Registration

2012 AAAI Spring Symposium Series

March 26–28, 2012
Stanford University, Stanford, California

Sponsored by the Association for the Advancement of Artificial Intelligence
In cooperation with Stanford University

sss12@aaai.org
www.aaai.org/Symposia/Spring/sss12@aaai.org
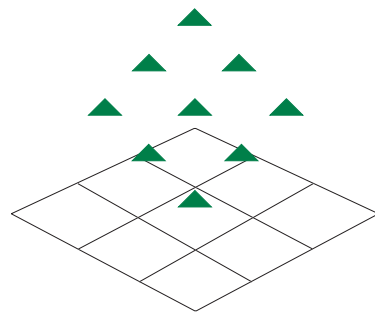www.aaai.org/Symposia/Spring/sss12.php

- AI, The Fundamental Social Aggregation Challenge, and the Autonomy of Hybrid Agent Groups
- Designing Intelligent Robots: Reintegrating AI
- Game Theory for Security, Sustainability and Health
- Intelligent Web Services Meet Social Computing
- Self-Tracking and Collective Intelligence for Personal Wellness
- Wisdom of the Crowd

Each symposium will have limited attendance. Participants will be expected to attend a single symposium throughout the symposium series. In addition to participants selected by the program committee of the symposia, a limited number of other interested parties will be allowed to register in each symposium on a first-come, first-served basis. To register, please fill out the registration form, and send it to the AAAI Spring Symposium Series along with payment:

2012 AAAI Spring Symposium Series
2275 East Bayshore Road, Suite 160
Palo Alto, California 94303 USA
Voice: 650-328-3123
Fax: 650-321-4457
sss12@aaai.org*
www.aaai.org/Symposia/Spring/sss12.php

*Credit card orders only, please note that there are security issues involved with the transmittal of credit card information over the Internet. AAAI will not be held liable for any misuse of your credit card information during its transmittal to AAAI.

Online registration is also available at www.aaai.org/Symposia/Spring/sss12.php, along with this document.

Location

Registration will be held beginning on Monday, March 26th at Stanford University on the lower level of the Cummings Art Building in the foyer of Annenberg Auditorium. Registration will *not* be open on Sunday, March 25.

The Association for the Advancement of Artificial Intelligence, in cooperation with Stanford University's Department of Computer Science, is pleased to present the 2012 Spring Symposium Series, to be held Monday through Wednesday, March 26–28, 2012 at Stanford University. The Symposium Series will be preceded on March 25 by a community-wide John McCarthy Memorial Celebration at Stanford University. The titles of the six symposia are as follows:

On March 25 at 4:00 PM, the AI and Computer Science Community will gather at Stanford University for a series of short talks celebrating John McCarthy's life, accomplishments, and contributions to the field of artificial intelligence and computer science. The seminar will be followed by a reception, which will include light hors d'ouevres.

AAAI Members and Spring Symposium registrants who wish to attend should indicate their interest by checking the appropriate box on the SSS-12 registration form. (Note that organizers will be using your indication of interest in planning for the reception so please only check the box if you plan to attend.)

Details about the location and parking will be made available closer to the event. All are welcome. This event is cosponsored by the Stanford University Computer Science Department and AAAI.

For More Information

For updates and additional information, please see the AAAI 2012 Spring Symposium Series website.

Special Event: John McCarthy Memorial Celebration

AI, the Fundamental Social Aggregation Challenge, and the Autonomy of Hybrid Agent Groups

The control of autonomous humans, machines and robots working together as hybrid agent groups is an important problem for AI. Today, the war in Afghanistan has hundreds of mobile robots aloft, on land, or under the sea. But these agents are socially passive.

Current paradigms require a team of human operators for each mobile platform, with no social aggregation among nonhuman agents, precluding the formation of autonomous hybrid teams. A "social fabric" would be able to leverage heterogeneous sensing to enhance situational awareness, improving the capabilities of hybrid teams during decision-making. The literature (for example, *Nature*, 2011; NSF's visions for the future of social-behavioral-economic sciences) underscores the fundamental challenge of aggregation for social science. How does a collection of individuals become an autonomous group, team, or organization?

