IJCAI-17 MELBOURNE

26th International
Joint Conference
on Artificial Intelligence
Melbourne Convention Centre
IJCAI-17.org
19-25 August 2017

Organized by:

International Joint Conferences on Artificial Intelligence

University of Technology Sydney (UTS)

Australian Computer Society (ACS)

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Welcome to IJCAI 2017!

Welcome to the Twenty-sixth International Joint Conference on Artificial Intelligence!

We are excited to welcome you to IJCAI-2017. The annual IJCAI conference is a much anticipated event in AI. IJCAI is the longest running major conference series spanning all areas of AI. The conference will include many activities: presentations of the latest research in technical paper sessions, an extensive slate of more focused workshops, tutorials to introduce you to other areas of AI, competitions from a range of AI subdisciplines, and an extensive range of industry exhibits. Melbourne, our host city will also be coordinating a range of related activities in their first AI Festival.

The theme of this Year's conference is Autonomy and AI and is intended to encourage debate and analysis of the limits and safeguards that must be established when giving AI systems more autonomy. Such limits and safeguards must be established for AI systems to progress in way that supports a just and prosperous society. This topic will be central on some invited talks, panels, sessions.

IJCAI's regular track will feature 660 papers, selected from a record 2540 submissions. All papers will be presented orally as well as displayed in a poster in specific poster sessions. Three specific sessions on AI and Autonomy feature 12 paper presentations followed by a debate. The program will also include presentations of 38 best paper awardees from sister conferences in our Best Papers track. The Journal track will feature 28 presentations summarizing work that has been published in the Artificial Intelligence Journal or the Journal of Artificial Intelligence Research but never presented at a conference.

In addition to these paper presentations, IJCAI-17 will include 15 talks by early career researchers discussing some of the latest and most innovative work being done in the field. There will be 9 plenary talks, comprised of 7 invited keynotes, the Computer and Thoughts Award talk by Devi Parikh, and the John McCarthy talk by Dan Roth. Andrew Barto, this year's winner of The Research Excellence Award talk will present his talk next year at IJCAI 2018. Moreover, the program includes a presentation addressing the debate on autonomous weapons and three panels: one on the theme of the conference, Autonomy and AI, another on the use of AI to address Societal Challenges, and the last one on the expected developments for the next decade, with exciting panelists from within and outside the field of AI.

IJCAI's 39 workshops and 22 tutorials covering most aspects of AI will provide an informal setting to learn and discuss new ideas. This year, the first two days of workshops and tutorials will take place at RMIT University one of Australia's original institutions for advanced education. RMIT is located in Melbourne's Central Business District (CBD). The doctoral consortium offers a forum for PhD students to present and discuss their work with senior researchers in the field. As in previous years, IJCAI-17 will have a video competition, and winning videos will be on display throughout the conference. There will also be three additional competitions, the Angry Birds AI Competition, the Automated Negotiating Agents Competition and a Data Mining Competition being sponsored by the Alibaba Group and the Ant Financial Service Group.

The IJCAI Opening Reception on Monday evening will be held in the member's area of the Melbourne Cricket Club located at the Melbourne Cricket Ground. The conference banquet will be held at Peninsula located in Docklands, a short walk from the Melbourne Convention and Exhibition Center (MCEC); and the student reception will be held at the Boatbuilders Yard next to the MCEC.

Melbourne is a fantastic location. It was ranked as the World's most livable cities in 2016 for a sixth consecutive year by The Economist magazine. Melbourne is also a great starting point for a number of locations of great natural beauty, gourmet food and world famous wine districts. We recommend taking a few extra days to travel Australia and the state of Victoria.

We sincerely hope that you will enjoy IJCAI 2017!

Fahiem Bacchus
Carles Sierra
Chengqi Zhang
Toby Walsh
Andy Song

Premier's foreword –International Joint Conference on Artificial Intelligence (IJCAI)

I am delighted to welcome you to Victoria for the International Joint Conference on Artificial Intelligence (IJCAI).

During your visit, you will join more than 1,800 of the brightest minds from across the globe in the fields of AI, Big Data, the Internet of Things, and deep technology.

Melbourne is the perfect location for a global tech conference of this size to be held in Australia.

