# Welcome to IJCAI 2015!

We are delighted to welcome you to the Twenty-Fourth International Joint Conference on AI (IJCAI-15).

The two years since IJCAI-13 in Beijing have been a tremendously exciting time for AI. Scarcely a week has passed without news items about new advances in AI research, or exciting new applications for AI research, in areas ranging from autonomous vehicles to social media. Researchers across the globe report huge interest in AI, particularly in areas like machine learning. But of course, this excitement has been tempered by concern from well-known scientists about the potential dangers posed by AI. We look forward to discussing all these issues with you throughout IJCAI-15.

The current intense interest in AI was reflected in an extraordinary number of submissions to the conference. The technical program of the conference broke IJCAI's previous record, attracting 1,996 submissions in total. After rigorous reviewing, some 571 papers (28.6 percent) were accepted for presentation at the conference. All accepted papers are included as full-length papers in the proceedings and are invited to present as posters. Authors of all papers are invited to give oral presentations, where a distinction is made between long talks and short talks based on the papers' quality, clarity, and potential relevance to a wider audience.

Besides the main technical track, we also introduced a number of special area tracks to allow the program committee to pay particular attention in identifying highly innovative papers in these areas. These are the Machine Learning Track, Knowledge Representation Track and Computational Sustainability Track. Track chairs were encouraged to be innovative in designing their programs. A new-problem paper type is introduced in the Machine Learning Track, for example, to allow researchers who report on novel AI and Machine Learning 'problems' to have a voice. Special 'integrated solution' sessions were also reserved for papers that address problems in machine learning while being integrated with other techniques in AI.

Of course, IJCAI would not be IJCAI without an extensive workshop and tutorial program, and we are delighted to have more than 40 workshops, on topics as diverse as AI in Space to Algorithmic Game Theory, and nearly 30 tutorials, from internationally renowned researchers. The topic of "AI and the Arts" was designated as a special theme for IJCAI-15. As such, the conference includes a special track on this theme, with technical papers reviewed in the same was papers for the main tracks, as well as an exhibition/project demonstrations, and of course some AI and the Arts related activities throughout the week, which we hope will entertain and intrigue you. A key component of these activities is an exciting exhibition showing ongoing interactions between AI and the Arts. The exhibition will be held in the Centro Cultural Borges (close to the main conference site) from Saturday 25 July until 30 July 2015. The vernissage (with live performances) is on Sunday 26 July at 7 pm and the finissage on 30 July at 7 pm.

IJCAI-15 is the first time that the IJCAI conference has been held in South America, and we firmly believe Buenos Aires will be a fantastic venue. The city has enormous opportunities for sightseeing and other leisure activities. Take the time while you are here to enjoy a glass of justly famous Argentinian malbec wine, and to check out some of the endless shows and varied nightlife that the city has to offer. In terms of gastronomy, steak lovers are of course in for a treat, but whatever your taste, Buenos Aires will surely be able to accommodate it.

We trust you will also enjoy the social events planned for the main conference. We look forward to seeing you at the opening reception, in the Salón de Actos in the School of Law, which will be followed by a reception and unique performance by a Marching Band. The band will play tunes inspired by Latin rhythms and specifically written for the occasion – the lyrics are about the daily struggles of AI researchers. The conference banquet will be held at Señor Tango, and will include a range of typical Argentine dishes and an exclusive selection of wines, followed by a 90 minute tango show, by some of Argentina's leading exponents of the art. Tango reflects the heart and soul of Argentina, and we can think of no more fitting and enjoyable way to celebrate what we are sure will be a truly memorable IJCAI.

Guillermo Simari (Local Arrangements Chair) Ricardo Oscar Rodriguez (Local Arrangements Chair) Michael Wooldridge (Conference Chair) Qiang Yang (Program Chair)

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# IJCAI 2015 opening and reception

School of Law, Monday, July 27, 2015. 19:00-22:00 (Open from 18:30hs. on; opening ceremony starts at 19:00h) Address: Av. Figueroa Alcorta 2263 (http://www.uba.ar/ recorridos/derecho/derecho\_fachada.html) *Free for IJCAI-15 attendees* 

The IJCAI-15 Opening Ceremony will begin at 19:00 hours on Salón de Actos in the School of Law and will be followed by a reception and unique performance by a Marching Band. Michael Wooldridge, IJCAI-15 Conference Chair, will chair the Opening Ceremony. During the ceremony, the following awards will be given: IJCAI-15 Donald E. Walker Distinguished Service Award, the IJCAI-15 Research Excellence Award, and the IJCAI/ JAIR award. In addition, the following awards will be announced: the IJCAI-15 Computers and Thought Award, and the IJCAI-15 John McCarthy Award.

The first part of the ceremony will be brought to a close with a performance-based on AI music. Next, the Opening Ceremony will be turned into a Fiesta thanks to an appearance of the IJCAI-2015 Praise Marching Band. The band will play tunes inspired by Latin rhythms and specifically written for the occasion. The lyrics are about the daily struggles of AI researchers. Attendees will enjoy a lunch and taste typical Argentine wines.

The conference badge gives access to the Opening Ceremony. **DON'T FORGET YOUR BADGE!** 

We will provide transportation from the Sheraton and W&T Venue. This shuttle bus service will start operating between 18:00 and 18:45. Attendees will return to the Sheraton by themselves.

### IJCAI 2015 conference banquet

It will take place on Wednesday, July 29, 2015 at 20:30, at Señor Tango.

Free for IJCAI-15 attendees

We will provide return transportation to the venue shuttle buses from the Sheraton will start operating at 19:30.

Dinner will include typical Argentine dishes and an exclusive selection of wines.

After dessert, you will enjoy a one and a half hour tango show with a live orchestra, dancing, and professional singers. You will be witness to the evolution of the "Tango" through history (milonga, arrabalero and modern tango) with beautiful scenery and an incredible atmosphere. The show entertains all five senses: it is a lavish display of light, colour, and sound with state-of-the-art technology to enhance the most dazzling show in the history of tango. It was created, directed and produced by Fernando Soler; it boasts over forty artists on stage, and throughout the two-hour show, it goes from traditional tango - played by the orchestra of Maestro Ernesto Franco, who was Juan Darienzo's first bandoneon for 24 years, during the golden years - to the most contemporary Tango of the late Maestro Astor Piazzolla, played by the "Juventango" orchestra. The show includes performer twins Marcela and Fernanda Pereyra; and Sangre Andina, musical amusement in the hands of Coquena Lamas and his group, and has nine dancing couples who create individual and group choreographies, boasting impressive skills and impersonating renowned personalities tangoing to the appropriate music in their typical attire. Among them, "Escondite", a rendering of "Apache" tango, a European flamenco-inspired ballroom tango; and "Roxanne", the very first choreography to connect Tango with Hollywood, created and musicalized by Mariano Mores combining lyrics by Sting. The show ends with the performance of "Don't cry for Me Argentina", a second-nature anthem for our country. All artists on stage participate and their roles bear witness to our true national identity, and our deep love for the light blue-and-white national colors.

Dinner and Tango Show are included in the registration fee. You will need your banquet ticket to board the bus. Please don't forget your banquet ticket!

## **Student only reception**

IJCAI-15 will hold a Student Reception on Thursday, July 30, 20:00-24:00 in TAZZ SOHO (Armenia 1744), an Excellent Entertainment Bar located a few meters away from the famous Plaza Armenia in Palermo Soho. This 3-level restaurant offers a variety of options to have fun. From comfortable sofas, private meeting rooms and 8 pool tables to a great dance-floor on the roof with the best music! Although all its bars are top quality, the best one is on the ground floor. It offers special menus for birthdays, meetings or events, ranging from pizza, Mexican food to more sophisticated and expensive cuisine.

We hope the reception may be an ideal venue for student to network with fellows students from all around the world, exchange experience, learn about research opportunities and enjoy a great moment strengthen the social links of their generation.

You will need your Student Reception ticket to enter to Tazz. Please don't forget your Student Reception ticket!

## **Exhibition**

The Exhibits will be located in the San Telmo Room at 1st floor of Sheraton Convention Center.

Exhibit hours: Wednesday, July 29: 10:00 - 17:00 Thursday, July 30: 10:00 - 17:00 Friday, July 31: 10:00 - 15:00

The IJCAI 2015 Exhibits Programme will provide companies and academic institutions an excellent way to reach the leading scientists and practitioners in artificial intelligence. Whether you want to showcase your intelligent technology services to the AI community, to make visible your position in the field, or provide conference participants with examples of the current uses, needs and opportunities for Artificial Intelligence, IJCAI-15 is the premier venue to accomplish these goals. The exhibition area will be co- located at coffee break area. Exhibitors with available booths are: Alibaba, Adobe, Baidu, bigML, Co-Invent, Essence, Facebook, Huawei, IBM, Insight, Medallia, Microsoft, Praise, Tencent, Yahoo, Elsevier, Springer, and IJCAI-17.

### **ARTE@IJCAI Exhibition**

Centro Cultural Borges Viamonte 525 Mon– Sat 10 a 21hs Sun 12 a 21hs.

The theme of IJCAI 2015 is AI and the Arts, and this is realized through an invited talk, a music performance based on AI at the opening, a special track of accepted papers and demos, and an exhibition at the Borges Cultural Centre, one of the most renowned art centers of Buenos Aires. The exhibition is intended to show to the people of Buenos Aires as well as conference attendees the exciting interactions that have been taking place between AI and the Arts.

The artists contributing to this exhibition are: 1. Jon Mccormack (Australia):

- The Unknowable
- 2. Patrick Tresset (France): 5 robots named Paul
- 3. Karl Sims (USA): Dual bodies
- 4. Olafur Eliasson (Germany): Look into the box
- 5. Annemarie Maes (Belgium): The scaffolded sound beehive

- 6. Alexander Berman and Valencia James (Sweden): *Kinetic dialogues*
- 7. Leo Nuñez (Argentina): Game of life

The exhibition will be held in the Centro Cultural Borges (close to the main conference site) from Saturday 25 July until 30 July 2015. The vernissage (with live performances) is on Sunday 26 July at 7 pm and the finissage on 30 July at 7 pm.

## IJCAI 2015 Awards

The IJCAI Organization is proud to announce the IJCAI-15 Awards!

The IJCAI-15 Award for Research Excellence, the IJCAI John McCarthy Award, and the Computers and Thought Award are awarded by the IJCAI Board of Trustees, upon recommendation by the IJCAI-15 Awards Selection Committee, which consists of:

■ Tom Dietterich, Oregon State University (USA)

Craig Knoblock, University of Southern California, ISI (USA) (Chair)

Hector Levesque, University of Toronto (CANADA)

Peter Stone, University of Texas at Austin (USA), and
 Sebastian Thrun, Udacity, Google and Stanford Uni-

The IJCAI Awards Selection Committee receives advice from members of the IJCAI-15 Awards Review Committee, who comment on the accuracy of the nomination material and provide additional information about the nominees. The IJCAI-15 Awards Review Committee is the union of the former Conference Chairs of IJCAI, the IJCAI-15 Advisory Committee, the Program Chairs of the last three IJCAI conferences, and the past recipients of the IJCAI Award for Research Excellence and the IJCAI Distinguished Service Award, with nominees excluded.

### IJCAI-15 AWARD FOR RESEARCH EXCELLENCE



versity (USA).

The Research Excellence award is given to a scientist who has carried out a program of research of consistently high quality throughout an entire career yielding several substantial results. Past recipients of this honor are the most illustrious group of

scientists from the field of Artificial Intelligence. They are: John McCarthy (1985), Allen Newell (1989), Marvin Minsky (1991), Raymond Reiter (1993), Herbert Simon (1995), Aravind Joshi (1997), Judea Pearl (1999), Donald Michie (2001), Nils Nilsson (2003), Geoffrey E. Hinton (2005), Alan Bundy (2007), Victor Lesser (2009, Robert Anthony Kowalski (2011), and Hector Levesque (2013).

The winner of the 2015 Award for Research Excellence is **Barbara Grosz**, Higgins Professor of Natural Sciences at the School of Engineering and Natural Sciences, Harvard University. Professor Grosz is recognized for her pioneering research in Natural Language Processing and in theories and applications of Multiagent Collaboration.

### IJCAI-15 COMPUTERS AND THOUGHT AWARD



The Computers and Thought Award is presented at IJCAI conferences to outstanding young scientists in artificial intelligence. The award was established with royal-

ties received from the book, Computers and Thought, edited by Edward Feigenbaum and Julian Feldman. It is currently supported by income from IJCAI funds. Past recipients of this honor have been: Terry Winograd (1971), Patrick Winston (1973), Chuck Rieger (1975), Douglas Lenat (1977), David Marr (1979), Gerald Sussman (1981), Tom Mitchell (1983), Hector Levesque (1985), Johan de Kleer (1987), Henry Kautz (1989), Rodney Brooks (1991), Martha Pollack (1991), Hiroaki Kitano (1993), Sarit Kraus (1995), Stuart Russell (1995), Leslie Kaelbling (1997), Nicholas Jennings (1999), Daphne Koller (2001), Tuomas Sandholm (2003), Peter Stone (2007), Carlos Guestrin (2009), Andrew Ng (2009),Vincent Conitzer (2011), Malte Helmert (2011), and Kristen Grauman (2013).

The winner of the 2015 IJCAI Computers and Thought Award is **Ariel Procaccia**, Assistant Professor at the Computer Science Department, Carnegie Mellon University. Professor Procaccia is recognized for his contributions to the fields of computational social choice and computational economics, and for efforts to make advanced fair division techniques more widely accessible.

### IJCAI-15 JOHN MCCARTHY AWARD



The Trustees of the International Joint Conferences on Artificial Intelligence (IJCAI) are pleased to announce the John McCarthy research award. This award is intended to recognize established mid-ca-

reer researchers that have built up a major track record of research excellence in artificial intelligence. Recipients of the award will have made significant contributions to the research agenda in their area and will have a first-rate profile of influential research results.

The award is named for John McCarthy (1927-2011), who is widely recognized as one of the founders of the field of artificial intelligence. As well as giving the discipline its name, McCarthy made fundamental contributions of lasting importance to computer science in general and artificial intelligence in particular, including time-sharing operating systems, the LISP programming languages, knowledge representation, common-sense reasoning, and the logicist paradigm in artificial intelligence.

The award was established with the full support and encouragement of the McCarthy family.

The winner of the 2015 inaugural John McCarthy Award is **Bart Selman**, Professor at the Department of Computer Science, Cornell University. Professor Selman is recognized for expanding our understanding of problem complexity and developing new algorithms for efficient inference.

### DONALD E. WALKER DISTINGUISHED SERVICE AWARD



The IJCAI Distinguished Service Award was established in 1979 by the IJCAI Trustees to honor senior scientists in AI for contributions and service to the field during their careers. Previous recipients

have been: Bernard Meltzer (1979), Arthur Samuel (1983), Donald Walker (1989), Woodrow Bledsoe (1991), Daniel G. Bobrow (1993), Wolfgang Bibel (1999), Barbara Grosz (2001), Alan Bundy (2003), Raj Reddy (2005), Ronald J. Brachman (2007), Luigia Carlucci Aiello (2009), Raymond C. Perrault (2011), and Wolfgang Wahlster (2013).

At IJCAI-15, the Donald E. Walker Distinguished Service Award will be given to **Anthony G. Cohn**, Professor of Automated Reasoning at the University of Leeds. As a pioneering researcher in Knowledge Representation and Reasoning, Professor Cohn is recognized for his substantial contributions, as well as his outstanding service to the international, European and UK AI communities, including terms as President of IJCAI, ECCAI, KR Inc., and AISB, and as Editor-in-chief of the AI journal, where he made significant contributions to the success of the journal and to the wider dissemination of AI into the scientific community.

### **IJCAI-JAIR Best paper prize**

Tuesday, July 28th 10:20-10:40 in Room LB2

The 2015 IJCAI-JAIR Best Paper Prize is awarded to an outstanding paper published in JAIR in the preceding five calendar years.

Funding for this award is provided by the IJCAI organisation.

The LAMA Planner: Guiding Cost-Based Anytime Planning with Landmarks Silvia Richter and Matthias Westphal JAIR volume 39, pages 127-177

This paper gives a comprehensive description and analysis of the award winning LAMA planner. LAMA's use of landmarks in combination with cost-sensitive heuristics is presented, and the performance of the planner in different configurations is evaluated and analyzed in a detailed and insightful experimental study. This excellently written paper has been very influential and has helped to establish the use of landmarks as a key technique in classical planning.

## **ECCAI Thesis Award**

Tuesday, July 28th 11:10-12:10 in Room C

The 2014 ARTIFICIAL INTELLIGENCE DISSERTATION AWARD sponsored by ECCAI, the European Coordinating Committee for Artificial Intelligence goes to Dr Benjamin Kaufmann, from the University of Potsdam, for his thesis "High Performance Answer Set Solving". This Award includes a certificate signed by the ECCAI Chair and 1.500 Euros.

## **AI Journal Awards**

AI Journal Classic Paper Award:

"Fusion, propagation, and structuring in belief networks" by Judea Pearl

AI Journal Prominent Paper Award:

"Label ranking by learning pairwise preferences" by Eyke Hüllermeier, Johannes Fürnkranz, Weiwei Cheng and Klaus Brinker

## Conference at a glance

Day	Morning	Afternoon	Evening
25-July	Registration Workshops Tutorials	Registration Workshops Tutorials	
26-July	Registration Workshops Tutorials	Registration Workshops Tutorials	
27-July	Registration Workshops Tutorials Doctoral Consortium	Registration Workshops Tutorials Doctoral Consortium	Speed Dating and Opening Ceremony
28-July	Registration IJCAI technical program (Computers and Thought award talk, papers, posters) AI&Arts Demos IJCAI 2015 Distinguished Papers Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters) Al&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Games Night
29-July	Registration IJCAI technical program (papers, posters) Al&Arts Demos Industry Track Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters, panel on 'Future of AI') Al&Arts Demos Industry Track Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Banquet
30-July	Registration IJCAI technical program (papers, posters) AI&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters) Al&Arts Demos IJCAI Community Meeting Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Student Reception
31-July	Registration IJCAI technical program (John McCarthy Award Talk, papers, posters) AI&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Award, Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters, Panel) Al&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Award Robot Exhibition Video Competition Closing Event	

## **Events/Activities included in the registration fee**

29 tutorials	
Opening reception	
Banquet	
Exhibition program	
Special Events	
Angry Birds AI competition	

## **Invited speakers**

USING CONSTRAINT-BASED SEARCH TO Schedule Science Campaigns for the Rosetta orbiter



**Dr. Steve Chien** The Jet Propulsion Laboratory, California Institute of Technology

Friday, July 31 14:00-15:00 Libertador Plenary Room: LB

## TOWARDS GENERAL ARTIFICIAL INTELLIGENCE



**Dr. Julien Cornebise** Google DeepMind, Towards General Artificial Intelligence

Tuesday, July 28 14:00-15:00 Retiro Pleanry Room: R

### IN KNOWLEDGE WE TRUST



Dr. Evgeniy Gabrilovich Google

Wednesday, July 29 14:00-15:00 Libertador Plenary Room: LB CONSCIOUSNESS IN BIOLOGICAL AND ARTIFICIAL BRAINS



<u>Christof Koch</u> Allen Institute for Brain Science in Seattle

Tuesday, July 28 14:00-15:00 Retiro Plenary Room: R

### **PROGRAMMING AGENTS VIA REWARDS**



<u>Michael L. Littman</u> Computer Science at Brown University

Friday, July 31 14:00-15:00 Libertador Pleanry Room: LB

### ART IS A SYSTEM



Jon McCormack Faculty of Information technology at Monash University in Melbourne

Thursday, July 30 14:00-15:00 Retiro Pleanry Room: R

### MAKING INTELLIGENT MOBILE SERVICE Robots a reality



<u>Manuela M. Veloso</u> Computer Science Department at Carnegie Mellon University

Thursday, July 30 14:00-15:00 Libertador Pleanry Room: LB

### AI AND ROBOTICS: TALES FROM KIVA SYSTEMS



<u>Pete Wurman</u> Kiva Systems, the Boston-based company

Wednesday, July 29 14:00-15:00 Retiro Pleanry Room: R

## **Special events**

### IJCAI-15 Panel: who speaks for AI?

Wednesday July 29th 15:10-16:30 Room Catalinas

### Panelists:

- Maria Gini (Minnesota)
- Barbara Grosz (Harvard)
- Francesca Rossi (Padua)
- Stuart Russell (Berkeley)
- Manuela Veloso (CMU)

### Chair:

- Michael Wooldridge (Oxford)

These are boom times for AI. Articles celebrating the success of AI research appear frequently in the international press. Millions of people every day routinely use AI-based systems that the founders of our field would hail as miraculous. And there is a palpable sense of excitement about impending applications of AI technologies. But while all this is cause for celebration, it could be argued that the discipline of AI is fragmented and largely uncoordinated – and that the entire AI community suffers as consequence.

We have a bewildering array of different organisations at national and international level representing us (AAAI, IJCAI, ECCAI, PRICAI, KR, ...), and a byzantine collection of specialised conferences and journals, with very little coordination or communication between them. The results are obvious. Researchers in distinct sub-fields often work in silos, unaware of work that is going on in other sub-fields of AI, and the development of the field is hindered by endless fragmentation.

Moreover, in the public arena, the lack of any authoritative voice for AI creates a vacuum, where ill-informed speculation about the potential of AI is rife, and attention-seeking claims in the popular press receive unwarranted attention, with nobody in a position to speak for the field, and give an authoritative, informed, and balanced response. In this panel, we want to discuss these issues, and how best we, as AI researchers, can address them.

The panelists are invited to present their views on this subject, and to constructively discuss how we, as the AI research community, can best move forward.

To motivate the discussion, some questions for the panel are as follows:

- Is it possible to de-fragment the AI community? For example, could NIPS and IJCAI ever be seen as companion events, or is the nature of our field such that fragmentation is inevitable?

- What kind of professional organisation would work best for the field of AI? (Member organisation a la AAAI, ACM, or other...?)

- What public activities should an AI professional association undertake (beyond the scientific mission of organising conferences etc)? Press releases on AI? Responding to ill-informed pronouncements about AI?

- What role should we as individual AI researchers, and our AI associations play in informing public opinion, for example about the future benefits or potential existential risks that AI presents?

### IJCAI15 Academic Speed Dating

Monday,

July 27 17:00-18:30 (just before to go to the conference reception) Salón de Actos. Ground floor at New Building of Facultad de Ciencias Económicas

Meet IJCAI attendees from senior researchers to student newcomers! It surely will be a great opportunity to network, and to receive or give mentoring and career advice. Doors open at 5:00 PM sharp. There will be no admittance after 5:10 PM, and admittance is on a firstcome basis. One lucky participant will win a free Nexus 7 in the door raffle.

### IJCAI15 Games night

Tuesday July 28 19:30- 21:30 Sheraton, Room Golden Horn

Come to spend an evening playing games with other IJCAI participants at the new proposal of IJCAI Games Night. There will be AI-themed games organized with prizes to be won for the lucky. Bring your own games to play afterward.

### **AI Non-technical Talks Track**

Tuesday to Friday July 28–31 14:00-15:00 Room C Tuesday and Wednesday, Room GH Thursday and Friday

### - Tuesday

"The Economic Implications of Machine Intelligence: Lessons from the Second Machine Age", Erik Brynjolfsson (remotely). We should be optimistic about the future because technological progress, 'the only free lunch that economists believe in,' is accelerating quickly past our intuitions and expectations. But we should also be mindful of our values and our choices: as technology races ahead, it may leave a lot of people, organizations and institutions behind.

### - Wednesday

"Killer robots, the end of humanity, and all that: What should a good AI researcher do?" Stuart Russell. Hear an update on the campaign to ban lethal autonomous weapons, as well as the fears that AI poses an existential threat to mankind.

### - Thursday

"100 year AI project", Barbara Grosz, Chair of the AI100 Standing Committee. The One Hundred Year Study on Artificial Intelligence, or AI100, is a 100-year effort to study and anticipate how the effects of artificial intelligence will ripple through every aspect of how people work, live and play.

### – Friday

"Panel on Countering Discrimination". This interactive panel will explore how different communities within AI face discrimination and how we might counter this. Please come, share and learn.

### **Press conference**

Every day 8:00-8:30 Ombú 2nd floor

### IJCAI Fellow / Student Lunches

Tuesday to Friday July 28–31 Lunch time. For the first time in a

For the first time in an IJCAI, we are providing an opportunity for students to chat with an AAAI or ECCAI Fellow over an informal lunch during the conference. Students should meet their designated Fellow at the onsite registration desk on their assigned day.

### Woman's breakfast

Tuesday July 27 8:00-8:30

A networking breakfast will be offered on a place TBA for an informal discussion on issues facing women in AI and CS, with particular emphasis in possible solutions, tying up with themes discussed in the workshop Women in IA and CS.

### Panel: Rethinking Turing Test

Friday, July 31, 10:40-12:10 Room R1

The Turing test was considered a grand goal to be achieved by generations of Artificial Intelligence researchers. It has helped inspire many new ideas and has also been the subject of many debates. Now over 60 years old, we wish to take a fresh look at the test given the current surge of interest and achievement in artificial intelligence, examining its origin and projecting beyond the horizon. The panel consists of researchers with different perspectives on what artificial intelligence has achieved so far and what more needs to be done. In particular, the debate will be centered on whether the Turing test will continue to serve as the signpost for developing intelligent machines, or perhaps other candidates are emerging to serve that purpose.