Unlike objects in physical reality, each human agent sees events and actions in social reality while embedded in different locations and under the influence of others; agents differentially collect, process, send, receive, channel and block information while they influence each other.

Uncertainty is a consideration, with two probable causes. One is based on measurement, the other on degrees of freedom (complexity). The problem of aggregation addresses the former. It reflects the physical influences of interdependence (bistability and multistability; for example, two or more sides exist to every story).

Hybrid agent teams must report on situations. Reports by humans are often reduced to ordinal data, the foundation of modern economic theory that Barzalai and colleagues believe is an error. Common examples of nonordinal interdependent effects are economic panic, real-estate bubbles, hostile mergers, and political gridlock.

Game theory initiated the mathematical study of interdependence among multiple agents. Yet, aggregating individual data into group (team) data remains unsolved. We must be able to prove mathematically that a group is different from the individuals who comprise it.

Solving the challenge of interdependence is essential for the effective and efficient engineering of autonomous multiagent teams. Once solved, hybrid teams could multitask to solve problems with firefighting, police work, reactor meltdowns, future wars, or while stationed on Mars and more. A hybrid leader would be able to efficiently control multiple autonomous robots, machines and humans as they solve problems together even under life and death situations.

Organizers

W. F. Lawless (Paine College, wlawless@paine.edu); Don Sofge (Naval Research Laboratory, Navy Center for Applied Research in Artificial Intelligence, don.sofge@nrl.navy.mil); Mark Klein (MIT Center for Collective Intelligence, m_klein@mit.edu); Laurent Chaudron (ONERA Provence Research Center, French Air Force Academy, laurent.chaudron@polytechnique.org).

For More Information

For more information, contact the organizers at the e-mails listed previously.

Designing Intelligent Robots: Reintegrating AI

The goal of building intelligent robots has been a motivating problem for generations of AI researchers, going back at least as far as Shakey the robot in 1966. Creating such a robot is both the fully realized expression of the original impulse behind AI and an immensely rich source of research questions that address real-world problems.

However, AI is a fragmented field: well-developed and largely independent research communities exist for learning, planning, reasoning, language, perception and control. Since the challenges posted by each of these subfields are immense, most researchers have found it necessary to devote their careers to specializing in a single subfield. While immense progress has been made in each of these subfields in the last few decades, it remains unclear how they can be integrated to produce an intelligent robot. Unifying these disparate technologies will open up new avenues of research and create new application opportunities. Therefore, we believe that integration should be considered a valid research endeavor in its own right.

This symposium aims to bring together a diverse and multidisciplinary group of researchers interested in the specific objective of designing intelligent robots. The goal of the symposium is to provide common ground for their diverse interests and thereby actively encourage the integration of various AI techniques. We also hope to foster an active discussion about setting a realistic and feasible medium-term objective for integrative research so that progress can be made. The symposium will include invited talks as well as a poster session with ample time for discussion.

Organizing Committee

George Konidaris (Massachusetts Institute of Technoloty), Byron Boots (Carnegie Mellon University), Stephen Hart (GM), Todd Hester (University of Texas, Austin), Sarah Osentoski (Bosch Research and Technology Center), David Wingate (Massachusetts Institute of Technology).

For More Information

For more information, see people.csail.mit. edu/gdk/dir/.

Game Theory for Security, Sustainability and Health

There is a large and growing interest in applying game theory to security, sustainability, and health; which are grand challenges for engineering in the 21st century. In fact, the last five years have seen game theory based systems developed and applied to real-world domains. For example, software assistants have been developed for randomized patrol planning for the Los Angeles International Airport police, the Federal Air Marshal Service and the United States Transportation Security Administration. Also game theory has been utilized for decentralized control, operation and management of future generation electricity.

While there has been significant progress, there still exist many major challenges facing the design of effective approaches to deal with the difficulties in security, sustainability, and health. Addressing these challenges requires collaboration from different communities including artificial intelligence, game theory, operations research, social science, and psychology. This symposium is structured to encourage a lively exchange of ideas between members from these communities. Topics of interest that may be discussed include but are not limited to game theory foundations; algorithms for scaling to very large games; human factors and intelligent user interfaces; agent/human interaction for preference elicitation and optimization; risk analysis; decision making under uncertainty; multiagent simulation; software development; modeling and evaluation; and distributed control in energy systems.