While here, you will discover why Melbourne is the number one hub for tech and data security in the Asia-Pacific.

Every year, our city generates more than $34 billion from the digital tech industry, making us the largest cloud hub in the region.

Victoria produces one-third of the nation's tech graduates and over the last seven years, Melbourne has seen more software companies establish their headquarters here than any other Australian city.

Our investments in STEM, world-leading research and development, and a $200 million Future Industries Fund all demonstrate our continued commitment to pushing the boundaries of innovation.

And thanks to our thriving arts and culture, renowned sporting events and unique natural beauty, you'll find plenty of ways to pass the time when not at the conference.

This event provides an excellent opportunity to build networks, expand your knowledge and grow the industries and jobs of the 21st century.

I wish you all the best for your time in Victoria.

Hon Daniel Andrews
Premier of Victoria

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IJCAI 2017 Social Events

Opening Reception

Monday, August 21st, 2017 at 19:00.
Melbourne Cricket Club Members Dining Room at the Melbourne Cricket Ground.
Free for all registrants to the Main Conference

The IJCAI-17 Opening Reception will commence at 19:00 hours at the Melbourne Cricket Club inside of Melbourne Cricket Ground (MCG). The club was founded in 1838 as is one of the oldest sports clubs in Australia. The venue consists of rooms overlooking the arena. MCG is Australia's largest sports stadium hosting both Australian Rules Football matches as well as Cricket Test Matches. The opening reception will feature entertainment as well as food and drink.

Directions: (Enter at MCG Gate 2). Walking (15-20 mins from Federation Square) Starting from the Federation Square, walk east on Princes Walk along the Yarra River, continue on a footbridge which extents to the William Barak Bridge. MCG is at the east end of William Barak Bridge. Tram: By tram you can reach the corner of Flinders Street and Spring Street while staying in the free tram zone. From there walk east along Wellington Parade for about 700 meters, turn right when you see a train station or tram Stop 11. To get closer to the venue with the tram you will need a valid MyKi card (the last two stops are outside of the free tram zone). With a Myki card you can reach Stop 11 by Tram 48 or 75. From Stop 11, walk through a park for about 450 meters towards the MCG stadium. The footpath in that park will be dark after 6pm in August. MCG also has its own train station (Jolimont - MCG Station) which is on the Hurstbridge and South Morang train lines. The train station is next to Stop 11. Trains around 6-7pm are, however, crowded and will go through the City Loop departing from Flinders Station.

See the local map in the map section.

Conference banquet

Wednesday, August 23rd, 2017 at 19:30.
Peninsula, Shed 14, Central Pier 161 Harbour Esplanade, Docklands.
Included with REGULAR REGISTRATION for the Main Conference

The Peninsula event space is located a short 15 minute walk from the Convention Centre. The Banquet will feature dinner and drinks along with entertainment by local artists.

Directions: walk west on the south wharf promenade outside of the convention center, walk across the Webb Bridge, go north along Harbour Esplanade for about 700 meters. You will see a large shed on your left, opposite Etihad Stadium. That is the banquet venue. You can also take tram 70 or 75 from Stop D5 travelling clockwise around the free tram zone and get off at Stop D3 or D2. Tram may, however, be crowded and you may need to wait for a tram with room. Tram 86 from CBD can also reach the venue.

See the local map in the map section.

Student reception

Thursday, August 24th, 2017 at 18:30.
The Boatbuilders Yard, 23 South Wharf Promenade, South Wharf.
Included with STUDENT REGISTRATION for the Main Conference

The Boatbuilders Yard is located on the Yarra River, a short 200 meter walk from the Convention Centre. The Student Reception is included in the student registration fee, and will feature food and beverages.

Women's lunch

Tuesday August 22nd, 2017 at 12:30.
Meat Market Restaurant, 53 South Wharf Promenade, South Wharf.
$15 USD for IJCAI ATTENDEES

Meat Market Restaurant is located a short 350 meter walk from the Convention Centre. The lunch is subsidized by a grant from the AI Journal. A small registration fee is required.

The lunch will bring together the broad women community, including junior and senior faculty, researchers, students, and postdocs, and will provide an excellent opportunity to discuss how to grow the community of women in AI, and share success stories and best practices. There will be informal discussion at each table on individual experiences and sharing of information with others.