# General tutorial/workshop timetable

Tutorials and Workshops timetable		
8:00-8:45	Registration	
8:45-10:30	Morning sessions	
10:30-11:00	Coffee break	
11:00-12:45	Morning sessions	
12:45-13:45	Lunch*	
13:45-15:30	Afternoon sessions	
15:30-16:00	Coffee break	
16:00-17:45	Afternoon sessions	

\* There are many nice and affordable restaurants near the venue. Please, consult the recommendations included in the IJCAI2015 package.

## **Tutorial program**

TRACK 1: AGENTS AND DECISION MAKING		
	Title	Tutors
T-5 (HD)	Automated composition and agent programming	Giuseppe De Giacomo, Fabio Patrizi and Sebastian Sardina
T-6 (HD)	Multi-agent programming	Olivier Boissier, Rafael H. Bordini, Jomi Fred Hübner, Alessandro Ricci, and Jaime Simao Sichman
T-12 (HD)	Crowd computing	Mark Klein and Ana Cristina B. Garcia
T-19 (FD)	Diffusion in social networks	Paulo Shakarian
T-15 (HD)	Multi-objective decision making	Shimon Whiteson and Diederik M. Roijers

TRACK 2: KNOWLEDGE REPRESENTATION AND REASONING		
	Title	Tutors
T-2 (FD)	Argumentation	Federico Cerutti
T-3 (HD)	Logic Programming	Sergio Greco and Cristian Molinaro
T-7 (HD)	Temporal Logic	Jose Aguilar
T-10 (HD)	Constraint logic programming	Roman Bartak
T-18 (FD)	Answer set programming	Martin Gebser, Roland Kaminski, Javier Romero, and Torsten Schaub
T-24 (HD)	Tweety system	Matthias Thimm
T-26 (FD)	Logic-based Merging	Ramon Pino Pérez

TRACK 3: REASONING UNDER UNCERTAINTY		
	Title	Tutors
T-8 (HD)	Combinatorial optimization in graphical models	Rina Dechter, Radu Marinescu, Alexander Ihler, Lars Otten
T-4 (HD)	Probabilistic programming	Luc De Raedt and Angelika Kimmig
T-22 (HD)	Sensitivity Analysis in Graphical Models	Cassio de Campos, Alessandro Antonucci, and Giorgio Corani

TRACK 4: SEMANTIC WEB AND KNOWLEDGE ENGINEERING		
	Title	Tutors
T-11 (HD)	Foundations of Web Personalization and Recommender Systems	Jill Freyne and Shlomo Berkovsky
T-20 (HD)	Internet of things	Munindar P. Singh and Amit K. Chopra
T-23 (HD)	Formal Concept Analysis	Sergei O. Kuznetsov and Amedeo Napoli
T-28 (HD)	Collaborative Knowledge	Nada Matta, Jason DAI and Francois Rauscher

TRACK 5: NATURAL LANGUAGE PROCESSING		
	Title	Tutors
T–14 (HD)	Evolutionary semantics for language grounding in robotics	Luc Steels
T–17 (HD)	Natural language understanding	Nicolae Duta
T-25 (HD)	Visual Text Analytics	Evangelos Milios and Axel Soto

TRACK 6: MACHINE LEARNING		
	Title	Tutors
T-9 (HD)	Lifelong machine learning	Zhiyuan Chen and Bing Liu
T–27 (HD)	Weakly Supervised Classification Problems	Jose A. Lozano, I. Inza, and J. Hernandez-Gonzalez
T-29 (FD)	System, algorithm, and theory foundations of scalable machine	Eric P. Xing and Qirong Ho

TRACK 7: AI APPLICATIONS		
	Title	Tutors
T–1 (HD)	Smart cities	Biplav Srivastava
T-16 (FD)	Musical metacreation	Philippe Pasquier, Arne Eigenfeldt, Oliver Bown
T–21 (HD)	Context awareness	Juan Carlos Augusto

## Tutorials' location and dates

	Room	Morning	Afternoon	
	460	T2	26	
	465	T	16	
Saturday, July 25th	430	Т9	T10	
July 25th	435	Т3	T5	
	436	T15	T20	
	438	T11		
	430	T2	29	
	435	T19		
Sunday,	436	Т2		
July 26th	438	T4	T24	
	460	T28	T23	
	465	T14	T22	
	430	T	18	
	460	Т8	T1	
Monday,	435	T6	Τ7	
July 27th	436	T17	T12	
	465		T27	
	438	T21	T25	

## Workshop program

	Title	Date	Room
W1 + W37	Joint Workshop on Preferences and Personalization	Full day, July 27	440
W2	The Fourth IJCAI International Workshop on Graph Structures for Knowledge Representation and Reasoning (GKR 2015)	Full day, July 25	440
W3	Behavioral, Economic and Computational Intelligence for Security	Full day, July 25	442
W4	Third International Workshop on Theory and Applications of Formal Argumentation (TAFA-15)	One and a half days, July 25-26	445
W5	Computer Games Workshop at IJCAI 2015	Full day, July 26	442
W6	Workshop at IJCAI 2015 "What can FCA do for Artificial Intelligence?"	Full day, July 25	443
W7	Al in Space	One and a half days, July 25-26	446
W8	International Workshop on Planning and Scheduling for Space (IWPSS)	One and a half days, July 26–27	446
W9	Worskshop on Synergies between Multiagent Systems, Machine Learning, and Complex Systems	Full day, July 27	442
W10	2nd International Workshop on Smart Simulation and Modelling for Complex Systems (SSMCS2015)	Full day, July 25	452
W11	Advances in Bioinformatics and Artificial Intelligence : Bridging the Gap	Full day, July 27	443
W12	General Intelligence in Game-Playing Agents	Full day, July 27	458
W13	Ontologies and logic programming for query answering	Full day, July 25	448
W14	Proposal of Chance Discovery, Data Synthesis, Curation and Data Market	Full day, July 26	440
W15 + W40	Replicability and Reproducibility in Natural Language Processing: adaptive methods, resources and software.	Full day, July 26	448
W16	Second International Workshop on Defeasible and Ampliative Reasoning (DARe)	Full day, July 27	457
W17	Hybrid Reasoning	Full day, July 26	443
W19	10th International Workshop on Artificial Intelligence Techniques for Ambient Intelligence (AITAml'15)	Afternoon, July 26	452
W20 + W36	Coordination, Organizations, Institutions and Norms in Agent Systems (COIN@IJCAI 2015)	Full day, July 26	450
W22	10th International Workshop on Neural-Symbolic Learning and Reasoning (NeSy'15)	Full day, July 27	456
W23 + W26	Modular Ontologies, Belief Change and Non Monotonic Reasoning in Ontologies and Databases.	Full day, July 26	453
W24	IJCAI-15 workshop on innovative applications of game theory and market design	Full day, July 26	455
W25	WL4AI'15: Weighted Logics for Artificial Intelligence	Full day, July 27	453
W28 + W35	Cognitive Knowledge Acquisition, Cognitive Computing and Applications for Augmented Human Intelligence	Full day, July 25	450
W29	Workshop on Social Influence Analysis (SocInf'2015)	Full day, July 27	455
W30	Women in AI and CS	Morning, July 26	452
W31	Formal Ontologies for Artificial Intelligence (FOfAI)	Full day, July 27	452
W34	Fuzzy Logic in Al	Full day, July 25	453
W38	Artificial Intelligence for Knowledge Management	Full day, July 27	450
W39	Spatio-Temporal Dynamics	Full day, July 26	456
W41	IJCAI-15 Workshop on Algorithmic Game Theory	Full day, July 27	445
W42	Al and Feedback	Morning, July 26	457
W43	3rd Workshop on Heterogeneous Information Network Analysis (HINA)	Full day, July 25	455
DC	Doctoral Consortium	Full day, July 27	448

	25th July morning	25th July afternoon	26th July morning	26th July afternoon	27th July morning	27th July afternoon
W1+W37					Roon	1440
W2	Room	n 440				
W3	Roon	n 442				
W4		Room 445				
W5			Roon	n 442		
W6						
W7		Room 446				
W8					Room 446	
W9					Roon	1442
W10	Roon	n 452				
W11					Roon	1443
W12					Roon	1 458
W13	Room	n 448				
W14			Roon	n 440		
W15+W40			Roon	n 448		
W16					Roon	n 457
W17			Roon	n 443		
W19				Room 452		
W20+W36			Roon	n 450		
W22					Roon	1 456
W23+W26			Roon	n 453		
W24			Roon	n 455		
W25					Roon	1 453
W28+W35	Roon	n 450				
W29					Roon	1 455
W30			Room 452			
W31					Roon	n 452
W34	Roon	n 453				
W38					Roon	1 450
W39			Roon	n 456		
W41					Roon	1445
W42			Room 457			
W43	Roon	n 455				
DC					Roon	1 448

## Workshops' location

### **Sessions and posters**

The IJCAI technical program consists of both oral presentations by accepted authors and poster presentations during the half day of the presentations. The posters of each author are required to put up their posters before each half day starts. They will also be present to discuss their posters at breaks with the audience. We hope both the oral presentations and the posters will give the attendees a full picture of the scientific advances of AI.

### **Doctoral Consortium**

July 27, 2015 08:45 Room 448 (New Building – Facultad de Ciencias Económicas)

The doctoral consortium at IJCAI provides an opportunity for Ph.D. students to discuss their research interests and career objectives with established researchers in AI, network with other participants, and receive mentoring about career planning and career options. The doctoral consortium will expose students to different areas of research within AI and help building professional connections within the international community of AI researchers. Below there is a tentative schedule for activities.

Timetable	Activity
7:30 - 8:45	Registration
8:45 - 9:00	Introduction
9.00 - 10:00	Invited Talk
10:00 - 10:30	Poster advertisements
10:30 - 11:00	Coffee Break
11:00 - 11:45	Posters
11:45 - 12:45	Career Panel
12:45 - 14:00	Lunch
14:00 - 15.30	Invited Talk: Gabriela Llaneza
15:00 - 15:30	Poster advertisements
15:30 - 16:00	Coffee Break
16:00 - 17:00	Posters
17:00 - 17.45	Wrapping Up

### IJCAI 2015 Distinguished Papers

July 28, 2015 9:40-10:40 Room GH

### IJCAI-2015 Distinguished Paper Award

- Recursive Decomposition for Nonconvex Optimization Abram L. Friesen and Pedro Domingos (Main Track #75)

- Bayesian Active Learning for Posterior Estimation Kirthevasan Kandasamy, Jeff Schneider, Barnabas Poczos (ML Track #112)

### IJCAI-2015 Honorable Mention

- Reasonable Highly Expressive Query Languages Pierre Bourhis, Markus Krötzsch, and Sebastian Rudolph (KR Track#297)

## Repeat Buyers Prediction Competition

IJCAI is pleased to announce a large-scale machine learning competition, hosted by Alibaba Group, a gold sponsor. This competition aims to promote applications of advanced techniques from AI research to real-world problems. Contestants will have access to vast amount of data provided by Tmall.com, the largest B2C platform in China. Top three winners will be invited to present their results at an IJCAI workshop and get a chance to test their algorithms online.

In April 2015, participants all over the world was invited to play with real transaction data from Tmall.com. The goal was to apply advanced and sophisticated machine learning and data mining techniques to predict which shoppers would become repeat buyers after sales promotion. The top 3 teams may present their solutions at the IJCAI workshop "*Social Influence Analysis*" (Afternoon of Monday July 27, Room 455). In addition, there are a lot of prizes.

## **AI Video Competition**

IJCAI 2015 is pleased to continue the AI Video Competition that was an integral part of the IJCAI technical programs from IJCAI-89 until IJCAI-97 and reinstated in 2011. A total of 14 submissions were accepted and will be screened in common areas during the conference. Additionally, a number of awards will be given to the best videos in several categories. Thus, awards will be given to the best long video, best short video, best application video, most entertaining video, most educational video, most societally beneficial video, and best robotics video.

The accepted videos are:

### The Kognit Storyboard: Cognitive Models and Mixed Reality for Dementia Patients

Daniel Sonntag (DFKI); Marina Böllig (HBK); Martha Bayer (HBK); Muriel Serf (HBK).

## Practice and Performance Analysis Inspiring Social Education

Josep Lluis Arcos (IIIA-CSIC); Harry Brenton (Goldsmiths University of London); Ismel Brito Rodriguez (IIIA-CSIC); Anna Enciso (IIIA-CSIC); Marco Gillies (Goldsmiths University of London); Patricia Gutierrez (IIIA-CSIC); Mark d'Inverno (Goldsmiths University of London); Dave de Jonge (IIIA-CSIC); Maria Krivenski (Goldsmiths University of London); Lissette Lemus (IIIA-CSIC); Johan Loeckx (VUB); Ramon Lopez de Mantaras (IIIA-CSIC); Daniel Martin Martinez (Sony CLS); Nardine Osman (IIIA-CSIC); François Pachet (Sony CLS); Mathieu Ramona (Sony CLS); Bruno Rosell (IIIA-CSIC); Tatiana Schofield (Goldsmiths University of London); Joan Serrà (IIIA-CSIC); Carles Sierra (IIIA-CSIC); Luc Steels (VUB); Matthew Yee-King (Goldsmiths University of London).

## Deep Neural Networks are Easily Fooled: High Confidence Predictions for Unrecognizable Images

Anh Nguyen (University of Wyoming); Jason Yosinski (Cornell University); Jeff Clune (University of Wyoming).

## Neural modularity helps organisms evolve to learn new skills without forgetting old skills

Kai Olav Ellefsen (University of Science and Technology, Trondheim); Jean-Baptiste Mouret (Sorbonne Université UPMC Univ Paris VI); Jeff Clune (University of Wyoming).

### Unshackling Evolution: Evolving Soft Robots with Multiple Materials and a Generative Encoding

Nick Cheney (Cornell University); Robert MacCurdy (Cornell University); Jeff Clune (University of Wyoming); Hod Lipson (Cornell University).

### **ObViz: Opinion-balanced News Delivery**

Claudiu Musat (EPFL); Maxime Darcot (EPFL); Boi Faltings (EPFL); Audrey Loeffel (EPFL); Gaylor Bosson (EPFL); Alexandru Ardelean (EPFL); Marina Boia (EPFL).

## Learning of Human Motion Feedback with Neural Self-Organization

Florian von Stosch (University of Hamburg); German Parisi (University of Hamburg); Sven Magg (University of Hamburg); Stefan Wermter (University of Hamburg).

### Intelligent Agent Supporting Human-Multi-Robot Team Collaboration

Ariel Rosenfeld (Bar-Ilan University); Oleg Maksimov (Bar-Ilan University); Sarit Kraus (Bar-Ilan University).

## Humanoidly Speaking – Learning about the world and language with a humanoid friendly robot

Xavier Hinaut (University of Hamburg); Johannes Twiefel (University of Hamburg); Marcelo Borghetti Soares (University of Hamburg); Pablo Barros (University of Hamburg); Luiza Mici (University of Hamburg); Stefan Wermter (University of Hamburg).

### Can you play that? A humanoid robot actively learning how to play an unknown musical instrument

Arturo Ribes Sanz (IIIA-CSIC); Jesus Cerquides (IIIA-CSIC); Ramon Lopez de Mantaras (IIIA-CSIC); Yiannis Demiris (Imperial College London).

### Goal Oriented Teachable Agent in Virtual Learning Environment

Ailiya Borjigin (Nanyang Technological University); Chunyan Miao (Nanyang Technological University); Zhiqi Shen (Nanyang Technological University); Han Yu (Nanyang Technological University); Su Fang Lim (Nanyang Technological University); Toh Hsiang Benny Tan (Nanyang Technological University); Zeng Zhiwei (Nanyang Technological University); Yuxi Guo (Nanyang Technological University); Simon Fauvel (Nanyang Technological University); Yang Qiu (Nanyang Technological University); Yang Qiu (Nanyang Technological University); Kah Hoe Pang (Nanyang Technological University); Jun Ji (Nanyang Technological University).

### Smooth Handling of Human Interrupts in Team Oriented Plans

Nathan Brooks (Carnegie Mellon); Paul Scerri (Platypus); Alessandro Farinelli (University of Verona); Nicolo' Marchi (University of Verona); Masoume Raeissi (University of Verona).

### **Autonomous Multi-Vehicle Coordination**

James Guo Ming Fu (Singapore-MIT Alliance for Research and Technology); Xiaotong Shen (Nanyang Technological University); Hans Andersen (Nanyang Technological University); Wei Liu (Nanyang Technological University); Scott Pendleton (Nanyang Technological University); Baoxing Qin (Singapore-MIT Alliance for Research and Technology); Zhuang Jie Chong (Singapore-MIT Alliance for Research and Technology); Cody Kamin (Singapore-MIT Alliance for Research and Technology); Mark Adam Ang (Singapore-MIT Alliance for Research and Technology); Tawit Uthaicharoenpong (Singapore-MIT Alliance for Research and Technology); Zhiyong Weng (Singapore-MIT Alliance for Research and Technology); Mengdan Feng (Nanyang Technological University); Marcelo Ang (Nanyang Technological University); Daniela Rus (MIT); Emilio Frazzoli (MIT).

### Multi-vehicle Motion Coordination Using V2V Communication

Xiaotong Shen (Nanyang Technological University); James Guo Ming Fu (Singapore-MIT Alliance for Research and Technology); Scott Pendleton (Nanyang Technological University); Wei Liu (Nanyang Technological University); Hans Andersen (Nanyang Technological University); Zhuang Jie Chong (Singapore-MIT Alliance for Research and Technology); Baoxing Qin (Singapore-MIT Alliance for Research and Technology); Cody Kamin (MIT); Mark Adam Ang (Singapore-MIT Alliance for Research and Technology); Tawit Uthaicharoenpong (Singapore-MIT Alliance for Research and Technology); Zhiyong Weng (Singapore-MIT Alliance for Research and Technology); Mengdan Feng (Nanyang Technological University); Marcelo Ang (Nanyang Technological University); Daniela Rus (MIT); Emilio Frazzoli (MIT).

## **Angry birds AI competition**

Room Ombú 2nd Floor. Sheraton Convention Center July 29-30, 2015. 9:00-18:00 Near Registration Desk Sheraton Convention Center

July 31, 2015. 10:00-18:00

The goal of the Angry Birds AI Competition is to build AI agents that can play the popular game "Angry Birds" as good as the best human players. In qualification rounds on July 29, the agents who qualify for the final rounds on July 30 will be determined. The highlight will be the Grand Final of the best AI agents at 18:00 on July 30. During the competition, there will also be a number of paper presentations. Further details and a complete schedule can be found at <u>http://aibirds.org</u>.

This year for the first time there will be a new competitive track where agents play the same levels with alternating shots. The agent scoring the winning shot gets all the points, but agents can bid points for the right of first or second shot.

In the Angry Birds' Man vs Machine Challenge on July 31, IJCAI participants and the general public have the chance to challenge the winning AI agents to see if humans are still better at playing Angry Birds than AI. Human players can compete from 10:00 onwards. The best AI agents will then play the same game levels at the final match at 18:00. The winner of the challenge, man or machine, will be awarded with a prize of USD 250. Registration for the Man vs. Machine Challenge opens at 10:00 on July 28 at http://aibirds.org.

### Best Papers in Sister Conferences Track

In continuation of the tradition started at IJCAI 2011, this track celebrates excellence in the field by featuring 15 presentations of award-winning papers from AI-related conferences. The track will run throughout the whole technical program.

The best papers that will be presented at IJCAI 2015 are from the following conferences:

AAMAS 2013, AAMAS 2014, HCOMP 2014, ICAPS 2014, ICCBR 2014, KR 2013, KR 2014, RecSys 2014, RR 2013, SoCS 2014, UAI 2014, and UMAP 2014.

## **Journal Track**

July 28-31, 2015 Within the main program, various rooms (papers tagged "Journal Track")

For the third time, throughout the technical program, IJCAI 2015 has a special track including 12 presentations of research results that have been published in the AI Journal or JAIR, ACM TIST, ACM TiiS, IEEE Intelligent Systems and KRR in 2013 or 2014 and have never been presented at a conference before. This track is intended to give this work exposure to a large AI audience in a highly interactive setting. These papers will also be presented as posters and are accompanied by a 4-page extended abstract in the conference proceedings.

## **Closing event**

July 31, 2015 18:30-20:00 Room LB

The closing event will include the award ceremony for the Angry Birds competitions, as well as the Best Presentation Award and the Best Poster Award. Moreover, you will listen to the plans for IJCAI 2016 in New York, USA. You will then be able to say goodbye to all your friends and colleagues while enjoying food and drinks.

# IJCAI-15 schedule on your smartphone

The IJCAI schedule is available on your smartphone (iPhone or Android) via the "eventbase" app.

To use this, download the free eventbase app from the Apple or Android store, then click on "Conferences" and search for "IJCAI-15". When it finds the event, click on it and launch the event guide. You can use the app to create a personal schedule with reminders.

Eventbase is widely used by conferences and other similar events - you can use the same app for other conferences in the future.

To download Eventbase:



# Participant registration for IJCAI 2015

Onsite registration will be located from Saturday, July 25 to Monday Morning, July 27 at New Building of Facultad de Ciencias Económicas and from Monday Afternoon, July 27 to Friday, July 31 at the Conference Desk at the second floor of the Sheraton Convention Center. All attendees must pick up their registration packets for admittance to programs. **Please note that new onsite registrations will be processed only online with credit card payment option!** 

### **Registration Desk Schedule**

DAY	LOCATION	TIME
Saturday July 25	New Building, Facultad de Ciencias Económicas (Workshop Site)	7:30-17:30
Sunday July 26	New Building, Facultad de Ciencias Económicas (Workshop Site)	7:30-17:30
Monday July 27	New Building, Facultad de Ciencias Económicas (morning only) and Sheraton Convention Center (afternoon only)	7:30-12:30 15:30-18:30
Tuesday July 28	Sheraton Convention Center (Conference Desk)	8:00-17:30
Wednesday July 28	Sheraton Convention Center (Conference Desk)	8:00-17:30
Thursday July 30	Sheraton Convention Center (Conference Desk)	8:00-17:30

## **Tour information**

The services described on this page (airport pick-up, accommodation, tours during and after the convention) are provided by the IJCAI-15 tour operator- TIPGROUP (which is the most important in Argentina).

Please send payment for services provided here directly to TIPGROUP.

### **AIRPORT PICK-UP SERVICE**

Car (1-2 pers)	USD 60
Utility (3-4 pers)	USD 75
Van (5-8 pers)	USD 120

\*\* Committee representative will hold a sign with IJCAI-15 logo at the exit, where clients have finished all procedures at Immigration and Customs, and have de-clared their luggage.

\*\* Clients taking irregular-size luggage or more than one big suitcase per person had better order a bigger size vehicle.

\*\* Groups with more than 8 people please send enquiries to tour-ijcai2015@tipgrouptravel.com

\*\* Payment for the above service should arrive at the Tipgroup account before 30th, Jun.

### **BUENOS AIRES HALF DAY TOURS**

#### **City Tour**

- Tour code: CITYT

– Highlights: Plaza de Mayo, San Telmo, La Boca, Recoleta, Palermo and Puerto Madero

- Booking on site price: USD 20
- Duration-approx: 3.0 hour
- Departure date: Daily AM or PM
- Departure time: from 08:45am or 1:45pm
- Departure point: The Hotel you are staying at

#### Description:

This tour gives you the emotion of a multiple Buenos Aires. We will see the symbol of our city: the obelisk at the wide 9th of July Ave, close to the opera house (Colon Theater). We will visit different squares such as Plaza de Mayo where you will feel the presence of "The Mothers" marching in front of The Pink House.

You will enjoy the colonial houses at San Telmo and Montserrat and be impressed by "La Bombonera" (soccer stadium) at the colorful neighborhood of La Boca.

By visiting Puerto Madero you will see the most modern towers and five-star hotels surrounded by the best beef restaurants of this harbor.

You will see elegant neighborhoods such as Palermo,

drive along its avenues decorated with ancient trees and reach Recoleta, with its private cemetery (Evita's grave) and the National Library Building. When going back to the hotel you will see the huge embassies and palaces that belonged to the aristocracy.

#### **Delta and North Zone**

- Tour code: TIGHD
- Highlights: Tigre City, boat trip through the Delta and San Isidro neighborhood
- Booking on site price: USD 35
- Booking on site price. USD 33
- Duration-approx: 4.0 hour
- Departure date: Daily AM
  Departure time: from 08:45am
- Departure point: The Hotel you are staying at

#### Description:

By watching the Delta you will appreciate the generosity of nature in a very singular place. We will leave Buenos Aires City and go to the north of the Great Buenos Aires looking at the natural scenery of the Delta and its islands. The lifestyle of the "isleños" (people who live on the islands) is very special. We will know their traditions, culture and their way of life. We will also see elegant residences located in the residential neighborhoods of the northern suburbs. We will visit the San Isidro neighborhood and the Amazing Cathedral. On the way back to Buenos Aires City, we will pass next to the Presidential Residence (Quinta de Olivos where all the Argentinian Presidents use to live during their Presidential period) and River Plate soccer stadium.