This symposium will feature presentations for all accepted papers. There will be invited talks and a panel discussion by experts from a variety of relevant fields.

Organizing Committee

Bo An (University of Southern California, boa@usc.edu), Vincent Conitzer (Duke University, conitzer@cs.duke.edu), Manish Jain (University of Southern California, manishja@usc.edu), Sarit Kraus (Bar-Ilan University, sarit@cs.biu.ac.il), Kevin Leyton-Brown (University of British Columbia, Vancouver, kevinlb@cs.ubc.ca) Sarvapali Ramchurn (University of Southampton, sdr@ecs.soton.ac.uk), Milind Tambe (University of Southern California, tambe@usc.edu)

For More Information

For more information, see teamcore.usc.edu/GT-Symposium.htm

Development of web services faces significant challenges concerning quality of design, development costs, endorsement of services by the community, integration and interoperability of services from different domains and effective sharing of services among users and developers. This spring symposium will bring together two lines of research whose combination can help in dealing with these issues, namely intelligent web services and social computing research. Social computing is a promising approach that can help to understand user and community behaviour and related computational challenges around web services development.

The topics of the symposium include the following:

- Social and technical requirements for collaborative web service development
- Platforms and user interfaces for crowdsourcing web service development, and verification
- Techniques for contextualized reviewing and rating of web services
- Methods to incentivize, boost, and influence community participation throughout the lifecycle of web services
- Methods to define and mashup service descriptions with Linked Data vocabularies

- Systems and techniques for context- and social-based recommendation of web services
- Methods for collaborative authoring of semantic annotations (for example RDFa, SAWSDL)
- Argumentation frameworks and norms for reaching consensus on service implementation, description, and integration
- Trust in collaborative web service construction
- Mining, monitoring and analysis of behaviour and activities of web service online communities (such as ProgrammableWeb, and Seekda)
- Analysis of web service usage patterns and associated social and technical parameters
- Extraction of web service descriptions from tags
- Case studies for use of social computing to construct and manage web services

The symposium will include technical presentations, demonstrations, invited speakers, panel and open discussions. Invited speakers include John Musser (ProgrammableWeb), Jamie Taylor (Google), and Fausto Giunchiglia (University of Trento, Italy).

Symposium Chairs

Tomas Vitvar (Czech Technical University), Harith Alani (Knowledge Media Institute, Open University, UK), David Martin (Apple)

For More Information

For more information, see vitvar.com/events/aaai-ss12.

Intelligent Web Services Meet Social Computing

Self-Tracking and Collective Intelligence for Personal Wellness

How can we quantify our health? How can our health data be integrated into personalized medicine, improved wellness, and contributions to scientific discovery? These are the significant questions to improve our daily life. To tackle this issue, our symposium aims to explore the answers to the above questions by integrating two approaches, individual and collective viewpoints, in improving personal wellness. The approach from the individual viewpoint focuses on recently developed self-tracking technologies for monitoring personal health conditions such as sleep, diet, exercise, and vital signs data, and for analyzing personal medical data and personal genome data. The approach from the collective viewpoint focuses on collective intelligence as a potential resource for finding useful knowledge for personal wellness from the knowledge of other individuals and groups. The role of artificial intelligence and other technologies is examined in helping to create value in our future personal wellness. This symposium will bring together an interdisciplinary group of researchers to discuss possible solutions for personal wellness.

Topics

Topics of interest at the symposium include the following:

- Self-tracking for personal wellness (Sleep monitoring, diet monitoring, vital data monitoring, personal medicine, personal genome, new types of self-tracking devices, portable mobile tools)
- Collective intelligence for personal wellness (Data mining for scientific discovery on collective data, biomedical informatics and systems biology, data visualization)
- Field study for personal wellness (life log analyses such as vital data analyses, lifestyle related disease improvement experiment such as metabolic syndrome or diabetes, sleep improvement experiment)
- Application for personal wellness (life log applications, wellness service application, medical recommendation system, care support system for aged persons, web service for personal wellness, games for health and happiness)
- Community platform for personal wellness (Citizen science platform, do it yourself (DIY) trials, quantified self business model)

Invited Speakers

Invited speakers at the symposium will include Atul J. Butte (Stanford University), Yukiko Shiki (University of Kansai), Rollin McCray (HeartMath Research Center), Sudheendra Hangal (Stanford University), and Emiliana Simon-Thomas (Stanford University).