Exhibition

August 22nd - 25th, 2017.
On the ground floor main foyer of MCEC.

The IJCAI 2017 Exhibits Program at IJCAI-17 will provide companies and academic institutions an opportunity to make visible their position in the field, and provide conference participants with examples of the current uses, needs and opportunities for Artificial Intelligence.

Exhibitors include:

ACS, AI Access Foundation, Adobe Systems, AIJ, Alibaba, ANT Financial Service Group, Australian National University, Baidu, Centre for Artificial Intelligence (UTS), Consilium Technology Pty Ltd, Data61, DiDi, Essence, Global Business College of Australia (GBCA), IBM, JD.COM, Joint NTU-UBC Research Centre of Excellence in Active Living for the Elderly, Nanyang Technological University, King Abdullah University of Science and Technology (KAUST), Meitu, MIT Press, Nnaisense, NVIDIA+XENON, RMIT University, Shanghai Xiaoi Robot Technology Co. LTD, Springer Nature, SUSTech, Sydney University, Tencent Technology (Shenzhen) Co. Ltd., and University of Melbourne.

IJCAI 2017 Awards

The IJCAI Organization is proud to announce the IJCAI-17 Awards for Research Excellence, the John McCarthy Award, and the Computers and Thought Award. These honors are awarded by the IJCAI Board of Trustees, upon recommendation by the IJCAI-17 Awards Selection Committee, which consists this year of:

- Qiang Yang, Hong Kong University of Science and Technology (Chair) (HONG KONG, CHINA)
- Craig Boutilier, Google (USA)
- Yolanda Gil, University of Southern California (USA)
- Joelle Pineau, McGill University (CANADA)
- Francesca Rossi, University of Padova (ITALY)

The IJCAI Awards Selection Committee receives advice from members of the IJCAI-17 Awards Review Committee, who comment on the accuracy of the nomination material and provide additional information about the nominees. The IJCAI-17 Awards Review Committee is the union of the former Trustees of IJCAI, the IJCAI-17 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–17 AWARD FOR RESEARCH EXCELLENCE

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), Hector Levesque (2013), Barbara Grosz (2015), and Michael I. Jordan (2016).

The winner of the 2017 Award for Research Excellence is **Andrew Barto**, Professor Emeritus, College of Information and Computer Sciences, University of Massachusetts Amherst. Professor Barto is recognized for his groundbreaking and impactful research in both the theory and application of reinforcement learning.

IJCAI–17 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 royalties 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), Kristen Grauman (2013), Ariel Procaccia (2015), and Percy Liang (2016).

The winner of the 2017 IJCAI Computers and Thought Award is **Devi Parikh**, Assistant Professor at School of Interactive Computing, Georgia Institute of Technology. Professor Parikh is recognized for her contributions at the intersection of words, pictures, and common sense from semantic image understanding, to the use of visual attributes for human-machine collaboration and visual abstractions for learning common sense, to enabling humans to interact with visual content via natural language.

IJCAI–17 JOHN MCCARTHY AWARD

The IJCAI John McCarthy Award is intended to recognize established mid-career researchers, typically between fifteen to twenty-five years after obtaining their PhD, that have built up a major track record of research excellence in artificial intelligence. Nominees 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.
Past recipients of this honor have been: Bart Selman (2015) and Moshe Tennenholtz (2016).

The winner of the 2017 John McCarthy Award is **Dan Roth**, Department of Computer and Information Science, University of Pennsylvania. Professor Roth is recognized for major conceptual and theoretical advances in the modeling of natural language understanding, machine learning and reasoning.

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), Wolfgang Wahlster (2013), Anthony G. Cohn (2015), and Erik Sandewall (2016).

At IJCAI-17, the Donald E. Walker Distinguished Service Award will be given to **Ramon Lopez de Mantaras**, Research Professor of the Spanish National Research Council (CSIC) and Director of the Artificial Intelligence Research Institute of the CSIC. Professor Lopez de Mantaras is recognized for his substantial contributions, as well as his extensive service to the field of Artificial Intelligence throughout his career.

2017 IJCAI-JAIR Best paper prize

Wednesday August 23rd
16:30-17:30
Room 218

The 2017 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 organization.