### Two Passions of Buenos Aires: Tango & Football

- Tour code: DOSPA
- Highlights: Carlos Gardel Museum, La Boca and
- La bombonera
- Booking on site price: USD 32
- Duration-approx: 3.5 hours
- Departure date: Mondays to Saturdays AM
- Departure time: from 08:45am
- Departure point: The Hotel you are staying at

### Description:

You will feel the two most important Passions of Buenos Aires City. Each corner tells a story when we talk about the Traditional music of Buenos Aires. We will visit the Carlos Gardel Museum, The Museum of the most important Tango Singer ever, the traditional corners, brave air, and the real Character of our city. We will also visit La Boca neighborhood, one of the most traditional neighborhoods of Buenos Aires. This neighborhood has a great personality, and it is one of the most important when we talk about Football in Buenos Aires. People who want to live this passion could visit the Boca Juniors Stadium known as La Bombonera (optional), and explore the colorful streets.

### Personalities Buenos Aires (Evita-Borges)

- Tour code: PERSO
- Booking on site price: USD 42
- Duration-approx: 4.0 hours
- Departure date: Tuesdays to Saturdays PM
- Departure time: from 1:45pm
- Departure point: The Hotel you are staying at

### Description:

We will visit different places. The cemetery of La Recoleta (tickets not included), and we will travel through our history. We will find mausoleums and tombs of the national heroes and ancestors of the most traditional families of Buenos Aires, while walking along the narrow streets of the cemetery. We will also visit the exclusive neighborhoods of La Recoleta, Palermo, Belgrano. We will know the area where Jorge Luis Borges spend part of his life. The National Library Building, and Evita's Museum, a place where our guides are going to make you feel, and understand the work and life of the most important woman of Argentina. It is a great mixture of history, culture and art. The price includes Evita's Museum Tickets.

### **Navegation Lunch**

- Tour code: HUMBE
- Highlights: boat trip, lunch, the best view of BA
- Booking on site price: USD 46
- Duration-approx: 3.0 hour
- Departure date: Mondays to Saturdays
- Departure time: from 12:45pm
- Departure point: The Hotel you are staying at

### Description:

Visit the city and have lunch for two hours in a boat trip through the Río de la Plata, in a ship full of pleasure and beauty with the best view of Buenos Aires city. Enjoy the excellent cooking aboard in its completely panoramic saloon. The price includes: Transportation and lunch aboard. Drinks are not included.

### **BUENOS AIRES FULL DAY TOURS**

### **Tigre and Delta Full Day**

- Tour code: TIGFD
- Highlights: Tigre City, traditional market, boat trip through the Delta, lunch and San Isidro neighborhood
- Booking on site price: USD 80
- Duration-approx: 6.0 hour
- Departure date: Daily AM
- Departure time: form 08:45am
- Departure point: The Hotel you are staying at

### Description:

We will know about the traditions, culture and lifestyles of the "isleños" (people who live in the islands); we will have lunch enjoying a great view of the river. We will visit the most traditional market at Puerto de Frutos and then we will go to this natural scenery and will sail into the islands. After that, we will visit the elegant residences located in the residential neighborhoods of the northern suburbs. You will see San Isidro neighborhood, its history and people. There, we will make a stop. On the way back to Buenos Aires, we will go through the Presidential Residence (Quinta de Olivos). On Sundays, the tour can end, if you want, in San Telmo neighborhood, where you can see the most important Flea and antique Market in the City. The price includes lunch without drinks.

### Gaucho's Experience at Santa Susana's Ranch

- Tour code: STSUS
- Highlights: Gaucho, Horses, chorizo, beef, red wine
- Booking on site price: USD 90
- Duration-approx: 9.0 hours
- Departure date: Tuesday to Sundays AM
- Departure time: from 9:30am
- Departure point: The Hotel you are staying at

### Description:

It is a unique experience to Santa Susana's Ranch. In this tour you will find the Gaucho's Countryside life, and the peace of the place where he lives. It is a great experience to know about the Argentine Tradition. We invite you to ride horses, make a trip in a Sulkie, the traditional carriage that people used to have in the countryside. In this tour you will see traditional dances, gaucho's skills exhibitions and more. Our tour includes: Transportation, Tour guide, lunch and drinks, traditional dances, gaucho's exhibition, coffee, tea, mate and mate cocido (a typical beverage of the countryside)

### Colonia (Uruguay)

- Tour code: COLBQ
- Booking on site price: USD 120
- Duration-approx: 12.00 hours
- Departure date: Daily AM
- Departure time: to be confirmed
- Departure point: Buquebus Port

### Description:

Escape the hustle and bustle of Buenos Aires and immerse yourself in the atmosphere of the historic Uruguayan town of Colonia del Sacramento. On this day trip, take a three hours scenic ferry ride from Buenos Aires across the Rio de la Plata and enjoy a city sightseeing tour and walking tour of Colonia. Then, enjoy a delicious lunch at a quality restaurant of your choice (own expense) and spend the afternoon exploring the city of Colonia at your leisure

### **Montevideo (Uruguay)**

- Tour code: MVDBQ
- Booking on site price: USD 300
- Duration-approx: 14.00 hours
- Departure date: Daily AM
- Departure time: 06:30am
- Departure point: Buquebus Port

### Description:

Enjoy a full-day trip from Buenos Aires to Montevideo, the capital city of Uruguay. Known for its theater scene and cultural heritage, Montevideo offers an array of sightseeing options in both its old and new areas. Take a scenic ferry ride there from Buenos Aires, and enjoy a city tour before enjoying a delicious lunch and exploring the city at your leisure. Ferry tickets, lunch and a city tour are all included.

### **BUENOS AIRES NIGHT TOURS**

### **Dinner Tango Show**

- Tour code: TANGO

- Highlights: Historical Tango Houses, Dinner and drinks, Tango Rhythms, Live Orchestra, Typical costumes.

- Booking on site price: from USD 45
- Duration-approx: 4.0 hour
- Departure date: Daily Evenings
- Departure time: from 7:30pm
- Departure point: The Hotel you are staying

### Description:

Round trip transportation (Hotel/Tango show/Hotel) Dinner with wide menu: typical Argentine dishes and an exclusive selection of wines is included.

After dessert, you will enjoy a one and a half hour tango show with a live orchestra, several couples dancing and professional singers.

You will be witness to the evolution of the "Tango" through history (milonga, arrabalero and modern tango) in a true scenery with a mystic atmosphere.

Esquina Homero Manzi USD 45

Cafe de los Angelitos	USD 60
La Ventana Tango	<b>USD 65</b>
Esquina Carlos Gardel	<b>USD 70</b>

## IJCAI 2015 Exhibit program

### Alibaba.com

Alibaba group's mission is to make it easy to do business anywhere. We operate leading online and mobile marketplaces in retail and wholesale trade, as well as cloud computing and other services. We provide technology and services to enable consumers, merchants, and other participants to conduct commerce in our ecosystem. We aim to build the future infrastructure of commerce. We envision that our customers will meet, work and live at Alibaba, and that we will be a company that lasts at least 102 years.

### Adobe

### www.adobe.com/

Adobe is the global leader in digital marketing and digital media solutions. Our tools and services allow our customers to create groundbreaking digital content, deploy it across media and devices, measure and optimize it over time and achieve greater business success. We help our customers make, manage, measure and monetize their content across every channel and screen.

### Baidu

### www.baidu.com

Baidu was founded in 2000 by Internet search pioneer Robin Li, with the mission of providing the best and most equitable way for people to find what they're looking for. Over the past 15 years we have strived to fulfill this mission by listening to our users and truly understanding their needs. To provide intelligent, relevant search results for the tens of billions of queries that are entered into our search platform every day, we focus on powering the best technology optimized for up-to-date local tastes and preferences, with a deep, nuanced insights into the Chinese language. In recent years, we've transitioned from a PC-centric to a mobile-first company, and currently over 50 percent of our revenues come from mobile. With a leading position in mobile search, mobile maps, and app distribution, Baidu is well positioned to capture the next opportunity: Connecting people with services in closedloop transactions.

#### **BigML**

### https://bigml.com

Cheap cloud computing and storage services have led to a huge increase in the amount of data accumulated. Companies with large numbers of analysts can gain valuable insight from their data. However, not everyone can afford such a team, let alone find the individuals with the right skill. There is a strong need for a new service that puts predictive power in the hands of many. Our goal is to make machine learning simple and beautiful. Our service can take the complexities out of creating a high-availability, low-latency Machine Learning system created especially for your data. You will not only gain valuable insights from your data, you will most likely enjoy it. From the developer, to the researcher, to the multinational corporation, BigML has something that can uncover the hidden predictive power of your data. BigML wants to make you the master of your data.

### CoInvent

http://www.coinvent-project.eu/

COINVENT is an effort to advance the understanding of creativity and its computational realisation. It is funded by FET within the 7th Framework Programme for Research of the European Commission (grant agreement number 611553) that runs from October 2013 to September 2016. COINVENT investigates mathematical models of general cognitive principles that operate when new concepts are invented, so as to be able to engineer computer systems that effectively support humans in their creative thinking. COINVENT focuses on the mathematical formalisation and the computational implementation of conceptual blending, a fundamental cognitive operation intrinsic to everyday thought and language. By conceptual blending humans combine particular elements and their relations of originally separate mental spaces into a unified space, in which new elements and relations emerge and new inferences are drawn. COINVENT brings together a team of scientists of Europe's leading universities and research centres in formal systems, cognitive science, artificial intelligence, computational creativity, mathematical reasoning and cognitive musicology, with the objective of bringing about a computational creative system to be deployed in two representative working domains of creativity: mathematics and music. COIN-VENT is coordinated by IIIA-CSIC, Barcelona, Spain, and has as partners: University of Edinburgh, Osnabrück University, Otto-von-Guericke University Magdeburg, Goldsmiths University of London, Aristotle University of Thessaloniki, University of Dundee, and Free University of Bozen-Bolzano.

### ESSENCE

### http://www.essence-network.com

ESSENCE (Evolution of Shared Semantics in Computational Environments) is a European research training network that aims to translate the capabilities that enable human societies to negotiate and evolve meaning in communication to computational systems. The fouryear programme is carried out by a multidisciplinary consortium composed of leading research groups in AI, linguistics, semantic technologies, and evolutionary robotics, as well as industrial and governmental organisations from six countries. It aims to build a sustainable European research base in the area by training 15 junior PhD researchers and organising a host of international events that will help bring together expertise from such areas as language evolution, autonomous decision making, knowledge representation and reasoning, and computational linguistics. For more information, please visit our website.

### Facebook

### https://www.facebook.com

Facebook is a popular free social networking website that allows registered users to create profiles, upload photos and video, send messages and keep in touch with friends, family and colleagues. Founded in 2004, Facebook's mission is to give people the power to share and make the world more open and connected. People use Facebook to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them.

### Google Inc.

#### research.google.com

Google's mission is to organize the world's information and make it universally accessible and useful. Perhaps as remarkable as two Stanford research students having the ambition to found a company with such a lofty objective is the progress the company has made to that end. Ten years ago, Larry Page and Sergey Brin applied their research to an interesting problem and invented the world's most popular search engine. The same spirit holds true at Google today. The mission of research at Google is to deliver cutting-edge innovation that improves Google products and enriches the lives of all who use them. We publish innovation through industry standards, and our researchers are often helping to define not just today's products but also tomorrow's.

### Huawei

### www.hauwei.com

Huawei is a leading global ICT solutions provider. Through our dedication to customer-centric innovation and strong partnerships, we have established end-to-end capabilities and strengths across the carrier networks, enterprise, consumer, and cloud computing fields. We are committed to creating maximum value for telecom carriers, enterprises and consumers by providing competitive ICT solutions and services. Our products and solutions have been deployed in over 140 countries, serving more than one third of the world's population.

#### **IBM Research**

#### www.ibm.com

IBM has developed a thoughtful, comprehensive approach to corporate citizenship that we believe aligns with IBM's values and maximizes the impact we can make as a global enterprise. We focus on specific societal issues, including the environment, community economic development, education, health, literacy, language and culture. IBM is committed to environmental leadership in all of our business activities. Our global environmental management system ensures the company is vigilant in protecting the environment across all of its operations worldwide.

### INSIGHT

### http://www.insightproject.eu/

The Insight Project is a consortium funded by the EU Seventh Framework Programme for research, technological development and demonstration under grant agreement no 308943, within the program of FET Open. The project offers and elaborates the Neural Replicator Hypothesis (NRH) stating that the missing ingredient for reaching adequate models of intelligence is true Darwinian neurodynamics of replicators within the brain. INSIGHT is based on, and refines, plausible neurobiological foundations of neuronal replicators. It attempts to show that Darwinian neurodynamics offers a credible and efficient algorithm for approximate Bayesian inference in the brain. The project is coordinated by Eors Szathmáry from the Parmenides Foundation in Munich (Germany) and includes the University of Sussex, the Universitat Pompeu Fabra, the Ecole Polytechnique de Lausanne, and IN Project Management from Udine.

### Medallia

At Medallia we collect, analyze and display terabytes of structured and unstructured data for our multi-billion dollar clients in real time. We mix academy innovation with industry technology to create tools that help our clients understand their information and provide a better service. We build products on top of machine learning techniques including sentiment analysis, automatic topic discovery and time series analysis for anomaly detection. Get to know more about us at www.medallia.com

### **Microsoft Research**

### www.microsoft.com

At Microsoft, we're motivated and inspired every day by how our customers use our software to find creative solutions to business problems, develop breakthrough ideas, and stay connected to what's most important to them. We are committed long term to the mission of helping our customers realize their full potential. Just as we constantly update and improve our products, we want to continually evolve our company to be in the best position to accelerate new technologies as they emerge and to better serve our customers.

### PRAISE

### http://www.iiia.csic.es/praise/

PRAISE is a social network for music education with tools for giving and receiving feedback. It aims to widen access to music education and make learning music more a supportive, social environment using the latest techniques in social networks, online community building, intelligent personal agents and audio and gesture analysis. Any member of any community can post audio to any community for which they are a member and ask for specific kinds of feedback on various regions of that audio. Any community member can respond with text, or with other audio to emphasize a particular point about style or performance for example. PRAISE enables online virtual communities of students with shared interests or goals to come together to share their music practice and music goals with each other so the process of learning can become social and shared and giving positive feedback and constructive criticism each other is part of the fabric of the community.

### Tencent

Founded in November, 1998, Tencent has grown into one of China's largest and most used Internet service portal. Since its establishment over the last decade, Tencent has maintained steady growth under its user-oriented operating strategies. It is Tencent's mission to enhance the quality of human life through Internet services. Presently, Tencent is providing value-added Internet, mobile and telecom services and online advertising under the strategic goal of providing users with "one-stop online lifestyle services". The development of Tencent has profoundly influenced the ways hundreds of millions of Internet users communicate with one another as well as their lifestyles. It also brings possibilities of a wider range of applications to the China's Internet industry. Looking forward, Tencent remains committed to enhancing its development and innovation capabilities while strengthening its nationwide branding for its long term development. Tencent's long term vision is to become the most respected Internet enterprise. In order to fulfill corporate social responsibilities and to promote civil Internet communities, Tencent has been actively participating in public charity programs. In 2006, Tencent inaugurated the Tencent Charity Fund, the first charity foundation set up by a Chinese Internet enterprise, and the public charity website gongyi.qq.com. The website focuses on youth education, assisting impoverished communities, care for the disadvantaged, and disaster relief. Tencent has currently begun a number of public charity projects across China. It strives to help build a harmonious society and to become a good corporate citizen.

### Elsevier

### www.elsevier.com/computerscience

Elsevier is committed to making important contributions to the artificial intelligence community by delivering world-class information and innovative tools. Elsevier's Artificial Intelligence, which commenced publication in 1970, is now the generally accepted premier international forum for the publication of results of current research in this field. The journal welcomes foundational and applied papers describing mature work involving computational accounts of aspects of intelligence. Please visit us at our stand or visit www.elsevier.com/computerscience for more information about Artificial Intelligence journal and Elsevier.

### Springer

### www.springer.com

Looking to publish your research? Discover Springer's print and electronic publication services, including open access! Get high quality review, maximum readership and rapid distribution. Visit our booth or springer.com/ authors. You can also browse key titles in your field and buy (e)books at discount prices. With Springer you are in good company.

### IJCAI-16

### www.ijcai-16.org

The booth will display the IJCAI-16 poster as well as materials about New York. The booth will be manned by researchers of the Local Arrangements Committee who can answer questions regarding the organization of IJCAI 2016 in New York, USA.

### IJCAI-17

www.ijcai-17.org

We will have a booth to publicize the forthcoming IJCAI-17 conference in Melbourne, Australia.

# DAY 1

# **TUESDAY, JULY 28TH**

Timetable	Place	Session	Paper ID	Title	Author/ Authors
08:30 - 09:30	ROOM LB	Invited 9	Invited 9	Computers and Thought Award	Prof. Ariel Procaccia
09:30 - 09:40	ROOM LB	Transition 1		Transition	
		Distinguished	Main75	Recursive Decomposition for Nonconvex Optimization	Abram Friesen, Pedro Domingos
09:40 - 10:40	ROOM GH	Paper Distinguished	ML112	Bayesian Active Learning for Posterior Estimation	Kirthevasan Kandasamy, Jeff Schneider, Barnabas Poczos
		Paper Track	KR297	Reasonable Highly Expressive Query Languages	Pierre Bourhis, Markus Krötzsch, Sebastian Rudolph
			Main 144	Simple Causes of Complexity in Hedonic Games	Dominik Peters, Edith Elkind
09:40 - 10:40	ROOM LB1	<b>Main 1</b> Game Theory 1	Main 99	The Adjusted Winner Procedure: Characterizations and Equilibria	Haris Aziz, Simina Brânzei, Aris Filos-Ratsikas, Søren Kristoffer Stiil Frederiksen
		danie moor y r	Main 10	Impartial Peer Review	David Kurokawa, Omer Lev, Jamie Morgenstern, Ariel D. Procaccia
			Main 784	Deordering and Numeric Macro Actions for Plan Repair	Scala Enrico, Pietro Torasso
00.40 10.40	DOOMUDO	Main 76	Main 456	Cost-optimal and Net-benefit Planning- -A Parameterised Complexity View	Meysam Aghighi, Christer Bäckström
09:40 - 10:40	ROOM LB2	Planning 1	Main 1019	On the Online Generation of Effective Macro-operators	Lukas Chrpa, Mauro Vallati, Thomas Leo McCluskey
			IJCAI-JAIR	IJCAI-JAIR BEST PAPER PRIZE talk	
		<b>Main 3</b> Relational Learning	Main 718	Anytime Inference in Probabilistic Logic Programs with Tp-compilation	Jonas Vlasselaer, Guy Van den Broeck, Angelika Kimmig, Wannes Meert, Luc de Raedt
00 40 10 40	DOOMIDO		Main 554	Knowledge Base Completion Using Embeddings and Rules	Quan Wang, Bin Wang
09:40 - 10:40	ROOM LB3		Main 580	Inducing Probabilistic Relational Rules from Probabilistic Examples	Luc de Raedt, Anton Dries, Ingo Thon, Guy Van den Broeck, Mathias Verbeke
			Main 1333	Saul: Towards Declarative Learning Based Programming	Parisa Kordjamshidi, Dan Roth, Hao Wu
			KR66	Modular Systems with Preferences	Alireza Ensan, Eugenia Ternovska
09:40 - 10:40	R00M LP	<b>KR1</b> KR Track: Aggregations	KR126	Multilateral Negotiation in Boolean Games with Incomplete Information using Generalized Possibilistic Logic	Sofie de Clercq, Steven Schockaert, Martine de Cock, Ann Nowé
	Ayyı eyations	KR224	Computing social behaviours using agent models	Paolo Felli, Tim Miller, Christian Muise, Adrian R. Pearce, Liz Sonenberg	
09:40 - 10:40 R00M R1		ML1 ROOM R1 ML Track: Deep Learning 1	ML56	Deep Convolutional Neural Networks on Multichannel Time Series for Human Activity Recognition	Jian-Bo Yang, Minh Nhut Nguyen, Phyo Phyo San, Xiaoli Li, Priyadarsini Krishnaswamy Shonali
	ROOM R1		ML249	Speeding up Automatic Hyperparameter Optimization of Deep Neural Networks by Extrapolation of Learning Curves	Tobias Domhan, Tobias Springenberg, Frank Hutter
			ML250	Perception Evolution Network — Adapting to the Emergence of New Sensory Receptor	Youlu Xing, Furao Shen, Jinxi Zhao
		ML514	Equivalence Results between Feedforward and Recurrent Neural Networks for Sequences	Alessandro Sperduti	

# **TUESDAY, JULY 28TH**

# DAY 1

			AIA15	Looking at Mondrian's Victory Boogie-Woogie: What do I feel?	Andreza Sartori, Yan Yan, Gözde Özbal, Alkim Almila Akdag Salah, Albert Ali Salah, Nicu Sebe	
09:40 - 10:40 R00M R2	<b>AIA1</b> Al&Arts: Visual Arts, Music, Language	AIA20	Computational invention of cadences and chord progressions by conceptual chord-blending	Manfred Eppe, Roberto Confalonieri, Ewen Maclean, Maximos Kaliakatsos, Emilios Cambouropoulos, Mihai Codescu, Marco Schorlemmer, Kai-Uwe Kuehnberger		
			AIA44	Slogans are not forever: Adapting Linguistic Expressions to the News	Lorenzo Gatti, Gözde Özbal, Marco Guerini, Oliviero Stock, Carlo Strapparava	
			C\$33	Clustering Dynamic Spatio-Temporal Patterns in The Presence of Noise and Missing Data	Xi Chen, Faghmous James, Ankush Khandelwal, Vipin Kumar	
09:40 - 10:40	ROOM R3	<b>CS2</b> CS Track: Machine	CS87	Copula Graphical Models for Wind Resource Estimation	Kalyan Veeramachaneni, Alfredo Cuesta-Infante, Una-May O'Reilly	
		learning	CS92	On the Balance of Meter Deployment Cost and NILM Accuracy	Xiaohong Hao, Bangsheng Tang, Yongcai Wang	
			CS100	Modeling Multi-Attribute Demand for Sustainable Cloud Computing With Copulae	Maryam Ghasemi, Benjamin Lubin	
10:40 - 11:10		Poster 1		Coffee and Poster 1		
		<b>Sist1</b> Sister Track: Games, Probability & Ontologies	Sist1	Near-Optimal Approximation Mechanisms for Multi-Unit Combinatorial Auctions (from AAMAS'13)	Piotr Krysta	
11:10 - 12:10	ROOM GH		Sist4	Reasoning with Probabilistic Ontologies (from RR'13)	Fabrizio Riguzzi	
			Sist6	Firefly Monte Carlo: Exact MCMC with Subsets of Data (from UAI'14)	Dougal Maclaurin and Ryan Adams	
		<b>Main 4</b> Game Theory 2		Main 550	Fixing tournaments for kings chokers and more	
11:10 - 12:10	ROOM LB1		Main 429	Gibbard–Satterthwaite Games	Edith Elkind, Umberto Grandi, Francesca Rossi, Arkadii Slinko	
			Main 720	Truthful Cake Cutting Mechanisms with Externalities: Do not make them care for others too much!	Minming Li, Jialin Zhang, Qiang Zhang	
			Main 812	Automated Rule Selection for Aspect Extraction in Opinion Mining	Qian Liu, Zhiqiang Gao, Bing Liu, Yuanlin Zhang	
		Main 5	Main 791	Prior-based Dual Additive Latent Dirichlet Allocation for User-item Connected Documents	Wei Zhang, Jianyong Wang	
11:10 - 12:10	ROOM LB2	Natural Language Processing 1	Main 1412	Joint POS Tagging and Text Normalization for Informal Text	Chen Li, Yang Liu	
			Main 830	Multi-Document Abstractive Summarization Using ILP based Multi-Sentence Compression	Siddhartha Banerjee, Prasenjit Mitra, Kazunari Sugiyama	
			Main 363	Strategy-Proofness of Scoring Allocation Correspondences for Indivisible Goods	Nhan-Tam Nguyen, Dorothea Baumeister, Joerg Rothe	
			Main 284	What Do We Elect Committees For? A Voting Committee Model for Multi-Winner Rules	Piotr Skowron	
11:10 - 12:10 ROOM LB3	Main 6 DM LB3 Multiagent Systems 1	Main 101	Equilibria Under the Probabilistic Serial Rule	Haris Aziz, Serge Gaspers, Simon Mackenzie, Nicholas Mattei, Nina Narodytska, Toby Walsh		
			Main 1124	Estimating the Margin of Victory of Elections using Sampling	Palash Dey, Y. Narahari	

