitive Capabilities)

1200 – Brief Group Reports

1230 – Lunch

1400 – Invited Presentation: Ken Forbus

1500 – Break

1515 – Discussion Groups (Successes; Challenges)

1630 – Brief Group Reports

**Workshop Attendance:** Please send an email by April 1, 2015 to the workshop organizers: {laird@umich.edu, kevin.gluck@us.af.mil} if you plan on attending.