Winner:
E. Bruni, N. K. Tran and M. Baroni (2014)
"Multimodal Distributional Semantics"
Volume 49, pages 1-47
http://www.jair.org/papers/paper4135.html

Citation: This paper describes a procedure for constructing word representations using text- and image-based distributional information. This has been a fundamental and innovative contribution in the area of natural language and vision. Another key contribution is the data set, which has since been used extensively. This work is recognised for its impact within multiple areas in AI, including NLP, Vision, and Machine Learning, and for its seminal role in the introduction of a multimodal perspective in distributional semantics models for computational representations of word meaning.

Honourable Mention:
A. J. Coles, A. I. Coles, M. Fox and D. Long (2012)
"COLIN: Planning with Continuous Linear Numeric Change"
Volume 44, pages 1-96
http://www.jair.org/papers/paper3608.html

Citation: This paper combines classical planning over a domain model with reasoning over continuous change - a challenging topic of high relevance within the AI community as well as for real-world applications, including energy management, chemical engineering and robotics. It introduces a concrete instantiation of what has since become the dominant approach for temporal hybrid planning, by effectively combining heuristic search with an external numeric reasoner such as a linear program solver. This work is recognised for its impact within AI planning and beyond, and for its seminal role in the development of hybrid discrete-continuous planning techniques.

EurAI Artificial Intelligence Dissertation Award 2016

Friday August 25th
8:30-10:00
Plenary

The 2016 Artificial Intelligence Dissertation Award is sponsored by EurAI, the European Association of Artificial Intelligence. This award includes a certificate signed by the EurAI President and a prize €1500, which includes a travel grant to the awards ceremony.

In this session the winner of the 2016 award will present a talk on the award-winning research. A talk will also be given by the nominee who receives an honourable mention.

Winner:
The Best-of-n Problem in Robot Swarms
Gabriele Valentini (Arizona State University, USA)
Nominated by: Marco Dorigo (Université Libre de Bruxelles, Belgium)

Honourable Mention:
Probabilistic reasoning and Learning for the Semantic Web
Riccardo Zese (University of Ferrara, Italy)
Nominated by: Fabrizio Riguzzi, Evelina Lamma (University of Ferrara, Italy)

08:30 - 10:00 EurAI Award Session (Plenary)
Session Chair: Barry O'Sullivan, University College Cork, Ireland
› 08:30 - 08:35
Introduction to the award and winner
› 08:35 - 09:20
EurAI Best Disseration Award 2016:
The Best-of-n Problem in Robot Swarms
Gabriele Valentini (Arizona State University, USA)
› 09:20 - 09:25
Introduction to the honourable mention
› 09:25 - 10:00
EurAI Dissertation Award Honourable Mention 2016:
Probabilistic reasoning and Learning for the Semantic Web
Riccardo Zese (University of Ferrara, Italy)

Industry day

Friday August 25th
All day
Room 220

The IJCAI 2017 Industry Day is a unique networking event where entrepreneurs and scientists can discuss the future of AI and its impact on industry and society.

Speakers will include those from companies who a few years ago did not exist but are now giants in industry. They will discuss the AI technologies they use and the key role these technologies play in their company operations and strategy.

Other speakers come from smaller AI start-ups, who will share their experiences with commercialising AI technologies, the problems they have had to overcome, and the elements of success and failure.

These international speakers represent a diverse array of companies and industries, from delivery robots to transportation, retail, multi-media, learning and social apps.

IJCAI 2017 Industry Day will also host two panel sessions involving researchers, engineers, and business executives in discussion with each other and the audience. The first panel focuses on how to start and successfully run an AI company. This will be followed by a second panel discussing the future of AI and its impact on society, both positive and negative.

IJCAI 2017 Industry Day will provide a fascinating insight into what it takes to transition AI from the research lab into the real world and how AI technologies will affect our future society.

The IJCAI AI Festival

Across the city of Melbourne.

The IJCAI AI Festival is an exciting and astounding festival of events hosted in Melbourne on Artificial Intelligence and its impact on society. It will involve the great thinkers in artificial intelligence, technology, the economy and the arts, so that a more informed public can make better decisions about the future society we desire and help create.