# DAY 1

# TUESDAY, JULY 28TH

			KR25	Polynomial Rewritings for Linear Existential Rules	Georg Gottlob, Marco Manna, Andreas Pieris
11:10 - 12:10 ROOM LP	KR2	KR98	Efficient Query Rewriting in the Description Logic EL and Beyond	Peter Hansen, Carsten Lutz, Inanc Seylan, Frank Wolter	
	KR Track: DL and Ontologies 1	KR106	Query Rewriting for Existential Rules with Compiled Preorder	Mélanie König, Michel Leclère, Marie-Laure Mugnier	
			KR132	The Combined Approach to Query Answering Beyond the OWL 2 Profiles	Cristina Feier, David Carral, Giorgio Stefanoni, Bernardo C. Cuenca Grau, Ian Horrocks
			Main 140	Exploring Implicit Hierarchical Structure for Recommender Systems	Suhang Wang, Jiliang Tang, Huan Liu, Yilin Wang
11:10 - 12:10	ROOM R1	Main 7 Recommender	Main 119	Simple Atom Selection Strategy for Greedy Matrix Completion	Zebang Shen, Hui Qian
		Systems 1	Main 589	Personalized Tour Recommendation based on User Interests and Points of Interest Visit Durations	Kwan Hui Lim, Jeffrey Chan, Christopher Leckie, Shanika Karunasekera
			ML35	Collaborative Place Models	Berk Kapicioglu, David S. Rosenberg, Robert E. Schapire, Tony Jebara
		ML2	ML105	Introspective Forecasting	Loizos Michael
11:10 - 12:10	ROOM R2	ML Track: New Problems	ML438	Sketch the Storyline with CHARCOAL: a Non-parametric Approach	Siliang Tang, Wu Fei, Si Li, Zhongfei Zhang
			ML558	Open Domain Short Text Conceptualization: A Generative + Descriptive Modeling Approach	Yangqiu Song, Shusen Wang, Haixun Wang
		Main 70 OM R3 Heuristic Search 1	Main 159	Mining Expert Play to Guide Monte Carlo Search in the Opening Moves of Go	Steinmetz Erik, Maria L. Gini
11:10 - 12:10	ROOM R3		Main 1102	Computing Possibly Optimal Solutions for Multi-Objective Constraint Optimisation with Tradeoffs	Nic Wilson, Razak Abdul, Radu Marinescu
			Main 93	Generalized Rapid Action Value Estimation	Tristan Cazenave
			Main 1253	Efficient Search with an Ensemble of Heuristics	Mike Phillips, Venkatraman Narayanan, Sandip Aine, Maxim Likhachev
12:10 - 12:30		Poster 2		Poster 2	
12:30 - 14:00		Lunch 1		Lunch	
14:00 - 15:00	R00M LB	Invited 1	Invited 1	Invited Talk 1: Julien Cornebise Towards General Artificial Intelligence	Dr. Julien Cornebise
14:00 - 15:00	ROOM R	Invited 2	Invited 2	Invited Talk 2: Christof Koch Consciousness in Biological and Artificial Brains	Christof Koch
15:00 - 15:10		Transition 2		Transition	
			Journal 17	New Avenues in Opinion Mining and Sentiment Analysis (Extended Abstract)	Erik Cambria
15:10 – 16:30 ROOM GH		<b>Joli Journal Track:</b> Natural Language Processing	Journal 18	Phrase Detectives: Utilizing Collective Intelli- gence for Internet-Scale Language Resource Creation (Extended Abstract)	Massimo Poesio
	ROOM GH		Journal 19	Developing Corpora for Sentiment Analysis: The Case of Irony and Senti–TUT (Extended abstract)	Cristina Bosco
			Journal 20	Feature Ensemble Plus Sample Selection: Domain Adaptation for Sentiment Classification (Extended Abstract)	Rui Xia
		Journal 21	Enhanced SenticNet with Affective Labels for Concept-based Opinion Mining [Extended Abstract]	Soujanya Poria	

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15:10 - 16:30 ROOM LB1		Main 432	Learning Cooperative Games	Maria F Balcan, Ariel D. Procaccia, Yair Zick					
			Main 808	Influence in Classification via Cooperative Game Theory	Amit Datta, Anupam Datta, Ariel D. Procaccia, Yair Zick				
	<b>Main 8</b> Game Theory 3	Main 658	Simultaneous Abstraction and Equilibrium Finding in Games	Noam Brown, Tuomas Sandholm					
			Main 521	Solving Heads-up Limit Texas Hold'em	Oskari Tammelin, Neil Burch, Michael Johanson, Michael Bowling				
			ML-ISC1	Learning in the Model Space	Huanhuan Chen				
15:10 - 16:30	ROOM LB2	ML-ISC1 ML Track: Invited Sister Conference	ML-ISC2	Fast Spatio-temporal Analysis via Low Rank Tensor Learning	Yan Liu				
		Presentations 1	ML-ISC3	Languages for Mining and Learning	Luc de Raedt				
			ML-ISC4	Learning as Interpretation	Stephen Muggleton				
			Main 152	Tackling Data Sparseness in Recommendation using Social Media based Topic Hierarchy Modeling	Xingwei Zhu, Zhao-Yan Ming, Yu Hao, Xiaoyan Zhu				
15:10 - 16:30	R00M LB3	<b>Main 10</b> Web Mining 1	Main 1446	Catch the Black Sheep: Unified Shilling Attack Detection based on Fraudulent Action Propagation	Yongfeng Zhang, Yunzhi Tan, Min Zhang, Yiqun Liu, Shaoping Ma				
		wen winning i	Main 17	Detecting Promotion Campaigns in Community Question Answering	Xin Li, Yiqun Liu, Min Zhang, Shaoping Ma, Xuan Zhu, Jiashen Sun				
			Main 1504	Learning Geographical Hierarchy Feature for Image Location Prediction	Zhang Xiaoming, Xia Hu				
		<b>KR3</b> KR Track: DL and Ontologies 2		KR40	The Complexity of Subsumption in Fuzzy El	Stefan Borgwardt, Marco Cerami Rafael Peñaloza			
			KR123	Efficient Paraconsistent Reasoning with Ontologies and Rules	Tobias Kaminski, Matthias Knorr, Joao Leite				
15:10 - 16:30	ROOM LP		KR133	First-Order Rewritability of Ontology-Mediated Temporal Queries	Alessandro Artale, Roman Kontchakov, Alisa Kovtunova, Vladislav Ryzhikov, Frank Wolter, Michael Zakharyaschev				
			KR260	Verification of Generalized Inconsistency- Aware Knowledge and Action Bases	Diego Calvanese, Marco Montali, Ario Santoso				
		<b>Main 11</b> Natural Language	Main 823	Iterative Learning of Parallel Lexicons and Phrases from Non-Parallel Corpora	Meiping Dong, Yang Liu, Maosong Sun				
			Main 874	Learning Context-Sensitive Word Embeddings with Neural Tensor Skip-Gram Model	PengFei Liu, Xipeng Qiu, Xuanjing Huang				
15:10 - 16:30	ROOM R1		Main 252	Representation Learning for Measuring Entity Relatedness with Rich Information	Yu Zhao, Zhiyuan Liu, Maosong Sun				
		Processing 2	Main 982	Local Translation Prediction with Global Sentence Representation	Jiajun Zhang				
		Main 164	Joint Learning of Character and Word Embeddings	Lei Xu, Xinxiong Chen, Zhiyuan Liu, Maosong Sun, Huanbo Luan					
15:10 - 16:30 ROOM R2			ML78	Multi-Task Model and Feature Joint Learning	Ya Li, Xinmei Tian, Tongliang Liu, Dacheng Tao				
		ML3 ML Track: Transfer Learning and Multi-task Learning					ML106	Deep Low-Rank Coding for Transfer Learning	Zhengming Ding, Ming Shao, Yun Fu
			ML142	Multi-task Multi-view Clustering for Non-negative Data	Xianchao Zhang, Xiaotong Zhang, Han Liu				
	ROOM R2		ML174	Portable Option Discovery for Automated Learning Transfer in Object-Oriented Markov Decision Processes	Nicholay Topin, Nicholas Haltmeyer, Shawn Squire, John Winder, Marie des Jardins, James MacGlashan				
			ML340	Multi-task Multi-dimensional Hawkes Processes for Modeling Event Sequences	Dixin Luo, Hongteng Xu, Yi Zhen, Xia Ning, Hongyuan Zha				
		ML350	Multitask Coactive Learning	Robby Goetschalckx, Alan Fern, Prasad Tadepalli					

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# TUESDAY, JULY 28TH

15:10 - 16:30 ROOM R3		ML230	Word Embedding Revisited: A New Representation Learning and Explicit Matrix Factorization Perspective	Yitan Li, Linli Xu, Fei Tian, Liang Jiang		
	ML4 ML Track: Matrix	ML311	Matrix Factorization with Scale-Invariant Parameters	Guangxiang Zeng, Hengshu Zhu, Qi Liu, Ping Luo, Enhong Chen, Tong Zhang		
		Completion	ML414	Accelerated Inexact Soft-Impute for Fast Large-Scale Matrix Completion	Quanming Yao, James Kwok	
			ML473	Scalable Probabilistic Tensor Factorization for Binary and Count Data	Piyush Rai, Changwei Hu, Lawrence Carin	
16:30 - 17:00		Poster 3		Coffee and Poster 3		
			Main 1297	The Complexity of Model Checking Succinct Multiagent Systems	Xiaowei Huang	
		Main 71	Main 218	Pushdown Multi-Agent System Verification	Aniello Murano, Giuseppe Perelli	
17:00 - 18:00	ROOM GH	Model Verification / Model Checking	Main 688	Verifying Emergent Properties of Swarms	Alessio Lomuscio, Panagiotis Kouvaros	
			Main 672	Symbolic model-checking for single resource RB+-ATL	Natasha Alechina, Brian Logan, Hoang Nga Nguyen, Franco Raimondi	
			Main1 078	Multi-Armed Bandits for Adaptive Constraint Propagation	Amine Balafrej, Anastasia Paparrizou, Christian Bessiere	
17:00 - 18:00	ROOM LB1	<b>Main 73</b> Constraints, Satisfiability and Search 1	Main 608	Efficient Algorithms with Performance Guarantees for the Stochastic Multiple-Choice Knapsack Problem	Long Tran-Thanh, Yingce Xia, Tao Qin, Nick Jennings	
			Main 1383	Personalized Mathematical Word Problem Generation	Oleksandr Polozov, Eleanor O'Rourke, Adam M. Smith, Luke Zettlemoyer, Sumit Gulwani, Zoran Popovi	
		<b>Main 13</b> Social Networks 1		Main 1317	Optimal Route Search with the Coverage of Users' Preferences	Xuefeng Chen, Yifeng Zeng, Xin Cao, Shengchao Qin, Marc Cavazza, Yanping Xiang
			Main 377	How Robust is the Wisdom of the Crowds?	Noga Alon, Michal Feldman, Omer Lev, Moshe Tennenholtz	
17:00 - 18:00	ROOM LB2		Main 234	Integrated Anchor and Social Link Predictions across Social Networks	Jiawei Zhang, Philip Yu	
			Main 834	Uncovering the Formation of Triadic Closure in Social Networks	Zhanpeng Fang, Jie Tang	
			Main 796	Face clustering in videos with proportion prior	Zhiqiang Tang, Yifan Zhang, Iu Han Qing	
17:00 - 18:00 ROOM LB3	ROOM LB3	Main 14 Vision and	Main 1491	Generalized Transitive Distance with Minimum Spanning Random Forest	Zhiding Yu, Weiyang Liu, Wenbo Liu, Xi Peng, Zhuo Hui, Vijayakumar Bhagavatula	
	Perception 1	Main 693	Saliency Detection with a Deeper Investigation of Light Field	Jun Zhang, Meng Wang, Jun Gao, Yi Wang, Xudong Zhang, Xindong Wu		
17:00 – 18:00 ROOM LP			KR41	Temporal Query Answering in the Description Logic EL	Stefan Borgwardt, Veronika Thost	
		KD 4	KR42	Beyond SPARQL under OWL 2 QL Entailment Regime: Rules to the Rescue	Georg Gottlob, Andreas Pieris	
	ROOM LP	COM LP KR Track: DL and Ontologies 3	KR82	Controlled Query Evaluation for Datalog and OWL 2 Profile Ontologies	Bernardo C Cuenca Grau, Evgeny Kharlamov, Egor V. Kostylev, Dmitriy Zheleznyakov	
		KR101	Combining Existential Rules and Description Logics	Antoine Amarilli, Michael Benedikt		

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			Main 779	Mechanism Design and Search Algorithm for Lung Exchange	Suiqian Luo, Pingzhong Tang
17:00 - 18:00	17:00 - 18:00 R00M R1	Main 15 Auctions and Market-Based Systems	Main 876	Selling Reserved Instances in Cloud Computing	Changjun Wang, Weidong Ma, Tao Qin, Xujin Chen, Xiaodong Hu, Tieyan Liu
			Main 1252	Maximal Cooperation in Repeated Games on Social Networks	Catherine Moon, Vincent Conitzer
			ML186	Compressed Spectral Regression for Efficient Nonlinear Dimensionality Reduction	Deng Cai
17:00 - 18:00	800M 82	<b>ML5</b> ML Track: High-	ML214	Semi-Orthogonal Multilinear PCA with Relaxed Start	Qiquan Shi, Haiping Lu
17:00 - 18:00	RUUM RZ	Dimensional Data 1	ML279	Feature Selection from Microarray Data via an Ordered Search with Projected Margin	Saulo Villela, Saul C. Leite, Raul Fonseca Neto
			ML475	Discriminative Unsupervised Dimensionality Reduction	Xiaoqian Wang, Feiping Nie, Heng Huang
			ML138	Model Metric Co-learning for Time Series Classification	Huanhuan Chen, Fengzhen Tang, Peter Tino, Anthony Cohn, Xin Yao
17:00 - 18:00	ROOM R3	ML6 ML Track: Online	ML227	Imaging Time-Series to Improve Classification and Imputation	Zhiguang Wang, Tim Oates
17:00 - 10:00	NUUM NJ	Learning and Sequential Data 1	ML299	On the Runtime of Randomized Local Search and Simple Evolutionary Algorithms for Dynamic Makespan Scheduling	Frank Neumann, Carsten Witt
			ML418	Unsupervised Condition Monitoring Using Segmental Hidden Markov Models	Chao Yuan
18:00 - 19:00		Poster 4		Poster 4	

### WEDNESDAY, JULY 29TH

Timetable	Place	Session	Paper ID	Title	Author/ Authors
08:30 - 10:10	ROOM GH	Ind1	Ind1	Industry Session 1 Alibaba Group Holding Limited	
08:30 - 10:10	ROOM GH	Ind1	Ind2	Industry Session 1 Microsoft Corporation	
			Main 35	Possible and Necessary Allocations via Sequential Mechanisms	Haris Aziz, Toby Walsh, Lirong Xia
			Main 1320	Wisdom of Waze	Shoshana Vasserman, Michal Feldman, Avinatan Hassidim
			Main 1216	Computing Optimal Mixed Strategies for Security Games with Dynamic Payoffs	Yue Yin, Haifeng Xu, Jiarui Gan, Bo An, Albert Xin Jiang
08:30 - 10:10	ROOM LB1	Main 16	Main 705	A characterization of n-player strongly monotone scheduling mechanisms	Annamaria Kovacs, Angelina Vidali
00:30 - 10:10		Game Theory 4	Main 545	Spiteful Bidding in the Dollar Auction	Marcin Waniek, Agata Niescieruk, Tomasz P Michalak, Talal Rahwan
			Main 1217	Strategic Network Formation through Intermediaries	Elliot Anshelevich, Onkar Bhardwaj, Koushik Kar
			Main 1201	Optimal Network Security Hardening Using Attack Graph Games	Karel Durkota, Viliam Lisy, Branislav Bosansky, Christopher Kiekintveld
			Main 313	Trailer Generation via A Point Process-based Visual Attractiveness Model	Hongteng Xu, Yi Zhen, Hongyuan Zha
			Main 226	Social Image Parsing by Cross-Modal Data Refinement	Zhiwu Lu, Xin Gao, Liwei Wang, Songfang Huang
			Main 145	Cross-View Projective Dictionary Learning for Person Re-identification	Sheng Li, Ming Shao, Yun Fu
			Main 954	Modeling Inter- and Intra-Part Deformations for Object Structure Parsing	Cai Ling, Rongrong Ji
00.00 10.10	DOOMUDO	Main 18	Main 1480	Adaptive Sharing for Image Classification	Li Shen, Gang Sun, Zhouchen Lin, Qingming Huang, Enhua Wu
08:30 - 10:10	ROOM LB2	Vision and Perception 2	Main 13	Salient Object Detection via Augmented Hypotheses	Nguyen Tam
			Main 670	Video Covariance Matrix Logarithm for Human Action Recognition in Videos	Piotr T Bilinski, Francois Bremond
			Main 268	Inferring Painting Style with Multi-task Dictionary Learning	Gaowen Liu, Yan Yan, Elisa Ricci, Yi Yang, Yahong Han, Nicu Sebe
			Main 139	Semantic Single Video Segmentation with Robust Graph Representation	Handong Zhao, Yun Fu
			Main 995	Efficient and Accurate Set Based Registration of Aerial Images	Arandjelovic Ognjen
			AIA10	Stroke–Based Stylization Learning and Rendering with Inverse Reinforcement Learning	Ning Xie, Tingting Zhao, Feng Tian, Xiaohua Zhang, Masashi Sugiyama
			AIA28	Heroic vs Collaborative AI for the Arts	Jon McCormack, Mark d'Inverno
08:30 - 10:10	ROOM LB3	AIA2 AI&Arts: Music, Dance, Language,	AIA33	Kinetic imaginations: Exploring the possibilities of combining AI and dance	Alexander Berman, Valencia James
		Visual Arts	AIA36	Pseudo-supervised training improves unsupervised melody segmentation	Stefan Lattner, Maarten Grachten, Carlos E. Cancino Chacón
			AIA52	Learning to Rap Battle with Bilingual Recursive Neural Networks	Dekai Wu, Karteek Addanki

### WEDNESDAY, JULY 29TH

			KR19	A Logic for Reasoning about Justified Uncertain Beliefs	Tuan-Fang Fan, Churn-Jung Liau
		KR32	Probabilistic Reasoning with Inconsistent Beliefs using Inconsistency Measures	Nico Potyka, Matthias Thimm	
			KR136	The cube of opposition - A structure underlying many knowledge representation formalisms	Didier Dubois, Henri Prade, Agnčs Rico
	50044.5	<b>KR5</b> KR Track:	KR166	Probabilistic belief contraction using argumentation	Kinzang Chhogyal, Abhaya Nayak, Zhiqiang Zhuang, Abdul Sattar
08:30 - 10:10	ROOM LP	Uncertainty reasoning	KR189	Probabilistic Inference in Hybrid Domains by Weighted Model Integration	Vaishak Belle, Andrea Passerini, Guy Van den Broeck
			KR261	Tractable Learning for Structured Probability Spaces: A Case Study in Learning Preference Distributions	Arthur Choi, Guy Van den Broeck, Adnan Darwiche
			KR320	Compatible-based conditioning in interval-based possibilistic logic	Salem Benferhat, Amélie Levray, Karim Tabia, Vladik Kreinovich
			KR702	The Logic of Qualitative Probability	James Delgrande, Bryan Renne
			ML354	Robust Learning for Repeated Stochastic Games via Meta-Gaming	Jacob Crandall
			ML327	Autonomous Cross-Domain Knowledge Transfer in Lifelong Policy Gradient Reinforcement Learning	Haitham Bou Ammar, Eric Eaton, Jose Marcio Luna, Paul Ruvolo
		<b>ML7</b> ML Track: Reinforcement Learning 1	ML511	Symbol Acquisition for Probabilistic High-Level Planning	George Konidaris, Leslie Kaelbling, Tomas Lozano-Perez
08:30 - 10:10 R00M R1	ROOM R1		ML604	Between Imitation and Intention Learning	James MacGlashan, Michael L. Littman
			ML623	Policy Shaping With Human Teachers	Thomas Cederborg, Ishaan Grover, Charles L. Isbell Jr., Andrea Thomaz
			ML641	Active Imitation Learning of Hierarchical Policies	Mandana Hamidi, Prasad Tadepalli, Robby Goetschalckx, Alan Fern
			ML668	Inverse Reinforcement Learning in Relational Domains	Thibaut Munzer, Bilal Piot, Matthieu Geist, Olivier Pietquin, Manuel Lopes
			ML139	Using A* for Inference in Probabilistic Classifier Chains	Deiner Mena, Elena Montañés, José R. Quevedo, Juan J. del Coz
			ML211	Crowdsourced Semantic Matching of Multi-Label Annotations	Lei Duan, Satoshi Oyama, Masahito Kurihara, Haruhiko Sato
		ML8	ML263	Muti-label structure learning with Ising model selection	Andre R. Goncalves, Fernando J. Von Zuben, Arindam Banerjee
08:30 - 10:10	ROOM R2	ML Track: Multi-label	ML306	Towards Class-Imbalance Aware Multi-Label Learning	Min-Ling Zhang, Yu-Kun Li, Xu-Ying Liu
		Learning	ML427	Polytree-Augmented Classifier Chains for Multi-Label Classification	Lu Sun, Mineichi Kudo
			ML458	Semi-supervised Multi-label Learning with Incomplete Labels	Feipeng Zhao, Yuhong Guo
			ML478	Multi-label Classification with Feature-aware Non-linear Label Space Transformation	Xin Li, Yuhong Guo

## WEDNESDAY, JULY 29TH

				Complexity Consistive Desister Presedures for	Walfgang Dugžál Matti
		Journal 1	Complexity-Sensitive Decision Procedures for Abstract Argumentation (Extended Abstract)	Wolfgang Dvočák, Matti Järvisalo, Johannes Peter Wallner, Stefan Woltran	
		Journal 2	Common Sense Reasoning for Detection Prevention and Mitigation of Cyberbullying (Extended Abstract)	Karthik Dinakar, Rosalind Picard, Henry Lieberman	
		<b>Jnl2</b> Journal Track:	Journal 3	Inapproximability of Treewidth and Related Problems (Extended Abstract)	Yu Wu, Per Austrin, Toniann Pitassi, David Liu
08:30 - 10:10	ROOM R3	Reasoning, Learning & Social Media	Journal 4	Influencing Individually: Fusing Personalization and Persuasion Extended Abstract	Shlomo Berkovsky, Jill Freyne, Harri Oinas-Kukkonen
		mould	Journal 10	The Arcade Learning Environment: An Evaluation Platform for General Agents (Extended Abstract)	Marc G. Bellemare, Yavar Naddaf, Joel Veness, Michael Bowling
			Journal 6	Using Social Media to Enhance Emergency Situation Awareness: Extended Abstract	Jie Yin, Harri Oinas-Kukkonen, Andrew Lampert, Mark Cameron, Bella Robinson, Robert Power
10:10 - 10:40		Poster 5		Coffee and Poster 5	
10:40 - 12:10	ROOM GH	Ind2	Ind3	Industry Session 2 Tencent Holdings Limited	
10:40 - 12:10	ROOM GH	Ind2	Ind4	Industry Session 2 Facebook Incorporation	
			Sist2	Speedy versus Greedy Search (from SoCS'14)	Christopher Wilt and Wheeler Ruml
		<b>Sist2</b> Sister Track: Planning and Search	Sist7	Max is More than Min: Solving Maximization Problems with Heuristic Search (from SoCS'14)	Roni Stern, Scott Kiesel, Rami Puzis, Ariel Felner and Wheeler Ruml
10:40 - 12:10	ROOM LB1		Sist9	Exploiting Separability in Multiagent Planning with Continuous-State MDPs (from AAMAS'14)	Jilles Dibangoye, Christopher Amato, Olivier Buffet and François Charpillet
			Sist16	LP-based Heuristics for Cost-optimal Planning (from ICAPS'14)	Florian Pommerening, Gabriele Roeger, Malte Helmert and Blai Bonet
			Main 214	Equilibrium Refinement through Negotiation in Binary Voting	Umberto Grandi, Davide Grossi, Paolo Turrini
			Main 387	Welfare Maximization in Fractional Hedonic Games	Haris Aziz, Serge Gaspers, Joachim Gudmundsson, Julián Mestre, Hanjo Täubig
			Main 1009	A Bargaining Mechanism for One-Way Games	Andres Abeliuk, Gerardo Berbeglia, Pascal Van Hentenryck
		Main 19	Main 740	Convergence to Equilibria in Strategic Candidacy	Maria Polukarov, Svetlana Obraztsova, Zinovi Rabinovich, Alexander Kruglui, Nick Jennings
10:40 - 12:10	ROOM LB2	Game Theory 5	Main 713	A Dictatorship Theorem for Cake Cutting	Simina Brânzei, Peter Bro B. Miltersen
			Main 1068	A Pseudo-Polynomial Algorithm for Computing Power Indices in Graph-Restricted Weighted Voting Games	Oskar Skibski, Tomasz P. Michalak, Yuko Sakurai, Makoto Yokoo
		Main 737	Strategic Candidacy Games with Lazy Candidates	Edith Elkind, Svetlana Obraztsova, Maria Polukarov, Zinovi Rabinovich	
		Main 709	The Game-Theoretic Interaction Index on Social Networks With Applications to Link Prediction and Community Detection	Piotr Szczepa,ski, Tomasz P. Michalak, Talal Rahwan, Aleksy Barcz	

