



American Association for Artificial Intelligence

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Press Release

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FOR IMMEDIATE RELEASE

Fifteenth Annual AAAI Mobile Robot Competition & Exhibition

Continuing to raise the bar on autonomous robot capabilities

*July 17-20, 2006
Seaport Hotel and World Trade Center
Boston, Massachusetts*

MENLO PARK, CA. – July 12, 2006. The AAAI Mobile Robot Competition has a long history over almost two decades of challenging world-class robotic researchers. Each year, the nature of the events has gotten harder and harder.

For example, in the earliest days, robots were challenged to navigate a hallway and find a room to notify its inhabitant of a meeting. Later, robots had to find and pick up tennis balls. Still later, a course of hallways, rooms, stairs and ramps strewn with rubble simulating a disaster zone such as the bombed Oklahoma City Federal Building, challenged competitors in a Search and Rescue event. Recently, the confines of a designated course have been opened up to the entire conference center as robots have been challenged to register for the conference, give a talk and answer questions from the audience.

Fertile seedbed for upcoming roboticists

The AAAI Mobile Robot Competition has also been a fertile seedbed for roboticists who have gone on to make major contributions to the field. After the conference in 2001, for example, some of the competitors in the Search and Rescue event, including Robin Murphy, Professor at

the University of South Florida, flew to New York to assist the efforts after the 9-11 attack on the World Trade Center.

Sebastian Thrun, Professor at Stanford University and head of the university's AI Lab, recently won the DARPA Grand Challenge and a \$2 million prize. He competed in three AAAI Mobile Robot Competitions in the 1990s, the first in 1992. In 1994 Mobile Robot Competition, he competed with the first European team (University of Bonn), winning 2nd place for the "clean up the office" event. Two years later, with his own team from Carnegie Mellon University, he shared 1st place for the "clean up the tennis court" event.

Thrun says he learned a lot from the seminal AAAI Mobile Robot Competitions in which he competed. "Failures during the 1994 competition," he says, "made me realize we needed a big leap forward in robustness. So I started working on probabilistic algorithms -- on which I just published a book." Thrun says this work on probabilistic algorithms was instrumental in the architecture of Stanley, the winning robot in the DARPA Grand Challenge.

In addition to the annual competition, the Robot Exhibition attracts some of the most innovative and exciting research underway in the field. Last year, for instance, a two-foot high social toy that assists in teaching autistic children was exhibited, and "Phil", a "Robotic Interactive Sculpture" modeled after the late science fiction writer Philip Dick. Looking rather like an animated Madame Tussaud figure, the pot-bellied robot sat in a chair in its flannel checked shirt chatting about its novels and personal habits. It made eye contact, smiled and scowled. This robot would have been eerie in its verisimilitude were it not for the fact that the back of its 'skull' was open and attendees could peer in to the mechanics and electronics in its head.

This year's competition and exhibition

This year, the tradition continues with two competition events -- a scavenger hunt, and a human robot interaction event -- plus the exhibition. The event will bring together over 20 teams from universities, colleges, and research laboratories to compete and demonstrate cutting edge, state-of-the-art research in robotics and AI.

The Scavenger Hunt will challenge the robots to search the conference hotel area for a checklist of given objects that may be distinguished using vision or other sensors. This task will require robots to reason about their spatial surroundings in a natural and dynamic environment.

The Human Robot Interaction event builds on similar past events. This year, teams will design their own tasks within guidelines of seven interaction categories. The first six demonstrate particular aspects of human-robot interaction, while the seventh is an "integration" category requiring demonstration of three of the first six categories (e.g., planning, tracking, message reading, speech recognition and generation, autonomous navigation, etc.).

A sampling of the Robot Exhibition promises an intriguing event. The team from Harvard University, for example, will showcase experimental work based on social insects (such as ants and termites) to collectively build structures, and a six-foot robotic helicopter from Drexel University.

The Mobile Robot Competition and Exhibition is part of the National Conference on Artificial Intelligence (AAAI-06) (<http://aai.org/Conferences/AAAI/aai06.php>) and co-located

Innovative Applications of AI (IAAI-06) conferences
(<http://aaai.org/Conferences/IAAI/iaai06.php>).

About AAAI

Founded in 1979, the American Association for Artificial Intelligence (www.aaai.org) is a nonprofit scientific membership society devoted to advancing the science and practice of AI. Its mission is to: (1) advance the scientific understanding of the mechanisms underlying intelligent thought and behavior, (2) facilitate their embodiment in machines, (3) serve as an information resource for research planners and the general public concerning trends in AI, and (4) offer training for the current and coming generations of AI researchers and practitioners. The Association has sponsored an annual conference, regarded as the premier gathering in the field, since 1980.