AI is already influencing the design and operation of future cities and transport systems, with smart cities and self-driving vehicles already a reality. More and more human work is being automated. In many businesses, entire levels of middle management are being replaced by computers, with workers reporting to computer APIs instead of humans.

The IJCAI Trustees are helping raise public awareness of AI and its impact on society by hosting, for the first time, the IJCAI AI Festival. Events will include thought-provoking debates, workshops, talks, exhibitions, and performances, to explore the way artificial intelligence is already affecting our lives and how it will continue to do so.

The AI Festival will be open to the public with many free events throughout the city of Melbourne, featuring world-leading researchers and experts in AI. It will include immersive events and discussions including film, music, law, politics, writing, economics, all focused on AI and the future of society.

The program of events starts on August 17th and runs through to August 26th. Full information can be found at http://aifestival.com.au

AI Lounge

Monday August 21st to Friday 25th
5:30pm to 7:00pm each day
Plus 5 Bar

A part of the AI Festival will be running every night of the conference at Plus 5 Bar, right opposite the Convention Centre. From 5.30pm to 7pm, Monday to Friday, we'll be holding a conversation with the public about the societal impact of AI. Join us for an interesting conversation. The event is free and open to the public. More details at http://tinyurl.com/ailounge

› Monday 21st. **Is the singularity near?** Conversation with Jan Feyereisl and Kevin Korb.
› Tuesday 22nd. **Android Dreams**. Conversation with Toby Walsh, author of "Android Dreams: The Past, Present and Future of AI".
› Wednesday 23rd. **Killer Robots, the end of war?** Conversation with Ugo Pagallo and Stuart Russell.
› Thursday 24th. **The end of work?** Conversation with Stefan Hajkowicz and Rao Kambhampati.
› Friday 25th. **Q & AI. Your questions about AI answered**. Conversation with Tuomas Sandholm, Devi Parikh and Toby Walsh.

Plus 5 Bar, 37 South Wharf Road, South Wharf, Melbourne.

Conference at a glance

	RMIT Building 80, 445 Swanston St		Melbourne Convention and Exhibition Center, South Wharf				
	August 19 (Sat)	August 20 (Sun)	August 21 (Mon)	August 22 (Tue)	August 23 (Wed)	August 24 (Thu)	August 25 (Fri)
08:00 –	Registration				Registration		
08:30 –	Workshops + Tutorials Co-located Conferences		Workshops Tutorials Doctoral Consortium	Opening + Keynote	Sessions	Sessions Competition	EurAI Award, Sessions Industry Day
10:00 –	Coffee Break			Coffee Break + Posters			
10:30 –	W/T/C Sessions		W/T/D Sessions	Sessions, Posters Competition	Sessions, Posters	Sessions, Posters Competition	Sessions, Posters Industry Day (Startups) Demonstrations
12:30 –	LUNCH BREAK						
14:00 –	W/T/C Sessions		W/T/D Sessions	2 Invited Talks	2 Invited Talks	2 Invited Talks	Awards
15:00 –				Sessions, Panel, Competition			Industry Day (Large Companies)
16:00 –	Coffee Break			Coffee Break + Posters			Coffee Break
16:30 –	W/T/C Sessions		W/T/D Sessions	Sessions, Posters Competition, Demonstrations	Sessions, Posters Competition Best Paper Prize	Sessions, Posters Competition	Industry Day (Panel) Closing Ceremony
17:30 –							Farewell: Food & Drink
18:00 –							
18:30 –						Student & Sponsor Reception	
19:00 –			Reception MCG (Richmond)		Banquet Penisula (Docklands)	The Boatbuilders Yard (outside of MCEC)	
19:30 –							

Co-located events

AusAI 2017
The 30th Australasian Joint Conference on Artificial Intelligence

August 19th-20th, 2017 (Part of IJCAI 17)

KSEM 2017
The 10th International Conference on Knowledge Science, Engineering and Management

August 19th-20th, 2017 (Part of IJCAI 17)
http://www.ksem2017.conferences.academy/

AusDM 2017
The 15th Australasian Data Mining Conference

August 19th-20th, 2017 (Part of IJCAI 17)
http://ausdm17.azurewebsites.net/

AI4KM 2017
The 5th IFIP conference on Artificial Intelligence for Knowledge Management