### WEDNESDAY, JULY 29TH

			Main 1018	Do we criticise (and laugh) in the same way? Multi-lingual automatic detection of satirical news in Twitter	Francesco Barbieri, Horacio Saggion, Francesco Ronzano
		Main 324	Reader-Aware Multi-Document Summarization via Sparse Coding	Piji Li, Lidong Bing, Wai Lam, Hang Li	
		Main 20	Main 1083	Towards Addressing the Winograd Schema Challenge - Building and Using Needed Tools	Arpit Sharma, Somak Aditya, Nguyen H. Vo, Chitta Baral
10:40 - 12:10	ROOM LB3	Natural Language Processing 3	Main 20	User Modeling with Neural Network for Review Rating Prediction	Duyu Tang, Bing Qin, Ting Liu
			Main 210	A Hybrid Neural Model for Type Classification of Entity Mentions	Li Dong, Furu Wei, Hong Sun, Ming Zhou, Ke Xu
			Main 335	Learning Term Embeddings for Hypernymy Identification	Zheng Yu, Haixun Wang, Xuemin Lin
			Main 238	Syntax-based deep matching of short texts	wang mingxuan, Lu Zhengdong, Li Hang, Qun Liu
			KR29	Efficiently Finding Conditional Instruments for Causal Inference	Benito van der Zander, Johannes Textor, Maciej Liskiewicz
		KR8	KR219	Query Understanding through Knowledge-Based Conceptualization	Zhongyuan Wang, Kejun Zhao, Haixun Wang, Xiaofeng Meng, Ji-Rong Wen
10:40 - 12:10	R00M LP	KR Track: Conceptualization	KR232	Membership Constraints in Formal Concept Analysis	Sebastian Rudolph, Christian Sacarea, Diana Troanca
		and causality	KR325	A Modification of the Halpern-Pearl Definition of Causality	Joseph Halpern
			KR1550	Characterizing Causal Action Theories and Their Implementations in Answer Set Program- ming: Action Languages B, C and Beyond	Haodi Zhang, Fangzhen Lin
		<b>ML9</b> ML Track: Partial	ML82	Weakly Supervised Matrix Factorization for Noisily Tagged Image Parsing	Yulei Niu, Zhiwu Lu, Ji-Rong Wen
			ML111	A Direct Boosting Approach for Semi-supervised Classification	Shaodan Zhai, Tian Xia, Zhongliang Li, Shaojun Wang
			ML305	Solving the Partial Label Learning Problem: An Instance-based Approach	Min-Ling Zhang, Fei Yu
10:40 - 12:10	ROOM R1		ML390	Maximum Entropy Semi-Supervised Inverse Reinforcement Learning	Julien Audiffren, Michal Valko, Alessandro Lazaric, Mohammad Ghavamzadeh
		Label Learning	ML431	Pre-release Prediction of Crowd Opinion on Movies	Xin Geng, Peng Hou
			ML580	Constrained Information-Theoretic Tripartite Graph Clustering to Identify Semantically Similar Relations	Chenguang Wang, Yangqiu Song, Dan Roth, Chi Wang, Jiawei Han, Heng Ji, Ming Zhang
			ML660	Extended Discriminative Random Walk: A Hypergraph Approach to Multi-View Multi-Relational Transductive Learning	Sai Nageswar Satchidanand, Harini Ananthapadmanaban, Balaraman Ravindran
			Main 1417	The Right to Obscure: a Mechanism and Initial Evaluation	Eric Huang, Jaron Lanier, Yoav Shoham
			Main 1362	Automated Geometry Theorem Proving for Human-Readable Proofs	Ke Wang, Zhendong Su
			Main 472	Combining Eye Movements and EEG to Enhance Emotion Recognition	Yifei Lu, Wei-Long Zheng, Bin-Bin Li, Bao-Liang Lu
		<b>Main 36</b> Multidisciplinary	Main 133	Offline Sketch Parsing via Shapeness Estimation	Wu Jie, Changhu Wang, Liqing Zhang, Yong Rui
10:40 - 12:10	ROOM R2	Topics and Applications	Main 1404	A New Input Method for Human Translators: Integrating Machine Translation Effectively and Imperceptibly	Guoping Huang, Jiajun Zhang, Yu Zhou, Chengqing Zong
			Main 649	A Study of Human-Agent collaboration for Multi-UAV Coordination in Dynamic Environments	Sarvapali D Ramchurn, Joel E. Fischer, Yuki Ikuno, Feng Wu, Jack Flann, Antony Waldock
			Main 442	Handling Complex Commands for Service Robot Task Requests	Perera Vittorio, Manuela Veloso
			Main 1123	Algorithmic exam generation	Omer Geiger, Shaul Markovitch

## WEDNESDAY, JULY 29TH

			CS8	\$\alpha\$-min: a compact approximate solver for finite-horizon POMDPs	Yann Dujardin, Thomas Dietterich, Iadine Chades
		CS15	Online Mechanisms for Charging Electric Vehicles in Settings with Varying Marginal Electricity Costs	Keiichiro Hayakawa, Enrico H. Gerding, Sebastian Stein, Takahiro Shiga	
10:40 - 12:10	ROOM R3	<b>CS4</b> CS Track: Reasoning,	C\$34	Multiple Instance Learning-based Birdsong Classification using Unsupervised Recording Segmentation	Jose F. Ruiz-Munoz, Mauricio Orozco-Alzate, G. Castellanos- Dominguez
		Planning and Learning	CS40	Optimal Electric Vehicle Charging Station Placement	Yanhai Xiong, Jiarui Gan, Bo An, Chunyan Miao, Ana L. C. Bazzan
			CS44	Reasoning about Connectivity Constraints	Christian Bessiere, Emmanuel Hebrard, George Katsirelos, Walsh Toby
			CS56	Secure Routing in Wireless Sensor Networks via POMDPs	Athirai A. Irissappane, Jie Zhang, Frans Oliehoek, Partha S. Dutta
12:10 - 12:30		Poster 6		Poster 6	
12:30 - 14:00		Lunch 2		Lunch	
14:00 - 15:00	ROOM LB	Invited 3	Invited 3	Invited Talk 3: Pete Wurman Al and Robotics: Tales from Kiva Systems	Pete Wurman
14:00 - 15:00	ROOM R	Invited 4	Invited 4	Invited Talk 4: Dr. Evgeniy Gabrilovich In Knowledge We Trust	Dr. Evgeniy Gabrilovich
15:00 - 15:10		Transition 3		Transition	
15:10 - 16:30	ROOM GH	Ind3	Ind5	Industry Session 3, Baidu Incorporation	
15:10 - 16:30	ROOM GH	Ind3	Ind6	Industry Session 3, Google Incorporation	
			Main 936	Envy-free Sponsored Search Auctions with Budgets	Bo Tang, Jinshan Zhang
			Main 1246	Smooth UCT Search in Computer Poker	Johannes Heinrich, David Silver
			Main 1174	Limited Lookahead in Incomplete-Information Games	Christian Kroer, Tuomas Sandholm
15:10 - 16:30	ROOM LB1	<b>Main 23</b> Game Theory 6	Main 1115	Structural Tractability of Shapley and Banzhaf Values in Allocation Games	Gianluigi Greco, Francesco Lupia, Francesco Scarcello
			Main 853	Incentivizing Peer Grading in MOOCs: An Audit Game Approach	Alejandro Carbonara, Anupam Datta, Arunesh Sinha, Yair Zick
			Main 786	SAT is an Effective and Complete Method for Solving Stable Matching Problems with Couples	Joanna Drummond, Perrault Andrew, Fahiem Bacchus
15:10 - 16:30	ROOM LB2	<b>Panel 1</b> Session Chair: Michael Woodridge	Panel 1	Panel: The Future of Al	
			Main 320	Classical Planning with Simulations: Results on the Atari Video Games	Nir Lipovetzky, Miquel Ramirez, Hector Geffner
			Main 1098	Models of Action Concurrency in Temporal Planning	Jussi Rintanen
15:10 - 16:30	ROOM LB3	<b>Main 24</b> Planning 2	Main 604	Sorting Sequential Portfolios in Automated Planning	Núñez Sergio, Daniel Borrajo, Carlos Linares López
			Main 1367	Exploiting Block Deordering for Improving Planners Efficiency	Lukas Chrpa, Fazlu Hasan Siddiqui
			Main 969	Delete Relaxations for Planning with State-Dependent Action Costs	Florian Geißer, Thomas Keller, Robert Mattmüller
			KR157	Only Knowing Meets Common Knowledge	Vaishak Belle, Gerhard Lakemeyer
15:10 - 16:30	ROOM LP	<b>KR7</b> KR Track:	KR183	Epistemic equilibrium logic	Luis FariĐas del Cerro, Andreas Herzig, Ezgi Iraz Su
		Epistemic logics	KR190	Verification of Knowledge-Based Programs over Description Logic Actions	Benjamin Zarrieß, Jens Claßen
			KR227	Multi-Agent Only Knowing on Planet Kripke	Guillaume Aucher, Vaishak Belle

## WEDNESDAY, JULY 29TH

			Main 112	Finding Diverse Solutions of High Quality	Thierry Petit, Andrew C. Trapp
	Main 25 5:10 - 16:30 ROOM R1 Constraint Optimization	Main 25	Main 1141	to Constraint Optimization Problems Improving the Effectiveness of SAT-Based Preprocessing for MaxSAT	Jeremias Berg, Paul Saikko, Matti Järvisalo
15:10 - 16:30		Constraint	Main 482	Maximum Satisfiability using Cores and Correction Sets	Nikolaj Bjorner, Nina Narodytska
		Main 375	A Multicore Tool for Constraint Solving	Amadini Roberto, Maurizio Gabbrielli, Jacopo Mauro	
			Main 638	Compositional Program Synthesis from Natural Language and Examples	Mohammad Raza, Sumit Gulwani, Natasa Milic-Frayling
			Main 301	ICBS: The Improved Conflict-based Search algorithm for Multi-Agent Pathfinding	Eli Boyarski, Ariel Felner, Roni Stern, Guni Sharon, Oded Betzalel, Solomon Shimony, David Tolpin
15:10 - 16:30	R00M R2	<b>Main 26</b> Heuristic Search 2	Main 1460	Programming by Example for Text Normalization	Dileep Kini, Sumit Gulwani
			Main 81	A Fast Local Search for Mnimum Vertex Cover in Massive Graphs	Shaowei Cai
			Main 1464	A Fast Goal Recognition Technique based on Interaction Estimates	Yolanda Escudero Martin, Maria Dolores Rodriguez Moreno, David E. Smith
			ML55	MUVIR: Multi-View Rare Category Detection	Zhou Dawei, Jingrui He, K. Selçuk Candan, Hasan Davulcu
			ML80	Dual-regularized Multi-view Outlier Detection	Handong Zhao, Yun Fu
15:10 - 16:30 ROOM R3	ML10 ML Track: Multi-view	ML512	Multi-View Matrix Decomposition: A New Scheme for Exploring Discriminative Information	Cheng Deng, Zongting Lv, Wei Liu, Junzhou Huang, Dacheng Tao, Xinbo Gao	
		Learning			
		Loai hing	ML529	Multi-Graph-View Learning for Complicated Object Classification	Jia Wu, Shirui Pan, Xingquan Zhu, Chenqqi Zhang
		Loanning	ML529 ML639		
16:30 - 17:00		Poster 7		for Complicated Object Classification	Chenqqi Zhang
16:30 - 17:00 17:00 - 18:00	ROOM GH	, , , , , , , , , , , , , , , , , , ,		for Complicated Object Classification Multi-view Self-Paced Learning for Clustering	Chenqqi Zhang
	ROOM GH ROOM GH	Poster 7	ML639	for Complicated Object Classification Multi-view Self-Paced Learning for Clustering Coffee and Poster 7 Industry Session 4, Huawei Technologies	Chenqqi Zhang
17:00 - 18:00		Poster 7 Ind4	ML639 Ind7	for Complicated Object Classification Multi-view Self-Paced Learning for Clustering <b>Coffee and Poster 7</b> Industry Session 4, Huawei Technologies Company Limited	Chenqqi Zhang
17:00 - 18:00		Poster 7 Ind4	ML639 Ind7 Ind8	for Complicated Object Classification Multi-view Self-Paced Learning for Clustering Coffee and Poster 7 Industry Session 4, Huawei Technologies Company Limited Industry Session 4, BigML Incorportaion Towards City-scale Mobile Crowdsourcing: Task Recommendations under Trajectory	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Chang Xu, Dacheng Tao, Chao Xu
17:00 - 18:00 17:00 - 18:00	ROOM GH	Poster 7 Ind4 Ind4 Main 27 Multiagent	ML639 Ind7 Ind8 Main 1490	for Complicated Object Classification         Multi-view Self-Paced Learning for Clustering         Coffee and Poster 7         Industry Session 4, Huawei Technologies         Company Limited         Industry Session 4, BigML Incorportaion         Towards City-scale Mobile Crowdsourcing:         Task Recommendations under Trajectory         Uncertainties         A Scalable Interdependent Multi-Issue	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Cen Chen, Shih-Fen Cheng, Archan Misra, Hoong Chuin Lau Muddasser Alam, Enrico H. Gerding, Alex Rogers,
17:00 - 18:00 17:00 - 18:00	ROOM GH	Poster 7 Ind4 Ind4 Main 27 Multiagent	ML639 Ind7 Ind8 Main 1490 Main 376	for Complicated Object Classification Multi-view Self-Paced Learning for Clustering Coffee and Poster 7 Industry Session 4, Huawei Technologies Company Limited Industry Session 4, BigML Incorportaion Towards City-scale Mobile Crowdsourcing: Task Recommendations under Trajectory Uncertainties A Scalable Interdependent Multi-Issue Negotiation Protocol for Energy Exchange Spectrum-based Fault Localisation	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Cen Chen, Shih-Fen Cheng, Archan Misra, Hoong Chuin Lau Muddasser Alam, Enrico H. Gerding, Alex Rogers, Sarvapali D. Ramchurn Lúcio Passos, Rui Abreu,
17:00 - 18:00 17:00 - 18:00	ROOM GH	Poster 7 Ind4 Ind4 Main 27 Multiagent Systems 2	ML639 Ind7 Ind8 Main 1490 Main 376 Main 1259	for Complicated Object Classification         Multi-view Self-Paced Learning for Clustering         Coffee and Poster 7         Industry Session 4, Huawei Technologies         Company Limited         Industry Session 4, BigML Incorportaion         Towards City-scale Mobile Crowdsourcing:         Task Recommendations under Trajectory         Uncertainties         A Scalable Interdependent Multi-Issue         Negotiation Protocol for Energy Exchange         Spectrum-based Fault Localisation         for Multi-Agent Systems         Personalized Ranking Metric Embedding	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Cen Chen, Shih-Fen Cheng, Archan Misra, Hoong Chuin Lau Muddasser Alam, Enrico H. Gerding, Alex Rogers, Sarvapali D. Ramchurn Lúcio Passos, Rui Abreu, Rosaldo J. F. Rossetti Shanshan Feng, Tao Xu, Yifeng Zeng, Gao Cong, Yeow Meng
17:00 - 18:00 17:00 - 18:00 17:00 - 18:00	ROOM GH	Poster 7 Ind4 Ind4 Main 27 Multiagent Systems 2	ML639 Ind7 Ind8 Main 1490 Main 376 Main 1259 Main 665	for Complicated Object Classification         Multi-view Self-Paced Learning for Clustering         Coffee and Poster 7         Industry Session 4, Huawei Technologies         Company Limited         Industry Session 4, BigML Incorportaion         Towards City-scale Mobile Crowdsourcing:         Task Recommendations under Trajectory         Uncertainties         A Scalable Interdependent Multi-Issue         Negotiation Protocol for Energy Exchange         Spectrum-based Fault Localisation         for Multi-Agent Systems         Personalized Ranking Metric Embedding         for Next New POI Recommendation         Nonnegative Matrix Tri-factorization         with Graph Regularization for Community	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Cen Chen, Shih-Fen Cheng, Archan Misra, Hoong Chuin Lau Muddasser Alam, Enrico H. Gerding, Alex Rogers, Sarvapali D. Ramchurn Lúcio Passos, Rui Abreu, Rosaldo J. F. Rossetti Shanshan Feng, Tao Xu, Yifeng Zeng, Gao Cong, Yeow Meng Chee, Quan Yuan Yulong Pei, Nilanjan Chakraborty,
17:00 - 18:00 17:00 - 18:00 17:00 - 18:00	ROOM GH	Poster 7 Ind4 Ind4 Main 27 Multiagent Systems 2	ML639 Ind7 Ind8 Main 1490 Main 376 Main 1259 Main 665 Main 1228	for Complicated Object Classification         Multi-view Self-Paced Learning for Clustering         Coffee and Poster 7         Industry Session 4, Huawei Technologies         Company Limited         Industry Session 4, BigML Incorportaion         Towards City-scale Mobile Crowdsourcing:         Task Recommendations under Trajectory         Uncertainties         A Scalable Interdependent Multi-Issue         Negotiation Protocol for Energy Exchange         Spectrum-based Fault Localisation         for Multi-Agent Systems         Personalized Ranking Metric Embedding         for Next New POI Recommendation         Nonnegative Matrix Tri-factorization         with Graph Regularization for Community         Detection in Social Networks         Influence Maximization in Big Network:         An Incremental Algorithm for Streaming	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Cen Chen, Shih-Fen Cheng, Archan Misra, Hoong Chuin Lau Muddasser Alam, Enrico H. Gerding, Alex Rogers, Sarvapali D. Ramchurn Lúcio Passos, Rui Abreu, Rosaldo J. F. Rossetti Shanshan Feng, Tao Xu, Yifeng Zeng, Gao Cong, Yeow Meng Chee, Quan Yuan Yulong Pei, Nilanjan Chakraborty, Katia Sycara
17:00 - 18:00 17:00 - 18:00 17:00 - 18:00	ROOM GH	Poster 7 Ind4 Ind4 Main 27 Multiagent Systems 2	ML639 Ind7 Ind8 Main 1490 Main 376 Main 1259 Main 665 Main 1228 Main 889	for Complicated Object ClassificationMulti-view Self-Paced Learning for ClusteringCoffee and Poster 7Industry Session 4, Huawei Technologies Company LimitedIndustry Session 4, BigML IncorportaionTowards City-scale Mobile Crowdsourcing: Task Recommendations under Trajectory UncertaintiesA Scalable Interdependent Multi-Issue Negotiation Protocol for Energy ExchangeSpectrum-based Fault Localisation for Multi-Agent SystemsPersonalized Ranking Metric Embedding for Next New POI RecommendationNonnegative Matrix Tri-factorization with Graph Regularization for Community Detection in Social NetworksInfluence Maximization in Big Network: An Incremental Algorithm for Streaming Subgraph Influence Spread EstimationCEIL: A scalable resolution limit free approach	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Cang Xu, Dacheng Tao, Chao Xu Cen Chen, Shih-Fen Cheng, Archan Misra, Hoong Chuin Lau Muddasser Alam, Enrico H. Gerding, Alex Rogers, Sarvapali D. Ramchurn Lúcio Passos, Rui Abreu, Rosaldo J. F. Rossetti Shanshan Feng, Tao Xu, Yifeng Zeng, Gao Cong, Yeow Meng Chee, Quan Yuan Yulong Pei, Nilanjan Chakraborty, Katia Sycara Wei-Xue Lu, Peng Zhang, Chuan Zhou, Chunyi Liu, Li Gao Vishnu Sankar, Balaraman
17:00 - 18:00 17:00 - 18:00 17:00 - 18:00	ROOM GH	Poster 7 Ind4 Ind4 Main 27 Multiagent Systems 2 Main 28 Social Networks 2	ML639 Ind7 Ind8 Main 1490 Main 376 Main 259 Main 665 Main 1228 Main 889 Main 1059	for Complicated Object ClassificationMulti-view Self-Paced Learning for ClusteringCoffee and Poster 7Industry Session 4, Huawei Technologies Company LimitedIndustry Session 4, BigML IncorportaionTowards City-scale Mobile Crowdsourcing: Task Recommendations under Trajectory UncertaintiesA Scalable Interdependent Multi-Issue Negotiation Protocol for Energy ExchangeSpectrum-based Fault Localisation for Multi-Agent SystemsPersonalized Ranking Metric Embedding for Next New POI RecommendationNonnegative Matrix Tri-factorization with Graph Regularization for Community Detection in Social NetworksInfluence Maximization in Big Network: An Incremental Algorithm for Streaming Subgraph Influence Spread EstimationCEIL: A scalable resolution limit free approach for detecting communities in large networks	Chenqqi Zhang Chang Xu, Dacheng Tao, Chao Xu Chang Xu, Dacheng Tao, Chao Xu Cen Chen, Shih-Fen Cheng, Archan Misra, Hoong Chuin Lau Muddasser Alam, Enrico H. Gerding, Alex Rogers, Sarvapali D. Ramchurn Lúcio Passos, Rui Abreu, Rosaldo J. F. Rossetti Shanshan Feng, Tao Xu, Yifeng Zeng, Gao Cong, Yeow Meng Chee, Quan Yuan Yulong Pei, Nilanjan Chakraborty, Katia Sycara Wei-Xue Lu, Peng Zhang, Chuan Zhou, Chunyi Liu, Li Gao Vishnu Sankar, Balaraman Ravindran, Shivashankar S.

## WEDNESDAY, JULY 29TH

			KR5	Partial Grounded Fixpoints	Bart Bogaerts, Joost Vennekens, Marc Denecker
		KR182	First-Order Disjunctive Logic Programming vs Normal Logic Programming	Yi Zhou	
	KDC	KR223	Simplifying a Logic Program Using Its Consequences	Jianmin Ji, Hai Wan, Ziwei Huo, Zhenfeng Yuan	
17:00 - 18:00	ROOM LP	<b>KR6</b> KR Track: Logic Programming	KR253	Stable Model Semantics of Abstract Dialectical Frameworks Revisited: A Logic Programming Perspective	Mario Alviano, Wolfgang Faber
			KR308	Logic Program Termination Analysis Using Rule Sizes	Marco Calautti, Sergio Greco, Cristian Molinaro, Irina Trubitsyna
			KR69	Epistemic Quantified Boolean Logic: Expressiveness and Completeness Results	Francesco Belardinelli, Wiebe van der Hoek
	Main 30	Main 494	Dissecting German Grammar and Swiss Passports: Open-Domain Decomposition of Compositional Entries in Large-Scale Knowledge Repositories	Marius Pasca, Hylke Buisman	
17:00 – 18:00 R00M R1	Main 30 Main Track: Knowledge	Main 1565	A Simple Probabilistic Extension of Modal Mu-calculus	Wanwei Liu, Lei Song, Ji Wang, Lijun Zhang	
17.00 - 10.00	noomm	Representation, Reasoning and Logic 1	Main 1370	Automatic Generation of Raven's Progressive Matrices	Ke Wang, Zhendong Su
			Main 483	The Complexity of MAP Inference in Bayesian Networks Specified Through Logical Languages	Denis Maua, Cassio P. de Campos, Fabio G. Cozman
			Main 758	On the Graded Acceptability of Arguments	Davide Grossi, Sanjay Modgil
			ML15	Reinforcement Learning from Demonstration through Shaping	Tim Brys, Anna Harutyunyan, Halit Bener Suay, Sonia Chernova, Matthew E. Taylor, Ann Nowé
17:00 - 18:00	ROOM R2	ML11 ML Track:	ML159	Potential Based Reward Shaping for Hierarchical Reinforcement Learning	Yang Gao, Francesca Toni
		Reinforcement Learning 2	ML316	Increasingly Cautious Optimism for Practical PAC-MDP Exploration	Liangpeng Zhang, Ke Tang, Xin Yao
			ML402	Direct Policy Iteration with Demonstrations	Jessica Chemali, Alessandro Lazaric
			KR68	Complexity Results in Epistemic Planning	Bolander Thomas, Martin Jensen, François Schwarzentruber
17.00 10.00	800M B3	KR18 KR Track:	KR154	Computation and Complexity of Preference Inference Based on Hierarchical Models	Nic Wilson, Anne-Marie George, Barry O'Sullivan
17:00 - 18:00	KUUM K3	Planning and Reasoning	KR191	Efficient Semantic Features for Automated Reasoning over Large Theories	Cezary Kaliszyk, Josef Urban, Jiri Vyskocil
			KR208	Fixed-parameter Tractable Reductions to SAT for Planning	Ronald de Haan, Martin Kronegger, Andreas Pfandler
18:00 - 19:00		Poster 8		Poster 8	
		Banguet			