Symposium Chairs

Takashi Kido, cochair (Riken Genesis Company Ltd. (Japan); kido.takashi@gmail.com) and Keiki Takadama (The University of Electro-Communications (Japan); keiki@inf.uec.ac.jp)

For More Information

For more information, see mednlp.jp/AAAI 2012.

Crowdsourcing provides a convenient and increasingly popular method for gathering large amounts of data and annotations. Amazon's Mechanical Turk and CrowdFlower, games such as the ESP Game, and requests for free annotation help such as LabelMe are just a few examples of crowdsourcing efforts. These attempts have taught us many lessons and brought up yet more questions. How can we most effectively elicit the information we need from a distant and potentially anonymous workforce? What kind of workforce is required for different tasks such as user studies and data set labeling? How can we train and evaluate workers?

This symposium brings together researchers from robotics, user interfaces, games, computer vision, and other disciplines exploring the core scientific research challenges of crowdsourcing. The symposium will facilitate interaction among researchers and work toward formulating a set of guidelines for future crowdsourcing endeavors.

Topics of interest include, but are not limited to the following:

Applications for crowdsourcing: data set annotation, user studies, search relevance, content authoring, and integration of crowdsourcing and AI

Reward strategies: no direct compensation (the LabelMe data set), low (Mechanical Turk) or high per-task compensation, and making the task fun, such as by using games (the ESP Game).

Methods for selecting an appropriate workforce: recruiting experts, creating experts and trusted workers, learning worker expertise, changing compensation models, and requiring workers to pass tests.

Methods for efficiently evaluating results: no evaluation, evaluating each task by hand, allowing workers to evaluate each other, and automated evaluation.

The symposium will combine a variety of activities to facilitate interaction among participants from different communities and discussion of key challenges, including invited talks, individual technical presentations by researchers to serve as case studies, open panel discussions and brainstorming around different applications and modalities, and working groups to create basic guidelines and evaluation strategies, providing a common starting point for future development and evaluation.

Invited Speakers

Invited speakers include Ed Chi (Google Inc.) and Rob Miller (Massachusetts Institute of Technology).

Chairs

Caroline Pantofaru (Willow Garage), Sonia Chernova (Worcester Polytechnic Institute), Alexander Sorokin (CrowdFlower).

For More Information

For more information, see users.wpi.edu/~soniac/WisdomOfTheCrowd.

Wisdom of the Crowd

Registration and Accommodations

ALL ATTENDEES MUST PREREGISTER. All accepted authors, symposium participants, and other invited attendees must register by February 10, 2012. After that period, registration will be opened up to the general membership of AAAI and other interested parties. All registrations must be postmarked by March 2, 2012.

Your registration fee covers your attendance at one symposium, a copy of the CD proceedings, coffee breaks, and the opening reception.

Checks (drawn on US bank) or international money orders should be made out to AAAI. If you are paying by check, please fill out the attached registration form and mail it with your fee to:

AAAI 2012 Spring Symposium Series
2275 East Bayshore Road, Suite 160
Palo Alto, CA 94303 USA

VISA, MasterCard and American Express are also accepted. If you are paying by credit card, you can email the form to sss12@aaai.org or fax it to 650-321-4457. An online registration form is also available at www.aaai.org/Symposia/Spring/sss12.php.

Please note: All refund requests must be in writing and postmarked by March 9, 2012. No refunds will be granted after this date. A $75.00 processing fee will be levied on all refunds granted.

When you arrive at Stanford, please pick up your complete registration packet at the Spring Symposium Series 2012 registration desk, which will be located on the lower level of the Cummings Art Building in the foyer of Annenberg Auditorium.