### THURSDAY, JULY 30TH

Timetable	Place	Session	Paper ID	Title	Author/ Authors
08:30 - 9:30	ROOM LB	Invited 10	Invited 10	John McCarthy Award	Prof. Bart Selman
09:30 - 9:40	ROOM LB	Transition 5		Transition	
			ML61	Intersecting Manifolds: Detection, Segmentation and Labeling	Shay Deutsch, Gerard Medioni
09:40 - 10:40	ROOM C	<b>ML17</b> ML Track: High-	ML119	Robust Subspace Segmentation by Simultaneously Learning Data Representations and Their Affinity Matrix	Xiaojie Guo
		Dimensional Data 2	ML248	Mirror Representation for Modeling View- specific Transform in Person Re-identification	Yingcong Chen, Wei-Shi Zheng, Jianhuang Lai
			ML363	Mixed Error Coding for Face Recognition with Mixed Occlusions	Ronghua Liang, Xiao-Xin Li
			Main 661	Factored Upper Bounds for Multiagent Planning Problems with Non-Factored Value Functions	Frans Oliehoek, Matthijs Spaan, Stefan Witwicki
09:40 - 10:40	ROOM GH	<b>Main 75</b> Planning 3	Main 755	Multi-Objective POMDPs with Lexicographic Reward Preferences	Kyle H Wray, Shlomo Zilberstein
			Main 1476	ASAP-UCT: Abstraction of State-Action Pairs in UCT	Ankit Anand, Aditya Grover, Mausam, Parag Singla
			Main 692	Optimization of probabilistic argumentation with Markov Decision Models	Emmanuel Hadoux, Aurélie Beynier, Nicolas Maudet, Paul Weng, Anthony Hunter
00 40 10 40	ROOM LB1	Main 46	Main 209	Solving MDPs with Skew Symmetric Bilinear Utility Functions	Hugo Gilbert, Olivier Spanjaard, Paolo Viappiani, Paul Weng
09:40 - 10:40	RUUMLBI	Sequential Decision Making	Main 1245	Stick-Breaking Policy Learning in DEC-POMDPs	Miao Liu, Christopher Amato, Xuejun Liao, Jonathan P. How, Lawrence Carin
			Main 671	Non-monotone Adaptive Submodular Maximization	Alkis Gotovos, Amin Karbasi, Andreas Krause
			Main 569	Biclustering gene expressions using factor graphs and the max-sum algorithm	Matteo Denitto, Manuele Bicego, Alessandro Farinelli
			Main 1627	Correcting Covariate Shift with the Frank-Wolfe Algorithm	Junfeng Wen, Russell Greiner, Dale Schuurmans
		Main 53	Main 63	Character-based Parsing with Convolutional Neural Network	Zheng Xiaoqing, Haoyuan Peng, Yi Chen
09:40 - 10:40	ROOM LB2	Main Track: Machine Learning 1	Main 510	Revisiting Gaussian Process Dynamical Models	Jing Zhao, Shiliang Sun
		Machine Learning r	Main 530	Adaptive Discriminative Reordering Model for Statistical Machine Translation Based on Structure Learning	Biao Zhang, JinSong Su, JunFeng Yao
			Main 513	Joint Learning of Constituency and Dependency Grammars by Decomposed Cross-Lingual Induction	Wenbin Jiang, Qun Liu
			Main 61	Weakly Supervised RBM for Semantic Segmentation	Yong Li, Jing Liu, Yuhang Wang, Lu Han Qing
09:40 - 10:40	ROOM LB3	Main 64 Robotics and	Main 761	Toward Estimating Others' Transition Models Under Occlusion for Multi-Robot IRL	Bogert Kenneth, Prashant Doshi
		Vision 1	Main 1040	Logic-geometric programming: An optimization-based approach to combined task and motion planning	Marc Toussaint
			KR72	Lightweight Temporal Description Logics with Rigid Roles and Restricted TBoxes	Víctor Gutiérrez-Basulto, Jean Christoph Jung, Thomas Schneider
09:40 - 10:40	ROOM LP	KR14 KR Track: DL and	KR88	Schema.org as a Description Logic	Andre Hernich, Carsten Lutz, Ana Ozaki, Frank Wolter
0.10 10.10		Ontologies 4	KR89	Ontology-Mediated Queries with Closed Predicates	Carsten Lutz, Inanc Seylan, Frank Wolter
			KR96	Computing Horn Rewritings of Description Logics Ontologies	Mark Kaminski, Bernardo C. Cuenca Grau

# THURSDAY, JULY 30TH

			Main 157	Cross-Domain Collaborative Filtering	Xin Xin, Zhirun Liu, Chin-Yew Lin,
				with Review Text Sparse Probabilistic Matrix Factorization by	Heyan Huang, Xiaochi Wei Liping Jing, Peng Wang
		Main 932	Laplace Distribution for Collaborative Filtering	Liping Jing, Peng Wang	
09:40 - 10:40	ROOM R1	<b>Main 49</b> Recommender Systems 2	Main 635	A Synthetic Approach for Recommendation: Combining Ratings, Social Relations and Reviews	Guang-Neng Hu, Xin-Yu Dai, Yunya Song, Shu-Jian Huang, Jia-Jun Chen
			Main 829	Optimal Greedy Diversity for Recommendation	Ashkan Azin, Branislav Kveton, Shlomo Berkovsky, Zheng Wen
			Main 264	Differentially Private Matrix Factorization	Jingyu Hua, Chang Xia, Sheng Zhong
			Main 440	Compiling Constraint Networks into Multivalued Decomposable Decision Graphs	Frédéric Koriche, Jean-Marie J.M. Lagniez, Marquis Pierre, Samuel Thomas
		Main 47	Main 1602	Statistical Regimes and Runtime Prediction	Barry Hurley, Barry O'Sullivan
09:40 - 10:40	R00M R2	Constraints, Satisfiability and Search 3	Main 1280	Exploiting the Structure of Unsatisfiable Cores in MaxSAT	Carlos Ansotegui, Frederic Didier Joel Gabas
			Main 292	ReACTR: Realtime Algorithm Configuration through Tournament Rankings	Tadhg Fitzgerald, Yuri Malitsky, Barry O'Sullivan
		Main 360	Expressive Logical Combinators for Free	Pierre Geneves, Nabil Layaida, Alan Schmitt	
			ML144	Instance-wise Weighted Nonnegative Matrix Factorization for Aggregating Partitions with Locally Reliable Clusters	Xiaodong Zheng, Shanfeng Zhu, Junning Gao, Hiroshi Mamitsuka
		ML18	ML403	Robust Clustering Ensemble	Peng Zhou, Liang Du, Yi-Dong Shen
09:40 - 10:40 ROOM R3	ML Track: Ensemble Me-	ML428	Optimizing Locally Linear Classifiers with Supervised Anchor Point Learning	Xue Mao, Zhouyu Fu, Ou Wu, Weiming Hu	
		thods	ML612	Training-Time Optimization of a Budgeted Booster	Yi Huang, Brian Powers, Lev Reyzin
			ML648	An Efficient Classifier Based on Hierarchical Mixing Linear Support Vector Machines	Di Wang, Xiaoqin Zhang, Mingyu Fan, Xiuzi Ye
10:40 - 11:10		Poster 9		Coffee and Poster 9	
			ML23	A New Simplex Sparse Learning Model to Measure Data Similarity for Clustering	Jin Huang, Feiping Nie
			ML199	Robust Dictionary Learning with Capped L1 Norm	Wenhao Jiang, Feiping Nie, Heng Huang
11:10 - 12:10	ROOM C	ML19 ML Track:	ML284	Convergence of Common Proximal Methods for L1 Regularized Least Squares	Shaozhe Tao, Daniel Boley, Shuzhong Zhang
1110 12.10	incom c	Sparsity	ML291	Density Corrected Sparse Recovery when R.I.P. Condition is Broken	Ming Lin, Zhengzhong Lan, Alexander G. Hauptmann
			ML335	Data Sparseness in Linear SVM	Xiang Li, Bin Gu, Charles Ling, Huaimin Wang
			ML616	Efficient Generalized Conditional Gradient with Gradient Sliding for Composite Optimization	Cheung Yiu-ming, Jian Lou
			Main 523	Adversarial Hierarchical-Task Network Planning for Complex Real-Time Games	Santiago Ontañón Villar, Michael Buro
11:10 - 12:10	ROOM GH	Main 31	Main 1128	Point-Based Planning for Multi-Objective POMDPs	Diederik Roijers, Shimon Whiteson, Frans Oliehoek
11.10 - 12:10		Planning 4	Main 356	Exploratory Digraph Navigation using A*	Fabrice Mayran de Chamisso, Laurent Soulier, Michaël Aupetit
			Main 754	Optimal Policy Generation for Partially Satisfiable Co-Safe LTL Specifications	Bruno Lacerda, David Parker, Nick Hawes
			Sist3	How to Define Certain Answers (from KR'13)	Leonid Libkin
11:10 - 12:10	ROOM LB1	<b>Sist4</b> Sister Track:	Sist8	Description Logic Based Dynamic Systems: Modeling, Verification and Synthesis (from RR'13)	Diego Calvanese, Giuseppe de Giacomo, Marco Montali and Fabio Patrizi
11:10 – 12:10 ROOM LB1	Sister Track: Logic and Query	Sist11	When Are Description Logic Knowledge Bases Indistinguishable? (from KR'14)	Elena Botoeva, Roman Kontchakov, Vladislav Ryzhikov, Frank Wolter and Michael Zakharyaschev	

## THURSDAY, JULY 30TH

			Main 312	Automatic Dominance Breaking for Constraint Optimization Problems	Christopher Mears, Maria Garcia-de-la-Banda
	Main	Main 51	Main 1113	Combining Preference Elicitation and Search in Multiojbective State-Space Graphs	Nawal Benabbou, Patrice Perny
11:10 - 12:10 ROOM LB2	Constraints, Satisfiability and Search 4	Main 171	Improving the Efficiency of Dynamic Programming on Tree Decompositions via Machine Learning	Michael Abseher, Frederico Dusberger, Nysret Musliu, Stefan Woltran	
			Main 1282	On the Resiliency of Unit Propagation to Max-Resolution	Andre Abrame, Djamal Habet
			Main 1100	On Constrained Boolean Pareto Optimization	Chao Qian, Yang Yu, Zhi-Hua Zhoi
			Main 643	Information Gathering in Networks via Active Exploration	Adish Singla, Eric Horvitz, Pushmeet Kohli, Ryen White, Andreas Krause
			Main 955	Multi-Label Active Learning: Query Type Matters	Sheng-Jun Huang, Songcan Cher Zhi-Hua Zhou
11:10 - 12:10	ROOM LB3	Main 52 Main Track:	Main 467	Medical Synonym Extraction with Concept Space Models	Chang Wang, Liangliang Cao
		Machine Learning 2	Main 712	Greedy Structure Search for Sum-Product Networks	Aaron Dennis, Dan Ventura
			Main 656	Active Learning from Crowds with Unsure Option	Jinhong Zhong, Ke Tang, Zhi-Hua Zhou
			Main 261	Auxiliary Information Regularized Machine for Multiple Modality Feature Learning	Yang Yang, Han-Jia Ye, De-Chuan Zhan, Yuan Jiang
			KR49	Combining Rewriting and Incremental Materialisation Maintenance for Datalog Programs with Equality	Boris Motik, Yavor Nenov, Robert E. F. Piro, Ian Horrocks
	200112	<b>KR15</b> KR Track: Datalog+/-	KR128	Combining Existential Rules and Transitivity: Next Steps	Jean-François Baget, Meghyn Bienvenu, Marie-Laure Mugnier, Swan Rocher
11:10 - 12:10	ROOMLP		KR196	Characterization of the Expressivity of Existential Rule Queries	Sebastian Rudolph, Michaël Thomazo
			KR204	Combining Existential Rules with the Power of CP-Theories	Tommaso Di Noia, Thomas Lukasiewicz, Maria Vanina Martinez, Gerardo I. Simari, Oana Tifrea-Marciuska
			Main 904	Interplanetary Trajectory Planning with Monte Carlo Tree Search	Daniel Hennes, Dario Izzo
11:10 - 12:10	ROOM R1	<b>Main 29</b> Heuristic Search 3	Main 684	H-Index Manipulation by Merging Articles: Models, Theory and Experiments	René van Bevern, Christian Komusiewicz, Rolf Niedermeier, Manuel Sorge, Toby Walsh
			Main 623	Model-based Genetic Algorithms for Algorithm Configuration	Carlos Ansotegui, Yuri Malitsky, Horst Samulowitz, Meinolf Sellmann, Kevin Tierney
			Main 944	Revenue Maximization Envy-free Pricing for Homogeneous Resources	Gianpiero Monaco, Piotr Sankowski, Qiang Zhang
		Main 54	Main 255	Competitive Pricing for Cloud Computing in an Evolutionary Market	Bolei Xu, Tao Qin, Guoping Qiu, Tieyan Liu
11:10 - 12:10	R00M R2	Agent and Multi-agent Systems 1	Main 621	Optimal Incremental Preference Elicitation during Negotiation	Tim Baarslag, Enrico H. Gerding
			Main 1401	Quantifying Robustness of Trust Systems Against Collusive Unfair Rating Attacks Using Information Theory	Dongxia Wang, Tim Muller, Jie Zhang, Yang Liu
			Main 1112	Finite Abstractions for the Verification of Epistemic Properties in Open Multi-Agent Systems	Francesco Belardinelli, Davide Grossi, Alessio Lomuscio
		Main 55 Main Track:	Main 1500	From Raw Sensor Data to Detailed Spatial Knowledge	Peng Zhang, Jae Hee Lee, Jochen Renz
11:10 - 12:10	ROOM R3	Knowledge Representation, Reasoning and	Main 622	Formal Analysis of Dialogues on Infinite Argumentation Frameworks	Francesco Belardinelli, Davide Grossi, Nicolas Maudet
		Logic 2	Main 707	A Common-Sense Conceptual Categorization System Integrating Proxytypes and the Dual Process of Reasoning	Antonio Lieto, Daniele Paolo Radicioni, Valentina Rho
		Poster 10		Poster 10	

## THURSDAY, JULY 30TH

12:30 - 14:00		Lunch 3		Lunch	
14:00 - 15:00	ROOM LB	Invited 5	Invited 5	Invited Talk 5: Jon McCormack Art is a System	Jon McCormack
14:00 - 15:00	ROOM R	Invited 6	Invited 6	Invited Talk 6: Manuela M. Veloso Making Intelligent Mobile Service Robots a Reality	Manuela M. Veloso
15:00 - 15:10		Transition 4		Transition	
			AIA4	Generating 1/f noise sequences as constraint satisfaction: the Voss constraint	Francois Pachet
15:10 - 16:30	ROOM C	<b>AIA3</b> AI&Arts: Music,	AIA25	Generating all Possible Palindromes from N-gram Corpora	Alexandre Papadopoulos, Pierre Roy, Jean-Charles Régin, Francois Pachet
10:10 - 10:30	NUUMIC	Language, Visual Arts	AIA40	Narrative Hermeneutic Circle: Improving Character Role Identification from Natural Language Text via Feedback Loops	Josep Valls-Vargas, Jichen Zhu, Santiago Ontanon
			AIA43	Evolving Ambiguous Images	Adriano Vinhas, João Correia, Penousal Machado, Aniko Ekart
			Main 51	Modeling Mention, Context and Entity with Neural Networks for Entity Disambiguation	Yaming Sun, Duyu Tang, Lei Lin, Zhenzhou Ji, Xiaolong Wang
			Main 52	A Subspace Learning Framework for Cross–Lingual Sentiment Classification with Partial Parallel Data	Guangyou Zhou, Jun Zhao, Xiao Miao
		Main 2	Main 251	Compressive Document Summarization via Sparse Optimization	Jin-ge Yao, Xiaojun Wan, Jianguo Xiao
15:10 - 16:30 ROOM GH	Main 2 Natural Language Processing 4	Main 744	Embedding Semantic Relations into Word Representations	Danushka Bollegala, Takanori Maehara, Ken-ichi Kawarabayashi	
			Main 203	Word-error correction of continuous speech recognition based on Normalized Relevance Distance	Yohei Fusayasu, Katsuyuki Tanaka, Tetsuya Takiguchi, Yasuo Ariki
			Main 949	Convolutional Neural Networks for Text Hashing	Jiaming Xu, Peng Wang, Guanhua Tian, Bo Xu, Jun Zhao, Wei Hong Hao
			Main 1114	How to select one preferred assertional-based repair from inconsistent and uncertain Description Logic knowledge bases?	Salem Benferhat, Zied Bouraoui, Karim Tabia
			Main 347	{Unsupervised Learning of an IS-A Taxonomy from a Limited Domain-Specific Corpus	Daniele Alfarone, Jesse Davis
		Main 20	Main 1600	Scalable Maintenance of Knowledge Discovery in an Ontology Stream	Freddy Lecue
15:10 - 16:30	ROOM LB1	<b>Main 39</b> Main Track: Ontologies	Main 464	Coherence Across Components in Cognitive Systems – One Ontology to Rule Them All	Gregor Behnke, Denis Ponomaryov, Marvin Rüdiger Georg Schiller, Pascal Bercher, Florian Nothdurft, Birte Glimm, Susanne Biundo
			Main 1294	Bootstrapping domain ontologies from Wikipedia: a uniform approach	Daniil Mirylenka, Andrea Passerini, Luciano Serafini
			Main 1497	An Ontology Matching Approach Based on Affinity-Preserving RandomWalks	Xiang Chuncheng
			Main 1365	Ranked Voting on Social Networks	Ariel D. Procaccia, Nisarg Shah, Eric Sodomka
		Main 9	Main 297	Non-Myopic Negotiators See What's Best	Yair Zick, Yoram Bachrach, Ian Kash, Peter Key
15:10 - 16:30	ROOM LB2	Social Choice Theory	Main 57	Efficient, Private and epsilon-Strategyproof Elicitation of Tournament Voting Rules	Lee David
			Main 1101	Structure in Dichotomous Preferences	Edith Elkind, Martin Lackner
			Main 1179	Lie on the Fly: Practical Manipulation with Incomplete Information	Lihi Dery, Zinovi Rabinovich, Svetlana Obraztsova, Meir Kalec

## THURSDAY, JULY 30TH

			Main 1035	A Unified Model for Unsupervised Opinion Spamming Detection Incorporating Text Generality	Yinqing Xu, Bei Shi, Wentao Tian, Wai Lam
			Main 1130	Pushing Forward Marginal MAP with Best-First Search	Radu Marinescu, Rina Dechter, Alexander Ihler
15.10 16.20	DOOMIDO	Main 40	Main 866	From Weighted to Unweighted Model Counting	Supratik Chakraborty, Dror Fried, Kuldeep Meel, Moshe Y. Vardi
15:10 - 16:30	ROOM LB3	Graphical Models	Main 141	Bayesian Modelling of Community-Based Multidimensional Trust in Participatory Sensing under Data Sparsity	Venanzi Matteo, Luke Teacy, Alex Rogers, Nick Jennings
			Main 337	Differential Semantics of Intervention in Bayesian Networks	Biao Qin
			Main 215	Indirect Causes in Dynamic Bayesian Networks Revisited	Alexander Motzek, Ralf Moeller
			KR44	MergeXplain: Fast Computation of Multiple Conflicts for Diagnosis	Kostyantyn Shchekotykhin, Dietmar Jannach, Thomas Schmitz
			KR226	A MaxSAT Algorithm Using Cardinality Constraints of Bounded Size	Mario Alviano, Carmine Dodaro, Francesco Ricca
15:10 - 16:30	ROOM LP	<b>KR11</b> KR Track: Reasoning	KR238	On the entailment problem for a logic of typicality	Richard Booth, Giovani Casini, Thomas Meyer, Ivan J. Varzinczak
			KR256	Bidirectional Constraints for Exchanging Data: Beyond Monotone Queries	Marcelo Arenas, Gabriel Diéguez, Jorge Pérez
		<b>Main 41</b> Planning 5	KR290	Did you know?: Mining Interesting Trivia for Entities from Wikipedia	Abhay Prakash, Manoj Kumar Chinnakotla, Dhaval Patel, Puneet Garg
			Main 927	Synthesis for LTL and LDL on finite traces	Giuseppe de Giacomo, Moshe Y. Vardi
			Main 789	Metareasoning for Planning Under Uncertainty	Christopher Lin, Andrey Kolobov, Ece Kamar, Eric Horvitz
15:10 - 16:30	ROOM R1		Main 1548	On the boundary of (un)decidability: decidable model-checking for a fragment of Resource Agent Logic	Natasha Alechina, Nils Bulling, Brian Logan, Hoang Nga Nguyen
			Main 108	Action2Activity: Recognizing Complex Activities from Sensor Data	Liu Ye, Liqiang Li Nie, Lei Han, Luming Zhang, David Rosenblum
			Main 1360	An Iterative Approach to Synthesize Data Transformation Programs	Bo Wu, Craig A. Knoblock
			Main 211	Estimating the Probability of Meeting a Deadline in Hierarchical Plans	Liat Cohen, Solomon Shimony, Gera Weiss
			Main 38	Collective Biobjective Optimization Algorithm for Parallel Test Paper Generation	Minh Luan Nguyen, Siu Cheung Hui, Alvis C. M. Fong
15-10 16-20		<b>Main 42</b> Distributed	Main 1007	Probabilistic Inference Based Message- Passing For Resource Constrained DCOPs	Supriyo Ghosh, Akshat Kumar, Pradeep Varakantham
15:10 - 16:30	ROOM R2	Search/CSP/ Optimization	Main 729	Applying Max-sum to Asymmetric Distributed Constraint Optimization	Roie Zivan, Tomer Parash, Yarden Naveh
			Main 415	Max-Sum Goes Private	Tamir Tassa, Roie Zivan, Tal Grinshpoun
		ML 1000	ML-ISC5	Employing Machine Learning to Help Verifying Research Hypotheses	Huan Liu
15.10 10.00	DOOM DO	ML-ISC2 ML Track: Invited	ML-ISC6	The Democratization of Optimization	Kristian Kersting
15:10 - 16:30	ROOM R3	Sister Conference Presentations 2	ML-ISC7	Tensor Methods: A New Paradigm for Training Probabilistic Models and Feature Learning	Animashree Anandkumar
			ML-ISC8	Discrete Chebyshev Classifiers	Elad Eban
16:30 - 17:00		Poster 11		Coffee and Poster 11	

### THURSDAY, JULY 30TH

			KR99	On the Parameterized Complexity of Belief Revision	Andreas Pfandler, Stefan Rümmele, Johannes Wallner, Stefan Woltran
17:00 - 18:00	ROOM C	<b>KR13</b> KR Track: Belief Revision 1	KR134	An Extension-Based Approach to Belief Revision in Abstract Argumentation	Martin Diller, Adrian Haret, Thomas Linsbichler, Stefan Rümmele, Stefan Woltran
			KR146	Characterizability in Belief Revision	Jon Yaggie, György Turán
			KR326	On the Aggregation of Argumentation Frameworks	Jérôme Delobelle, Sébastien Konieczny, Srdjan Vesic
			CS5	Online Fair Division: analysing a Food Bank problem	Martin Aleksandrov, Haris Aziz, Serge Gaspers, Walsh Toby
17:00 - 18:00	ROOM GH	<b>CS1</b> CS Track: Game theory and Optimization	CS7	When Security Games Go Green: Designing Defender Strategies to Prevent Poaching and Illegal Fishing	Fei Fang, Peter Stone, Milind Tambe
		optimzation	CS9	A Fast Combinatorial Algorithm for Optimizing the Spread of Cascades	Xiaojian Wu, Dan Sheldon, Shlomo Zilberstein
			Main 1553	Decomposition of the Factor Encoding for CSPs	Chavalit Likitvivatanavong, Wei Xia, Roland Yap
		Main 43	Main 620	Packing Curved Objects	Ignacio Salas, Gilles Chabert
17:00 - 18:00	ROOM LB1	Constraints, Satisfiability and Search 5	Main 462	Efficient Operations on MDDs for building Cons- traint Programming Models	Guillaume Perez, Jean-Charles Regin
			Main 1026	Filtering Nogoods Lazily in Dynamic Symmetry Breaking During Search	Jimmy Lee, Zichen Zhu
		Main 44 Web and Knowledge- based Information Systems 1	Main 1529	Personalized Sentiment Classification Based on Latent Individuality of Microblog Users	Kaisong Song, Shi Feng, Wei Gao, Daling Wang, Ge Yu, Kam-Fai Wong
17 00 10 00	<b>B00141 B0</b>		Main 384	Reasoning with Style	Marti Bosch, Pierre Geneves, Nabil Layaida
17:00 - 18:00	ROOM LB2		Main 1413	Short and Sparse Text Topic Modeling via Self-Aggregation	Xiaojun Quan, Chunyu Kit, Yong Ge, Sinno Jialin Pan
			Main 40	Semantic Concept Discovery for Large-Scale Zero-Shot Event Detection	Chang Xiaojun, Yi Yang, Eric Xing, Alexander Hauptmann, Yaoliang Yu
		Main 45 B3 Robotics and Vision 2	Main 1290	Reduced Time-Expansion Graphs for Solving Cooperative Path Finding Sub-optimally	Pavel Surynek
17:00 - 18:00	ROOM LB3		Main 993	Reactive Integrated Motion Planning and Execution	Andreas Hofmann, Enrique Fernandez-Gonzalez, Justin Helbert, Scott D. Smith, Brian C. Williams
			Main 883	Multi-Modality Tracker Aggregation: from Generative to Discriminative	Xiaoqin Zhang, Xiuzi Ye, Wei Li
			Main 1482	Graph-based Inverse Optimal Control for Robot Manipulation	Arunkumar Byravan, Monfort Mathew, Brian Ziebart, Byron Boots, Dieter Fox
17.00 10.00	DOOMED	KR12	KR108	Answer Update for Rule-based Stream Reasoning	Harald Beck, Minh Dao-Tran, Thomas Eiter
17:00 - 18:00	ROOM LP	KR Track: Answer Set Programming	KR173	On Knowledge Forgetting in Answer Set Programming	Jianmin Ji, Yisong Wang
			Main 547	Security Games with Information Leakage: Modeling and Computation	Haifeng Xu, Albert Xin Jiang, Arunesh Sinha, Zinovi Rabinovich, Shaddin Dughmi, Milind Tambe
17:00 - 18:00	ROOM R1	<b>Main 12</b> Game Theory 7	Main 1095	When Schwartz' Conjecture Holds	Matthias Mnich, Yash Raj Shrestha, Yongjie Yang
		,	Main 841	Equilibrium Analysis of Multi-Defender Security Games	Jian Lou, Yevgeniy Vorobeychik
			Main 1249	Approximate Nash equilibria with near optimal social welfare	Artur Czumaj, Michail Fasoulakis, Marcin Jurdzinski

## THURSDAY, JULY 30TH

				Tracking political elections on social media: Applications and Experience	Danish Contractor, Bhupesh Chawda, Sameep Mehta, L.
			Main 416	Applications and experience	Venkata Subramaniam, Tanveer A. Faruquie
			Main 614	Interest Inference via Structure-Constrained Multi-Source Multi-Task Learning	Xuemeng Song, Liqiang Li Nie, Luming Zhang, Tat-Seng Chua
17:00 - 18:00	ROOM R2	<b>Main 74</b> Web Mining 2	Main 919	Interactive Gender Inference with Integer Linear Programming	Shoushan Li, Jingjing Wang, Guodong Zhou
			Main 1440	Towards Domain-Specific SR: A Case Study from Geography	Sen W Shilad, Isaac Johnson, Rebecca Harper, Huy Mai, Samuel Horlbeck Olsen, Benjamin Mathers, Laura Souza Vonessen, Matthew Wright, Hecht Brent
		<b>ML16</b> ML Track: Hashing	Main 257	A Clustering Algorithm for Massive Amount of Texts	Ming Liu, Bing Quan Liu, Xiang Nan Zhao, Xiao Long Wang
			ML70	Learning to Hash on Partial Multi-Modal Data	Qifan Wang, Luo Si, Bin Shen
			ML154	Quantized Correlation Hashing for Fast Cross-modal Search	Botong Wu, Qiang Yang, Wei-Shi Zheng, Yizhou Wang, Jingdong Wang
17:00 - 18:00	ROOM R3		ML277	Ranking Preserving Hashing for Fast Similarity Search	Qifan Wang
			ML315	Semantic Topic Multimodal Hashing for Cross-media Retrieval	Di Wang, Xinbo Gao, Xiumei Wang, Lihuo He
			ML388	Optimal Bayesian Hashing for Efficient Face Recognition	Qi Dai, Jianguo Li, Jun Wang, Yu-Gang Jiang, Yurong Chen
18:00 - 19:00		Poster 12		Poster 12	

## FRIDAY, JULY 31ST

Timetable	Place	Session	Paper ID	Title	Author/ Authors
			Journal 7	The Complexity of Manipulative Attacks in Nearly Single-Peaked Electorates (Extended Abstract)	Piotr Faliszewski, Edith Hemaspaandra, Lane A. Hemaspaandra
			Journal 8	On the Testability of BDI Agent Systems (Extended Abstract)	Michael Winikoff, Stephen Cranefield
		Jnl3	Journal 9	Constitutive and Regulative Specifications of Commitment Protocols: a Decoupled Approach (Extended Abstract)	Matteo Baldoni, Cristina Baroglio, Elisa Marengo, Viviana Patti
08:30 - 10:10	ROOM C	Journal Track: Multiagent & Logic	Journal 5	Norms as a Basis for Governing Sociotechnical Systems: Extended Abstract	Munindar P. Singh,
			Journal 11	kLog: A Language for Logical and Relational Learning with Kernels (Extended Abstract)	Paolo Frasconi, Fabrizio Costa, Luc de Raedt, Kurt de Grave
			Journal 12	Data Complexity of Query Answering in Description Logics (Extended Abstract)	Diego Calvanese, Giuseppe de Giacomo, Domenico Lembo, Maurizio Lenzerini, Riccardo Rosati
			Main 321	Exploiting k-Degree Locality to Improve Overlapping Community Detection	Hongyi Zhang, Michael R. Lyu, Irwin King
			Main 131	Large Scale Homophyly Analysis in Twitter using a Twixonomy	Paola Velardi
			Main 158	Unsupervised Sentiment Analysis for Social Media Images	Yilin Wang, Suhang Wang, Jiliang Tang, Huan Liu, Baoxin Li
08:30 - 10:10	ROOM GH	<b>Main 17</b> Web Mining 3	Main 1593	A Unified Probabilistic Model of User Activities and Relations on Social Networking Sites	Yu Xiaofeng, Junqing Xie
			Main 74	Minimum Sum of Squared Smilarities for Large Scale Spectral Clustering	Djallel Bouneffouf
			Main 49	Re-Ranking Voting-Based Answers by Discarding User Behavior Biases	Xiaochi Wei, Heyan Huang, Chin- Yew Lin, Xin Xin, Xianling Mao
			Main 908	Deep Learning for Event-Driven Stock Prediction	Xiao Ding, Yue Zhang, Ting Liu, Junwen Duan
		<b>Main 33</b> Satisfiability	Main 426	A Modularity-based Random SAT Instances Generator	Jesús Giráldez-Cru, Jordi Levy
	R00M LB3		Main 107	Tractable Classes of Binary CSPs Defined by Excluded Topological Minors	David A Cohen, Martin C. Cooper, Peter Jeavons, Stanislav Zivny
08:30 - 10:10			Main 1143	Prime Compilation of Non-Clausal Formulae	Alessandro Previti, Alexey Ignatiev, Antonio Morgado, Joao Marques-Silva
			Main 992	Efficient Model Based Diagnosis with Maximum Satisfiability	Joao Marques-Silva, Mikolas Janota, Alexey Ignatiev, Antonio Morgado
			Main 1149	Literal-Based MCS Extraction	Carlos Mencía, Alessandro Previti, Joao Marques-Silva
			Main 1016	An Exact Inference Scheme for MinSAT	Chu-Min Li, Felip Manya
			KR35	Trust-Sensitive Belief Revision	Aaron Hunter, Richard Booth
			KR135	AGM Meets Abstract Argumentation: Expansion and Revision for Dung Frameworks	Ringo Baumann, Gerhard Brewka
			KR159	Merging in the Horn fragment	Adrian Haret, Stefan Rümmele, Stefan Woltran
08:30 - 10:10	ROOM LP	<b>KR9</b> KR Track:	KR246	AGM Revision of Beliefs about Action and Time	Marc Zee, Mehdi Dastani, Dragan Doder, Leendert van der Torre
00.00 - 10.10		Belief revision 2	KR285	Belief Revision and Progression of Knowledge Bases in the Epistemic Situation Calculus	Christoph Schwering, Gerhard Lakemeyer, Maurice Pagnucco
			KR1322	Kernel Contraction and Base Dependence: A Theoretical Benchmark for Relevance	Mehrdad Oveisi, James Delgrande, Fred Popowich, Francis Jeffry Pelletier
			KR1488	Extending AGM Contraction to Arbitrary Logics	Zhiqiang Zhuang, Zhe Wang, Kewen Wang, James Delgrande

			Main 565	Computer Science on the Move: Inferring Migration Regularities from the Web via Compressed Label Propagation	Fabian Hadiji, Martin Mladenov, Christian Bauckhage, Kristian Kersting
			Main 438	Emotions in Argumentation: an Empirical Evaluation	Mohamed Sahbi Benlamine, Maher Chaouachi, Serena Villata, Elena Cabrio, Claude Frasson, Fabien Gandon
08:30 - 10:10	ROOM R1	Main 34 Al and Social	Main 395	Parliamentary Voting Procedures: Agenda Control, Manipulation and Uncertainty	Robert Bredereck, Jiehua Chen, Rolf Niedermeier, Toby Walsh
00.00 10.10	noomm	Sciences	Main 1512	A Deterministic Partition Function Approxima- tion for Exponential Random Graph Models	Wen Pu, Jaesik Choi, Yunseong Hwang, Eyal Amir
			Main 449	Context-Independent Claim Detection for Argumentation Mining	Marco Lippi, Paolo Torroni
			Main 1357	Semi-Universal Portfolios with Transaction Costs	Dingjiang Huang, Yan Zhu, Bin Li, Shuigeng Zhou, Steven C. H. Hoi
			Main 1039	Bonus or Not? Learn to Reward in Crowdsourcing	Ming Yin, Yiling Chen
			ML42	Gaussian Processes for High-Dimensional Regression: A Method Based on Deep Neural Networks	Wenbing Huang, Deli Zhao, Fuchun Sun, Huaping Liu, Edward Chang
	ROOM R2	<b>ML12</b> ML Track: Deep Learning 2	ML62	Deep Linear Coding for Fast Graph Clustering	Ming Shao, Sheng Li, Zhengming Ding, Yun Fu
			ML128	Robust Kernel Dictionary Learning using A Whole Sequence Convergent Algorithm	Huaping Liu
08:30 - 10:10			ML246	Self-Adaptive Hierarchical Sentence Model	Han Zhao, Zhengdong Lu, Pascal Poupart
			ML313	Supervised Representation Learning: Transfer Learning with Deep Autoencoders	Fuzhen Zhuang, Xiaohu Cheng, Ping Luo, Sinno Jialin Pan, Qing He
			ML344	Adaptive dropout rates for learning with corrupted features	Jingwei Zhuo, Jun Zhu, Bo Zhang
			ML541	A Joint Optimization Framework of Sparse Coding and Discriminative Clustering	Zhangyang Wang, Yingzhen Yang, Shiyu Chang, Jinyan Li, Simon Fong, Thomas Huang
			ML13	A Graph Kernel based on Jensen-Shannon Representation	Bai Lu, Zhihong Zhang, Chaoyan Wang, Edwin Hancock
			ML145	Random Feature Mapping with Signed Circulant Matrix Projection	Chang Feng, Shizhong Liao
		ML13	ML216	Graph Invariant Kernels	Francesco Orsini, Paolo Frasconi, Luc de Raedt
08:30 - 10:10	ROOM R3	ML Track: Kernel Methods	ML355	Robust Unsupervised Multiple Kernel Learning	Peng Zhou, Liang Du, Yi-Dong Shen
			ML401	Training-Efficient Feature Map for Shift-Invariant Kernels	Xixian Chen, Haiqin Yang, Irwin King, Michael R. Lyu
			ML500	Nonparametric Independence Testing for Small Sample Sizes	Aaditya Ramdas, Leila Wehbe
			ML625	Robust Multiple Kernel K-means	Liang Du, Lei Shi
10:10 - 10:40		Poster 13		Coffee and Poster 13	

# FRIDAY, JULY 31ST

				Aggregate Demand-Based Real-Time Pricing	Sambaran Bandyopadhyay,
			CS11	Aggi egate bernand-based hear-rine Pricing Mechanism for the Smart Grid: A Game-Theoretic Analysis	Ramasuri Narayanam, Ramachandra Kota, Pg Dr Mohammad Iskandarbin Pg Hj Petra, Zainul M Charbiwala
		CS3	CS13	A Personalised Thermal Comfort Model using a Bayesian Network	Frederik Auffenberg, Sebastian Stein, Alex Rogers
10:40 - 12:10	ROOM C	CS Track: Game Theory, Learning	CS18	Batch Reinforcement Learning for Smart Home Energy Management	Heider Berlink, Anna Costa
		and Modeling	CS36	A Crowdfunding Model for Green Energy Investment	Ronghuo Zheng, Ying Xu, Nilanjan Chakraborty, Katia Sycara
			CS54	Abstract Routing Models and Abstractions in the Context of Vehicle Routing	René Schönfelder, Martin Leuker
			CS84	Approximately Stable Pricing for Coordinated Purchasing of Electricity	Andrew Perrault, Craig Boutilier
			ML88	Image Feature Learning for Cold Start Problem in Display Advertising	Kaixiang Mo, Bo Liu, Lei Xiao, Yong Li, Jie Jiang
			ML108	Ice-Breaking: Mitigating Cold-Start Recom- mendation Problem by Rating Comparison	Jingwei Xu, Yuan Yao, Hanghang Tong, Xianping Tao, Jian Lu
10:40 - 12:10	ROOM GH	<b>ML14</b> ML Track: Recommendation	ML109	A Space Alignment Method for Cold-Start TV Show Recommendations	Shiyu Chang, Jiayu Zhou, Pirooz Chubak, Junling Hu
		necommendation	ML213	Mobile Query Recommendation via Tensor Function Learning	Zhou Zhao, Ruihua Song, Xing Xie, Xiaofei He
			ML352	Scalable Maximum Margin Matrix Factorization by Active Riemannian Subspace Search	Yan Yan, Mingkui Tan, Ivor W. Tsang, Qinfeng Shi, Yi Yang
		Sist3 ALB1 Sister Track: User Modeling	Sist5	Examples and tutored problems: adaptive su- pport using assistance scores (from UMAP'14)	Amir Shareghi Najar, Tanja Mitrovic and Bruce Mclaren
			Sist12	Adapting to User Preference Changes in Inte- ractive Recommendation (from RecSys'14)	Negar Hariri, Bamshad Mobasher and Robin Burke
10:40 - 12:10	ROOM LB1		Sist13	Trust-Guided Behavior Adaptation Using Case-Based Reasoning (from ICCBR'14)	Michael Floyd, Michael Drinkwater and David Aha
			Sist14	Matching and Grokking: Approaches to Personalized Crowdsourcing (from HCOMP'14)	Peter Organisciak, Jaime Teevan, Susan Dumais, Robert C. Miller and Adam Tauman Kalai
			Main 25	Distance-Bounded Consistent Query Answering	Andreas Pfandler, Emanuel Sallinger
			Main 370	Online Learning to Rank for Content-Based Image Retrieval	Pengcheng Wu, Steven C. H. Hoi, Peilin Zhao, Ji Wan, Gao Xingyu, Dayong Wang
10:40 - 12:10			Main 847	Raising Expectations in GDA Agents Acting in Dynamic Environments	Dustin Dannenhauer, Hector Munoz-Avila
	00000000	Main 35 Web and	Main 1520	Determining Expert Research Areas with Multi-instance Learning of Hierarchical Multi-label Classification Model	Tao Wu, Qifan Wang, Zhiwei Zhang, Luo Si
	ROOM LB2	Knowledge- based Informa- tion Systems 2	Main 1403	Hamming Compatible Quantization for Hashing	Zhe Wang, Ling-Yu Duan, Jie Lin, Xiaofang Wang, Tiejun Huang, Wen Gao
			Main 616	Deep Multimodal Hashing with Orthogonal Regularization	Daixin Wang, Peng Cui, Mingdong Ou, Wenwu Zhu
			Main 1419	Web Page Classification based on Uncorrelated Semi-supervised Intra-view and Inter-view Manifold Discriminant Feature Extraction	Qian Liu, Jing Xiao-Yuan, Wu Fei, Yangping Zhu
			Main 945	Scalable Graph Hashing with Feature Transformation	Qing-Yuan Jiang, Wu-Jun Li

			Main 685	Integrating Partial Order Reduction and Symmetry Elimination for Cost-Optimal Classical Planning	Martin Wehrle, Malte Helmert, Alexander Shleyfman, Michael Katz
		Main 22	Main 160	MORRF/: Sampling-Based Multi-Objective Motion Planning	Daqing Yi, Michael A Goodrich, Kevin D. Seppi
10:40 - 12:10	ROOM LB3	Planning 6	Main 1197	A Privacy Preserving Algorithm for Multi-Agent Planning and Search	Brafman Ronen
			Main 1050	Simulation-Based Admissible Dominance Pruning	Alvaro Torralba, Joerg Hoffmann
			Main 1330	Optimal planning with axioms	Franc Ivankovic, Patrik Haslum
			KR129	Allegro: Belief-based Golog in Stochastic Dynamical Domains	Vaishak Belle, Hector Levesque
			KR184	On the Progression of Knowledge and Belief for Nondeterministic Actions in the Situation Calculus	Liangda Fang, Yongmei Liu, Ximing Wen
		KR10	KR197	Automatic Verification of Partial Correctness of Golog Programs	Naiqi Li, Yongmei Liu
10:40 - 12:10	R00M LP	KR Track: Reaso- ning about actions	KR229	A Complete Epistemic Planner without Epistemic Closed World Assumption	Rui Yang, Hai Wan, Liangda Fang, Yongmei Liu, Huada Xu
		and planning Panel 2 Session Chair: Qiang Yang	KR322	Policies that Generalize: Solving Many Planning Problems with the Same Controller	Bonet Blai, Hector Geffner
			KR323	Towards Fully Observable Non-determinis- tic Planning as Assumption-based Reactive Synthesis	Nicolas D'Ippolito, Sebastian Sardina
			KR18	On the Undecidability of the Situation Calculus Extended with Description Logic Ontologies	Diego Calvanese, Giuseppe de Giacomo, Mikhail Soutchanski
10:40 - 12:10	ROOM R1		Panel2	Panel: Rethinking Turning Test	
		<b>Main 38</b> Agent and Multi-agent Systems 2	Main 67	Generalizing the single-crossing property on lines and trees to intermediate preferences on median graphs	Adam D. Clearwater, Clemens Puppe, Arkadii Slinko
			Main 402	Optimal mechanism design for partially rational bidders	Zihe Wang, Pingzhong Tang
			Main 1589	The Power of Local Manipulation Strategies in Assignment Mechanisms	Timo Mennle, Sven Seuken, Michael Weiss, Basil Philipp
10:40 - 12:10 F			Main 300	Characterization of Scoring Rules with Distan- ces: Application to the Clustering of Rankings	Paolo Viappiani
	ROOM R2		Main 1316	An Adaptive Computational Model for Personalized Persuasion	Kang Yilin, Ah-Hwee Tan
			Main 1086	Efficiency and complexity of price competition among single-product vendors	Ioannis Caragiannis, Xenofontas Chatzigeorgiou, Panagiotis Kanellopoulos, George A. Krimpas, Nikos Protopapas, Alexandros A. Voudouris
			Main 956	Strategic Abstention based on Preference Extensions: Positive Results and Computer-Generated Impossibilities	Florian Brandl, Felix Brandt, Christian Geist, Johannes Hofbauer
			Main 1517	Exchange of Indivisible Objects with Asymmetry	Zhaohong Sun, Hideaki Hata, Taiki Todo, Makoto Yokoo

## FRIDAY, JULY 31ST

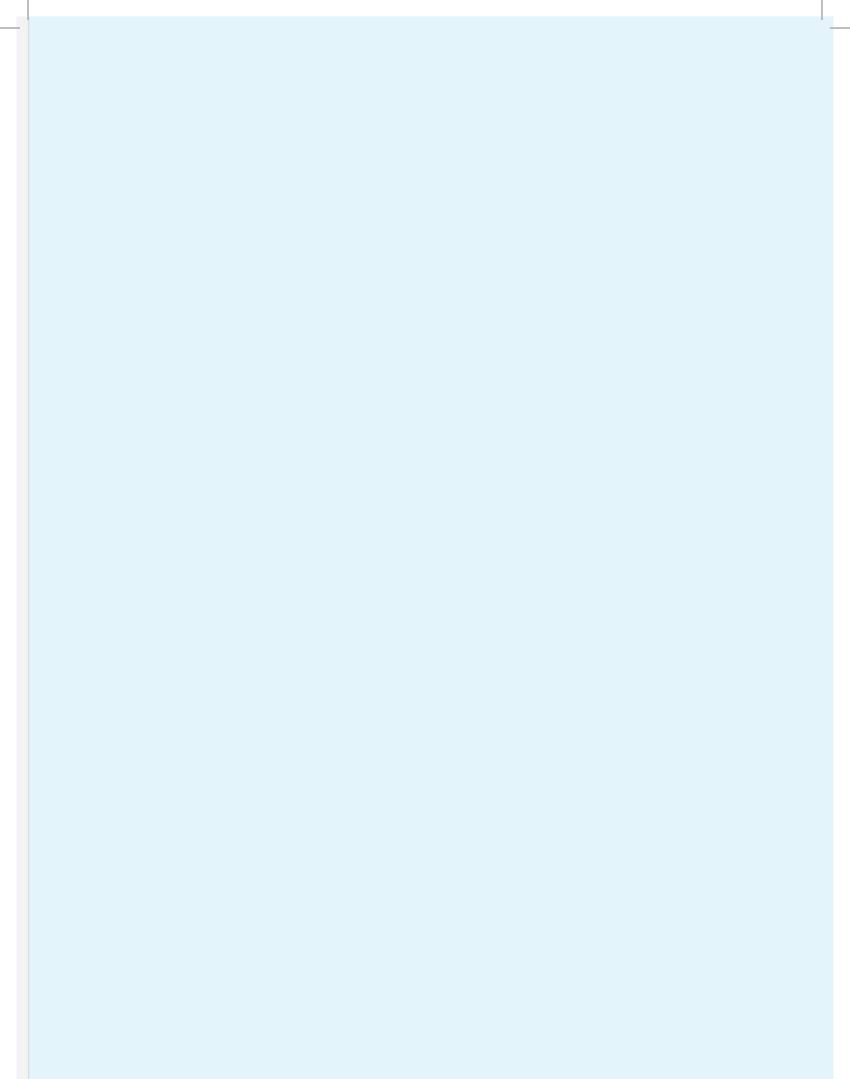
			ML454	An Expectation-Maximization Algorithm to Compute a Stochastic Factorization	Andre Barreto, Rafael L. Beirigo, Joelle Pineau, Doina Precup
			ML325	Thompson Sampling for Budgeted Multi-armed Bandit	Yingce Xia, Haifang Li, Tao Qin, Tie-Yan Liu
		ML15	ML394	Count-Based Frequency Estimation with Bounded Memory	Marc Bellemare
10:40 - 12:10	ROOM R3	ML Track: Online Learning and Sequential Data 2	ML434	Bi-parameter Space Partition for Cost-Sensitive SVM	Bin Gu, Victor S. Sheng
			ML559	Fast Cross-Validation for Incremental Learning	Pooria Joulani, Andras Gyorgy, Csaba Szepesvari
			ML573	Online Robust Low Rank Matrix Recovery	Xiaojie Guo
			ML293	A Geometric Theory of Feature Selection and Distance-Based Measures	Kilho Shin, Adrian Pino Angulo
12:10 - 12:30		Poster 14		Poster 14	·
12:30 - 14:00		Lunch 4		Lunch	
14:00 - 15:00	ROOM LB	Invited 7	Invited 7	Invited Talk 7: Dr. Steve Chien Using Constraint-based Search to Schedule Science Campaigns for the Rosetta Orbiter	Dr. Steve Chien
14:00 - 15:00	ROOM R	Invited 8	Invited 8	Invited Talk 8: Michael L. Littman Programming agents via rewards	Michael L. Littman
15:00 - 15:30		Poster 15		Coffee and Poster 15	
			AIA17	Aesthetic Visual Quality Evaluation of Chinese Handwritings	Rongju Sun, Zhouhui Lian, Yingmin Tang, Jianguo Xiao
15:30 - 16:50	ROOM C	AIA4 AI&Arts: Music, Poetry, Visual Arts	AIA37	Artificial Intelligence in the Concertgebouw	Andreas Arzt, Harald Frostel, Thassilo Gadermaier, Martin M Gasser, Gerhard Widmer, Maarten Grachten
			AIA45	Swarm-based Visualisation of Consumption Patterns	Catarina Maçãs, Penousal Machado
			AIA53	Haiku Generator That Reads Blogs and Illustrates Them with Sounds and Images	Rafal Rzepka, Kenji Araki
			Main 529	Modeling Quantum Entanglements in Quantum Language Models	Mengjiao Xie, YueXian Hou, Peng Zhang, Jingfei Li, Wenjie Li, Dawei Song
			Main 1595	On Conceptual Labeling of a Bag of Words	Xiangyan Sun, Yanghua Xiao, Haixun Wang, Wei Wang
		Main 32	Main 100	Linking Heterogeneous Input Features with Pivots for Domain Adaptation	Zhou Guangyou, Zhao Jun, Cai Li
15:30 - 16:50	ROOM GH	Natural Language Processing 5	Main 247	Positive, Negative or Neutral: Learning an Expanded Opinion Lexicon from Emoticon-annotated Tweets	Felipe Bravo-Marquez, Eibe Frank, Bernhard Pfahringer
			Main 842	Incorporating Domain and Sentiment Supervision in Representation Learning for Domain Adaptation	Biao Liu, Minlie Huang
			Main 903	Target-dependent Twitter Sentiment Classification with Rich Automatic Features	Tin Vo, Yue Zhang
			Main 1341	Agile Planning for Real-World Disaster Response	Feng Wu, Sarvapali D. Ramchurn, Wenchao Jiang, Joel Fischer, Tom Rodden, Nick Jennings
15:30 - 16:50		<b>Main 56</b> Agent and	Main 1157	Structural Results for Cooperative Decentralized Control Models	Jilles Dibangoye, Olivier Buffet, Olivier Simonin
	ROOM LB1		Main 1308	Towards Applying Interactive Dynamic Influen- ce Diagrams to Real-Time Strategy Games	Ross Conroy, Yifeng Zeng, Marc Cavazza, Yingke Chen
		Multi-agent Systems 3	Main 1213	Composing and Verifying Commitment- Based Multiagent Protocols	Matteo Baldoni, Cristina Baroglio, Amit K. Chopra, Munindar P. Singh
			Main 1624	Solving the Station Repacking Problem	Alexandre Fréchette, Neil Newman, Kevin Leyton-Brown
		Main 735	Tractable inquiry in information-rich environments	Barbara Dunin-K, Plicz, Alina Strachocka	