Registration Hours

Registration hours will be:

- Monday, March 26
  8:00 AM - 5:00 PM

- Tuesday, March 27
  8:30 AM - 5:00 PM

- Wednesday, March 28
  8:30 AM - 12:00 PM

Please call AAAI at 650-328-3123 or email sss12@aaai.org for further information.

Accommodations

For your convenience, AAAI has reserved a small block of rooms at the hotels listed below. Symposium attendees must contact the hotels directly. Please identify yourself as an AAAI Spring Symposium Series attendee to qualify for the reduced rates. Attendees are encouraged to reserve early because of limited hotel rooms due to other events in the Palo Alto area at the same time.

The Cardinal Hotel
235 Hamilton Avenue
Palo Alto, CA 94301
Phone: 650-323-5101
URL: www.cardinalhotel.com
Reservations URL: book.cardinalhotel.com/aaai12
Rates: $135 (Standard room with private bath)/$75 (European style room)
Reserve before: March 1, 2012

Creekside Inn
3400 El Camino Real
Palo Alto, CA 94306
Phone: 650-493-2411 or 1-800-492-7335
Fax: 650-493-6787
URL: www.creekside-inn.com
Reservations URL: gc.synxis.com/rez.aspx?Hotel=17137&Chain=6158&arrive=3/25/2012&depart=3/28/2012&adult=1&child=0&group=AAAI - 2012
Rates: $149 (Single/Double)
Reserve before: March 5, 2012

Stanford Terrace Inn
531 Stanford Ave
Palo Alto, CA 94306
Phone: 650-857-0333 or 1-800-729-0332
Email: reservations@stanfordterraceinn.com
URL: www.stanfordterraceinn.com
Please refer to Group number: 4463
Rates: $179 (Single Queen) / $199 (Double King) / $189 (Double Queen-Queen)
Reserve before: February 24, 2012

Other Hotels

Available only on a first-come, first served basis; all prices are subject to changes without notice. Please also refer to www.stanford.edu/dept/hds/chs/general/hotel.html for other options.

Hotel California

2431 Ash Street
Palo Alto, CA 94306
Phone: 650-322-7666
Fax: 650-321-7358
URL: www.hotelcalifornia.com/
Marguerite shuttle stops in front
Rates: $89 - $115 exclusive of 12% tax

Comfort Inn

3945 El Camino Real
Palo Alto, CA 94306
Phone: 650-493-3141 or 800-556-1278
Fax: 650-493-6313
URL: www.paloaltoci.com/
Rates: $95 – $105 exclusive of 12% tax

Ground Transportation

This information is the best available at time of publication. Fares and routes change frequently. Please check by telephoning the appropriate numbers below for the most up-to-date information.

South and East Bay Shuttle

Van service from San Francisco Airport (SFO) to Palo Alto is $22 for one-person, shared van, one way, and from San Jose Airport (SJC) to Palo Alto is $31 for one-person, shared van, one way. For reservations call 408-559-9477 or 1-800-548-4664. (www.southandeastbay airportshuttle.com/)

SuperShuttle

24 hour van service to and from San Francisco to Palo Alto. The shared ride fare from San Francisco Airport to Palo Alto is $26 per person one-way plus $15 per additional passenger. Cash or major credit cards only. For reservations write to reservations@supershuttle.net or call (800) BLUE-VAN (800-258-3826). (www.supershuttle.com)

Stanford Marguerite Shuttle

The Stanford University Marguerite Shuttle Bus provides service from several points along El Camino Real, the CalTrain station, and other surrounding locations to the Stanford Oval as well as transportation around the Stanford Campus. For route and schedule information, see transportation.stanford.edu/marguerite.

CalTrain

CalTrain runs between San Francisco and San Jose, with stops in Palo Alto starting at 5:00 AM with the last train leaving San Francisco at 11:59 PM (weekdays). For up-to-date fare information and timetables, please visit www.caltrain.org or call 1-800-500-4636.

Parking

Special symposium parking will be available at the Galvez Lot on the Stanford campus, March 26-28, at a cost of $15.00 for all three days. Please indicate on the symposium registration form if you would like a parking permit. The permit will be mailed to you with your registration receipt, along with a map and directions to the assigned parking area. Please note that parking permits are valid only in the designated area.