			Main 1042	Compiling Away Uncertainty in Strong Temporal	Andrea Micheli, Minh Do,
			Main 1042	Planning with Uncontrollable Durations	David E. Smith
			Main 1028	Probabilistic Knowledge-Based Programs	Lang Jérôme, Bruno Zanuttini
15:30 - 16:50	ROOM LB2	Main 57 Planning 7	Main 1082	Further Connections between Contract- Scheduling and Ray-Searching Problems	Spyros Angelopoulos
		Planning 7	Main 1203	Temporal Planning with Semantic Attachment of Non–Linear Monotonic Continuous Behaviours	Josef Bajada, Maria Fox, Derek Long
			Main 935	Planning for Stochastic Games with Co-safe Objectives	Lei Song, Yuan Feng, Lijun Zhang
			Main 288	Music Recommenders: User Evaluation Without Real Users?	Susan Craw, Ben Horsburgh, Stewart Massie
			Main 249	Modeling Users' Dynamic Preference for Personalized Recommendation	Xin Liu
15:30 - 16:50	ROOM LB3	Main 58 Recommender	Main 334	AdaBPR: A Boosting Algorithm for Item Recommendation with Implicit Feedback	Yong Liu, Peilin Zhao, Aixin Sun, Chunyan Miao
13.30 - 10.30		Systems 3	Main 458	Building Personal Ad Recommendation Systems for Life-Time Value Optimization with Guarantees	Georgios Theocharous, Philip Thomas, Mohammad Ghavamzadeh
			Main 239	Recommendation Algorithms for Optimizing Hit Rate, User Satisfaction and Website Revenue, User Satisfaction and Website Revenue	Xin Wang, Yunhui Guo, Congfu Xu
		<b>KR16</b> KR Track: Argumentation and Reasoning	KR7	Modelling the Persuadee in Asymmetric Argumentation Dialogues for Persuasion	Anthony Hunter
	ROOM LP		KR85	Dealing with Generic Contrariness in Structured Argumentation	Pietro Baroni, Massimiliano Giacomin, Beishui Liao
			KR107	Extension Enforcement in Abstract Argumentation as an Optimization Problem	Sylvie Coste-Marquis, Sébastien Konieczny, Jean-Guy Mailly, Pierre Marquis
15:30 - 16:50			KR186	Group Decision Making via Weighted Propositional Logic: Complexity and Islands of Tractability	Gianluigi Greco, Jérôme Lang
			KR206	Realizability of Three-Valued Semantics for Abstract Dialectical Frameworks	Joerg Puehrer
			KR211	On the Computational Complexity of Naive-based Semantics for Abstract Dialectical Frameworks	Sarah Gaggl, Sebastian Rudolph, Hannes Strass
			KR292	A Top-Down Compiler for Sentential Decision Diagram	Umut Oztok, Adnan Darwiche
			Main 1220	AskWorld: Budget-Sensitive Query Evaluation for Knowledge-on-Demand	Mehdi Samadi, Partha Pratim Talukdar, Manuela Veloso, Tom Mitchell
15:30 - 16:50	ROOM R1	<b>Main 59</b> Knowledge Acquisition	Main 1601	An approach for Improving RDF Data with Formal Concept Analysis	Mehwish Alam, Aleksey Buzmakov, Victor Codocedo, Amedeo Napoli,
			Main 422	Personalizing Product Rankings using Collaborative Filtering on Opinion-derived Topic Profiles	Claudiu C. Musat, Boi Faltings
			Main 867	Building Hierarchies of Concepts via Crowdsourcing	Yuyin Sun, Adish Singla, Dieter Fox, Andreas Krause
			Main 1167	Analysis of Sampling Algorithms for Twitter	Deepan Palguna, Vikas Joshi, Venkatesan Chakaravarthy, Ravi Kothari, L. Venkata Subramaniam
		Main 60	Main 1498	Portfolio Choices with Orthogonal Bandit Learning	Weiwei Shen, Jun Wang, Yu-Gang Jiang
15:30 - 16:50	ROOM R2	Main Track: Machine Learning 3	Main 1223	Detecting Emotions in Social Media: A Constrained Optimization Approach	Yichen Wang, Aditya Pal
			Main 1193	Regression Model Fitting under Differential Privacy and Model Inversion Attack	Yue Wang, Cheng Si, Xintao Wu
			Main 181	Using a Recursive Neural Network to Learn an Agent's Decision Model for Plan Recognition	Francis Bisson, Hugo Larochelle, Froduald Kabanza

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			ML79	EntScene: Nonparametric Bayesian Temporal Segmentation of Videos aimed at Entity-driven Scene Detection	Adway Mitra, Chiranjib Bhattacharyya, Soma Biswas
			ML147	EigenGP: Gaussian process models with adaptive eigenfunctions	Hao Peng, Yuan Qi
15:30 - 16:50	ROOM R3	<b>ML20</b> ML Track: Graphical Models	ML193	Regularizing Flat Latent Variables with Hierarchical Topic Structures	Lin Rongcheng, Huayu Li, Xiaojun Quan, Yong Ge
		and Nonparame- trics	ML361	Data Compression for Learning MRF Parameters	Khaled Refaat, Adnan Darwiche
			ML451	Quiet: Faster Belief Propagation for Images and Related Applications	Yasuhiro Fujiwara, Dennis Shasha
			ML713	Topic Modeling with Document Relative Similarities Paper subtitle	Jianguang Du, Jing Jiang, Dandan Song, Lejian Liao
16:50 - 17:00		Transition 6		Transition	
			Journal 13	Continuous Body and Hand Gesture Recognition for Natural Human-Computer Interaction: Extended Abstract	Yale Song, Randall Davis
17.00 10.00	50014.0	<b>Jnl4</b> Journal Track:	Journal 14	Algorithm Runtime Prediction: Methods & Evaluation (Extended Abstract)	Frank Hutter, Lin Xu, Holger Hoos Kevin Leyton-Brown
17:00 - 18:00	ROOM C	Machine Learning Applications	Journal 15	Framing Image Description as a Ranking Task: Data, Models and Evaluation Metrics (Extended Abstract)	Micah Hodosh, Peter Young, Julia Hockenmaier
			Journal 16	Measuring and Recommending Time-Sensitive Routes from Location-Based Data	Hsun-Ping Hsieh, Cheng-Te Li, Shou-De Lin
		<b>Main 37</b> Planning 8	Main 499	Mixed Discrete-Continuous Heuristic Generative Planning based on Flow Tubes	Enrique Fernandez-Gonzalez, Erez Karpas, Brian C. Williams
	ROOM GH		Main 509	Tight Bounds for HTN planning with Task Insertion	Ron Alford, Pascal Bercher, David Aha
17:00 - 18:00			Main 943	On the Effective Configuration of Planning Domain Models	Mauro Vallati, Frank Hutter, Luka Chrpa, Thomas Leo McCluskey
			Main 1388	Polynomial-Time Reformulations of LTL Tempo- rally Extended Goals into Final-State Goals	Jorge Torres, Jorge A. Baier
			Main 245	Exploiting Symmetries by Planning for a Descriptive Quotient	Mohammad Abdulaziz, Charles Gretton, Michael Norrish
		<b>Main 72</b> Agent and Multi–agent Systems 4	Main 828	Uncovering Hidden Structure through Parallel Problem Decomposition for the Set Basis Problem: Application to Materials Discovery	Yexiang Xue, Stefano Ermon, Carla P Gomes, Bart Selman
17:00 - 18:00	ROOM LB1		Main 1060	An Expert-Level Card Playing Agent Based on a Variant of Perfect Information Monte Carlo Sampling	Florian Wisser
			Main 1025	Tradeoffs between Incentive Mechanisms in Boolean Games	Vadim Levit, Zohar Komarovsky, Tal Grinshpoun, Amnon Meisels
			Main 271	Environment-driven social force model: Lévy walk pattern in collective behavior	Danyan Lv, Zhaofeng Li, Yichuan Jiang
17:00 - 18:00		<b>Main 63</b> Main Track: Machine Learning 4	Main 248	Mobility Profiling for User Verification with Anonymized Location Data	Miao Lin, Hong Cao, Vincent W. Zheng, Kevin C. Chang, Shonali Krishnaswamy
			Main 1581	On the Consistency of AUC Pairwise Optimization	Gao Wei, Zhi-Hua Zhou
	ROOM LB2		Main 1396	Opportunities or Risks to Reduce Labor Force in Crowdsourcing Translation? Characterizing Cost v.s. Quality in Balance	Rui Yan
			Main 1002	Cognitive Modelling for Predicting Examinee Performance	Runze Wu, Yuping Liu, Qi Liu, Enhong Chen, Yu Su, Zhigang Chen, Guoping Hu

			Main 1233	Active Learning for Coreference Resolution	Mrinmaya Sachan, Eduard Hovy
		Main 50	Main 980	Integrating Importance, Non-redundancy and Coherence Graph-based Extractive Summarization	Daraksha Parveen Michael Strube
17:00 - 18:00	ROOM LB3	Natural Language Processing 6	Main 894	Optimizing Sentence Modeling and Selection for Document Summarization	Wenpeng Yin, Yulong Pei
			Main 872	Convolutional Neural Tensor Network Archi- tecture for Community-based Question Answering	Xipeng Qiu, Xuanjing Huang
			KR50	Qualitative Reasoning about Directions in Semantic Spaces	Steven Schockaert, Jae Hee Lee
		KR17	KR81	An algebra of granular temporal relations	Quentin Cohen-Solal, Maroua Bouzid, Alexandre Niveau
17:00 - 18:00	ROOM LP	KR Track: Temporal and spatial reasoning	KR114	Efficiently Characterizing Non-Redundant Constraints in Large Real World Qualitative Spatial Networks	Michael Sioutis, Sanjiang Li, Jean-Francois Condotta
			KR287	Execution Monitoring as Meta-Games for General Game-Playing Robots	Rajaratnam David, Michael Thielscher
			Main 695	Intelligent Agent Supporting Human-Multi-Robot Team Collaboration	Rosenfeld Ariel, Noa Agmon, Oleg Maksimov, Amos Azaria, Sarit Kraus
17:00 - 18:00 ROO	ROOM R1	<b>Main 62</b> Robotics and Vision 3	Main 1466	Grounding the Meaning of Words through Vision and Interactive Gameplay	Natalie Parde, Adam Hair, Michalis Papakostas, Konstantinos Tsiakas, Maria Dagioglou, Vangelis Karkaletsis, Rodney Nielsen
			Main 861	Co-Acquisition of Spatial Language Syntax and Semantics	Michael Spranger, Luc Steels
			Main 727	Learning to Interpret Natural Language Commands through Human-Robot Dialog	Thomason Jesse, Shiqi Zhang, Raymond Mooney, Peter Stone
			Main 1073	Maximizing the Coverage of Information Propagation in Social Networks	Zhefeng Wang, Qi Liu, Yu Yang, Yong Ge, Enhong Chen, Biao Chang
17:00 - 18:00	ROOM R2	<b>Main 48</b> Social Networks 3	Main 213	A Scalable Community Detection Algorithm for Large Graphs Using Stochastic Block Models	Chengbin Peng, Zhihua Zhang, Ka-Chun Wong, Xiangliang Zhang, David Keyes
			Main 687	Network Representation Learning with Rich Text Information	Cheng Yang, Zhiyuan Liu, Deli Zhao, Maosong Sun, Edward Chang
			ML166	Soft Predicate Invention with Structured Sparsity	William Yang Wang, Kathryn Mazaitis, William W. Cohen
		ML21	ML239	Identification of Time-Dependent Causal Model: A Gaussian Process Treatment	Biwei Huang, Kun Zhang, Bernhard Schölkopf
17:00 - 18:00	ROOM R3	ML Track: Relational	ML275	Learning Regular Languages via Alternating Automata	Dana Angluin, Sarah Eisenstat, Dana Fisman
		Learning	ML466	Online Learning of k-CNF Boolean Functions	Joel Veness, Marcus Hutter, Laurent Orseau, Marc Bellemare
			ML692	Learning efficient logical robot strategies involving composable objects	Stephen Muggleton, Andrew Cropper
18:00 - 18:30		Poster 16		Poster 16	



#### Main conference venue

The IJCAI-15 will be held at the Sheraton Convetion Center (SCC) which is located close to the financial district, the main commercial attractions and important cultural and entertainment centers. It is 30 kilometers from Ministre Pistarini International Airport, Ezeiza, and 7 kilometers from Jorge Newbery Domestic Airport.

The Sheraton Convention Center offers the largest event facilities in the city. Their fifteen meeting rooms totaling 6,500 square meters can accommodate up to 9,000 guests. Their venues are ideal for conferences, exhibitions, and small events. Venues include audiovisual equipment, videoconferencing services, and simultaneous translation. Plus, their specially trained staff provides excellent food and beverage service.

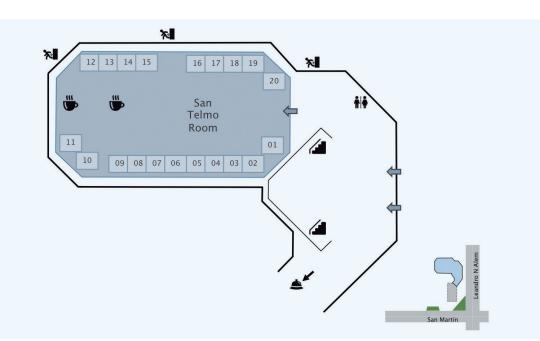
#### **Convenient Transportation**

Sheraton Hotel is on San Martin street near of 9 Julio Avenue and Libertador Avenue, one of the principal thoroughfares in Buenos Aires. It is 34 kilometers from Ezeiza International Airport (EZE) and 6.5 kilometers from Jorge Newbery International Airport (AEP). On Wednesday there will be bus service from here to the Banquet location. In order to get the bus, you must show your ticket. School of Law is on Figueroa Alcorta Avenue a major

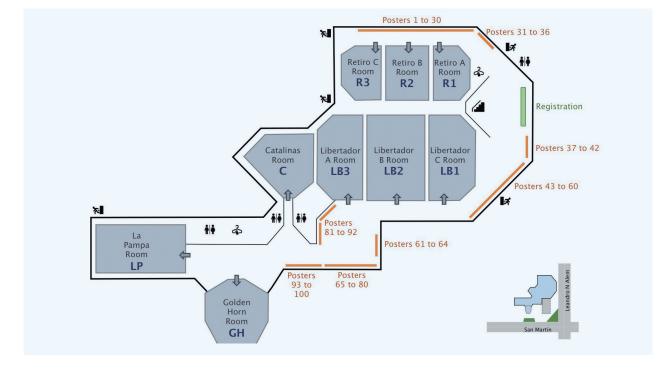
thoroughfare, with a length of over 7 km along the city's northside. It is 2.5 kilometers from Sheraton Hotel. School of Economics is on Córdoba Avenue and is 3 kilometers from Sheraton Hotel. On Monday there will be bus service between here and School of Law in order to attend to the Opening Ceremony.



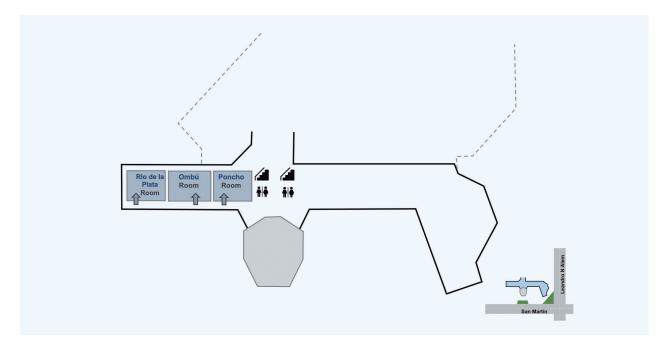
#### Sheraton - Lobby Level Exhibition Room



#### Sheraton - 1st Floor Room Map & Poster Distribution



#### Sheraton - 2nd Floor



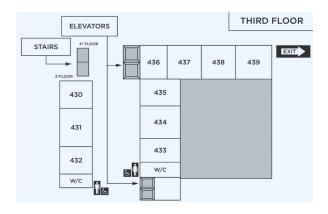
#### Workshops and tutorials venue

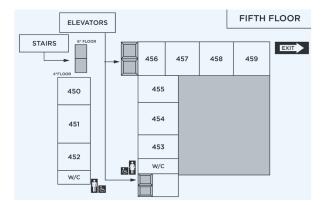
New Building of Facultad de Ciencias Económicas. Uriburu Pres. José Evaristo Uriburu 781.

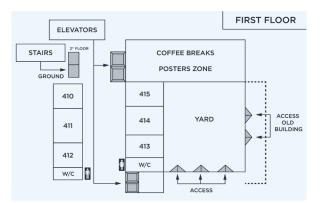
#### How to get Teaching Building

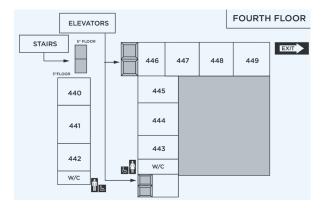
There are many of bus services that take you to the School. There are two Subway stations near the building: "Facultad de Medicina" of "D" Line and "Pasteur" of "B" Line. You can visit <u>http://mapa.buenosaires.gob.ar</u> in order to see all the options.

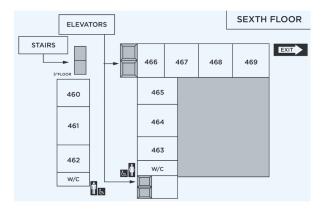
Entrance for attendees is around the corner from main building, at Uriburu Street.











#### IJCAI 2015 Opening & reception

July 27 19:00-21:30 School of Law *Figueroa Alcorta Avenue 2263* 

#### **IJCAI 2015 Banquet**

July 29 20:30-24:00 Señor Tango

#### How to get to

#### **Opening ceremony**

 On July 27, buses will depart from Sheraton Hotel and Convention Center and from School of Economics to School of Law starting at 18:00.
 <u>Please, don't forget your badge.</u>

#### Banquet

 On July 29, buses will depart from Sheraton Hotel and Convention Center to the Banquet location starting at 19:30.

> To get on the bus, please don't forget your banquet ticket.

#### **Students Reception**

– It will be hold in Tazz Soho, Armenia 1744, Palermo. The fastest way to arrive is Subway D Line. The nearest station is "Plaza Italia". Please enter to http://mapa.buenosaires.gob.ar to see the walk path and to search for other options.

> Please don't forget your Student Reception ticket.

#### **Restaurants**

There are many restaurants near the Sheraton Hotel and the School of Economics. In the bag provided at IJCAI registration there will be some suggestions near of each place. You could ask the volunteers too.

# Terms and conditions disclaimer

(To be accepted at registration time)

#### **Registration and Payment**

– Registration must be processed throughout the Online Registration System.

- All payments must be made in USD(\$)

- All payments must be done by credit card or wire transfer.

#### **Bank Details**

- Name on Receiving Bank Account: IJCAI

– Receiving Bank Routing Number (SWIFT code): DEUT-DE6FXXX

-IBAN Code: DE69 6807 0030 0140 0209 00

-Bank: Deutsche Bank

-Bank Address: DEUTSCHE BANK AG, Global Transaction Banking, Theodor-Heuss-Str. 3 D-70174 Stuttgart, Germany

-Payment reference: IJCAI-15 + Name of registered person + Paper\_ID

#### Confirmation

- Once you submit your registration online, you will receive an email reply to confirm the registration, but your registration will still be in pending status until the payments have arrived. The registration status can be checked by clicking on the "Check Registration" button. Invoicing

– Invoicing details must be indicated during the online registration process.

– Official receipt will be included in your conference package when you check in during the conference.

- E-invoices must be requested by e-mail to the Registration Services: registration@ijcai15.org

Cancellation and Changes

All cancellation must be sent to Registration Services by e-mail.

Any change of name will be dealt with as a cancellation and a new registration.

In case of cancellations until July 20, 2015, deposits will be refunded less 50 USD for administrative costs.

No refund will be made for cancellations received after July 20, 2015 or registrants who fail to attend.

#### Disclaimer

In case of conference cancellation for reasons beyond the control of IJCAI-15 organizers, the liability of the IJCAI-15 organizers is limited to the fees already paid by the registrants. IJCAI-15 organizers will not be responsible for any personal inconvenience that may arise.

#### General Disclaimer for Hotels and other service providers:

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#### **Special meetings**

#### Sunday, July 26

– IJCAI Trustees Meeting 08:30 - 18:30 Sheraton Hotel ROOM PONCHO

#### Monday, July 27

– IJCAI Trustees Meeting 08:30 - 12:30 Sheraton Hotel ROOM PONCHO

– IJCAI Executive Committee Meeting 13:30 - 18:30 Sheraton Hotel ROOM OMBU

#### **Tuesday, July 28**

– AI Journal EB Lunch 12:30 - 14:00 Sheraton Hotel ROOM OMBU

– International AI Societies Meeting 15:00 - 16:00 Sheraton Hotel ROOM OMBU

– ECCAI General Assembly 16:00 - 18:00 Sheraton Hotel ROOM OMBU

#### Wednesday, July 29

– Angry Birds Competition All day. 9:00-18:00 Sheraton Hotel ROOM OMBU

– JAIR EB Lunch 12:30 - 14:00 Sheraton Hotel ROOM TBA

#### Thursday, July 30

– Angry Birds Competition All day Sheraton Hotel ROOM OMBU

– ECCAI Fellows Lunch 12:30 - 14:00 Sheraton Hotel ROOM TBA

– IJCAI Town Hall meeting 18:00 – 19:00 Sheraton Hotel ROOM GH

#### Friday, July 31

– IJCAI-15 Wrap-up Meeting 09:30 – 10:30 Sheraton Hotel ROOM PONCHO

– IJCAI-15 & IJCAI-16 Handover Meeting 10:30 – 11:30 Sheraton Hotel ROOM PONCHO

– IJCAI Trustees Meeting 12:30 – 14:00 Sheraton Hotel ROOM PONCHO

#### Internet

Free wireless internet access is available at the conference site and the workshops site. Access information will be provided at site.

# Proceedings download information

Proceedings can be downloaded from: **ijcai.org/papers15/contents.php** 

#### IJCAI 2015 T-Shirts

IJCAI-15 T-shirts are available for sale at the registration desk.

#### **IJCAI 2016**

IJCAI-16 will be held in New York City, July 9-15, 2015.

New York City is, of course, one of the world's great cities. It has also become a major center for AI research. Academic AI research teams in the city include Columbia, New York University, City University, and others; Rutgers, Princeton, Yale, and SUNY Stony Brook are not far away. Industrial AI labs here include branches of the Facebook, Google, and IBM, together with many other companies, large and established or up and coming.

The conference will be held at the Hilton Hotel, in the center of midtown Manhattan. The conference reception will be held half a block away at The Museum of Modern Art, perhaps the greatest collection of 20th century art anywhere. The al fresco banquet will be in beautiful Central Park at the wonderful Central Park Zoo, a ten-minute walk away. Also within a ten minute walk of the hotel are Carnegie Hall, the Broadway theater district, Times Square, the Chrysler building, the New York Public Library, and shopping and restaurants galore. A further 20 minutes walk --- New York is a wonderful city for walking! --- in one direction or another, will get you to the Empire State Building, Lincoln Center for the Performing Arts, the Museum of Natural History, the Metropolitan Museum, the Frick Museum, and Madison Square Garden. And to list everything you could reach in a short subway ride would require a brochure much thicker than this one.

Come to IJCAI-16, and experience New York City's infinite richness and variety!

#### For further information, please contact one of the following:

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#### Conference at a glance

Day	Morning	Afternoon	Evening
25-July	Registration Workshops Tutorials	Registration Workshops Tutorials	
26-July	Registration Workshops Tutorials	Registration Workshops Tutorials	
27-July	Registration Workshops Tutorials Doctoral Consortium	Registration Workshops Tutorials Doctoral Consortium	Speed Dating and Opening Ceremony
28-July	Registration IJCAI technical program (Computers and Thought award talk, papers, posters) Al&Arts Demos IJCAI 2015 Distinguished Papers Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters) Al&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Games Night
29-July	Registration IJCAI technical program (papers, posters) Al&Arts Demos Industry Track Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters, panel on 'Future of AI') Al&Arts Demos Industry Track Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Banquet
30-July	Registration IJCAI technical program (papers, posters) Al&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters) AI&Arts Demos IJCAI Community Meeting Best Papers in Sister Conferences Track Journals Track Angry Birds Competition Robot Exhibition Video Competition	Student Reception
31-July	Registration IJCAI technical program (John McCarthy Award Talk, papers, posters) AI&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Award, Robot Exhibition Video Competition	Registration IJCAI technical program (invited talks, papers, posters, Panel) Al&Arts Demos Best Papers in Sister Conferences Track Journals Track Angry Birds Award Robot Exhibition Video Competition Closing Event	