Note: If you park in the SSS-12 designated parking lot, you will need to take the campus shuttle (Marguerite) to the Spring Symposium registration area and sessions. Please allow an extra thirty minutes travel time in your schedule for the shuttle.

Disclaimer

Disclaimer

In offering Stanford University, the Cardinal Hotel, the Creekside Inn, and the Stanford Terrace Inn (hereinafter referred to as "Suppliers") and all other service providers for the AAAI Spring Symposium Series, the Association for the Advancement of Artificial Intelligence acts only in the capacity of agent for the Suppliers, which are the providers of hotel rooms and transportation. Because the Association for the Advancement of Artificial Intelligence has no control over the personnel, equipment or operations of providers of accommodations or other services included as part of the Symposium program, AAAI assumes no responsibility for and will not be liable for any personal delay, inconveniences or other damage suffered by symposium participants which may arise by reason of (1) any wrongful or negligent acts or omissions on the part of any Supplier or its employees, (2) any defect in or failure of any vehicle, equipment or instrumentality owned, operated or otherwise used by any Supplier, or (3) any wrongful or negligent acts or omissions on the part of any other party not under the control, direct or otherwise, of AAAI.

AAAI 2012 Spring Symposium Series Registration Form

ALL ATTENDEES MUST PREREGISTER. Please complete in full and return to AAAI, postmarked by February 10, 2012 (invited attendees) or by March 2, 2012 (general registration). The fee includes attendance at one symposium, a copy of the symposium notes, and the reception.

Please print or type.

First Name: _____ Last Name: _____

Company or Affiliation: _____

Address: _____

City: _____ State: _____

Zip or Postal Code: _____ Country: _____

Telephone: _____ E-mail: _____

Symposium *(Please check only one)*

☐ *Yes,* I will attend the John McCarthy Memorial Celebration
☐ *No,* I will not attend the John McCarthy Memorial Celebration
☐ SS-01: AI, The Fundamental Social Aggregation Challenge, and the Autonomy of Hybrid Agent Groups
☐ SS-02: Designing Intelligent Robots: Reintegrating AI
☐ SS-03: Game Theory for Security, Sustainability and Health
☐ SS-04: Intelligent Web Services Meet Social Computing
☐ SS-05: Self-Tracking and Collective Intelligence for Personal Wellness
☐ SS-06: Wisdom of the Crowd

FEE *(Students must send legible proof of full-time student status.)*

☐ Member:	$310.00	☐ Nonmember:	$495.00
☐ Student Member:	$150.00	☐ Nonmember student:	$245.00

AAAI Platinum Registration (Includes one, three, or five-year AAAI membership or renewal)

☐ Regular (one year)	$450.00	☐ Regular (five year)	$1010.00
☐ Regular (three year)	$730.00	☐ Student (one year only)	$220.00
☐ Temporary Stanford University parking permit, March 26-28:			$15.00

TOTAL FEE

Total Fee: (Please enter correct amount) $_____

> *The card verification number on Visa and Mastercard is a 3-digit number printed on the back of your card. It appears after and to the right of your card number. On American Express cards, the verification number is a 4-digit number printed on the front of your card. It appears after and to the right of your card number.*

Method of Payment

All e-mail and fax registrations must be accompanied by credit card information. Checks (drawn on a US bank) should be made payable to AAAI. **Prepayment is required. No purchase orders will be accepted.** *(Please circle one)*

AMERICAN EXPRESS   MASTERCARD   VISA   CHECK

Credit card number_____Verification No.* _____ Expiration _____

Name *(as it appears on card)* _____ Signature _____

Credit Card Billing Address _____ Business Name _____

Please mail or fax completed form with your payment to AAAI, SSS-12 2275 East Bayshore Road, Suite 160, Palo Alto, California 94303, USA, 1-650-321-4457 (fax) *Please Note:* Requests for refunds must be received **in writing** by March 9, 2012. No refunds will be granted after this date. A $75.00 processing fee will be levied on all refunds granted.

Thank you for your registration!