August 20th, 2017 (Part of IJCAI 17)
http://ifipgroup.com/5thai4km/

AIAI 2017
The 13th IFIP International Conference on Artificial Intelligence Applications and Innovations

August 20th, 2017 (Part of IJCAI 17)
https://sites.google.com/site/2017aiai/

ICML 2017
The thirty-fourth International Conference on Machine Learning

August 6th -11th, 2017 (Sydney)
https://2017.icml.cc/

UAI 2017
The Conference on Uncertainty in Artificial Intelligence

August 11th-15th, 2017 (Sydney)
http://auai.org/uai2017/index.php

AI & Machine Learning Summit

August 15th-16th, 2017 (Sydney)
http://www.aisummitaustralia.com.au/

AGI-17
The 10th conference on Artificial General Intelligence

August 15th-18th, 2017 (Melbourne)
http://www.agi-conf.org/2017/

SAT 2017
The 20th International Conference on Theory and Applications of Satisfiability Testing

August 28th - September 1st, 2017 (Melbourne)
http://sat2017.gitlab.io/

CP 2017
The 23rd International Conference on Principles and Practice of Constraint Programming

August 28th - September 1st, 2017 (Melbourne)
http://cp2017.a4cp.org/

ICLP 2017
The 33rd International Conference on Logic Programming

August 28th - September 1st, 2017 (Melbourne)
http://iclp17.a4lp.org/

The 2017 Big Data Summit

August 20th - 22nd, 2017 (Melbourne)
http://2017.bigdatasummit.co/

Digital Innovation Festival

August 23rd - September 6th, 2017 (Melbourne)
http://www.vic.gov.au/digitalinnovation

Re-engineering Industries with Artificial Intelligence and the Social Contract, ACS Lunch Function

August 24th, 2017 (Melbourne)
goo.gl/ugo9RN

Free things not to miss

22 tutorials
Industry Day
Opening reception
Banquet or Student Reception
Exhibition program
Robot demonstrations
Video competition
Angry Birds AI competition
Customer Flow Forecasts on Koubei.com Challenge
Automated Negotiating Agent Competition
AI Lounge
AI Festival (at various locations around the city)

Invited speakers

PROVABLY BENEFICIAL AI

Stuart Russell
UC Berkeley

Aug 22nd
9:00-10:00
Plenary

AS WE TRAIN THE AI, SO THE AI CAN TRAIN US

Marti Hearst
UC Berkeley

Aug 22nd
14:00-15:00
Plenary

SWIFT LOGIC FOR BIG DATA AND KNOWLEDGE GRAPHS

Georg Gottlob
University of Oxford and TU Wien

Aug 22nd
14:00-15:00
Room 203-204

IMPROVING HEALTH-CARE: CHALLENGES AND OPPORTUNITIES FOR REINFORCEMENT LEARNING

Joelle Pineau
McGill University

Aug 23rd
14:00-15:00
Plenary

SUPER-HUMAN AI FOR STRATEGIC REASONING: BEATING TOP PROS IN HEADS-UP NO-LIMIT TEXAS HOLD'EM

Tuomas Sandholm
Carnegie Mellon University

Aug 23rd
14:00-15:00
Room 203-204

DEEP LEARNING AT ALIBABA

Rong Jin
Alibaba

Aug 24th
14:00-15:00
Plenary

FROM AUTOMATION TO AUTONOMOUS SYSTEMS: A LEGAL PHENOMENOLOGY WITH PROBLEMS OF ACCOUNTABILITY

Ugo Pagallo
University of Turin Law School; Center for Transnational Legal Studies, London; NEXA Center for Internet & Society, Politecnico of Turin

Aug 24th
14:00-15:00
Room 203-204

General tutorial/workshop timetable

August 19th-20th, 2017
RMIT University Building 80.

Note that room numbers at RMIT are listed in the format bb.ff.rr where bb is the building number (80 for all IJCAI-17 events), ff is the floor number, and rr is the room number on that floor.

Tutorials' timetable	
8:00–8:30	Registration
8:30–10:00	Morning tutorial, part 1
10:00–10:30	Coffee break
10:30–12:30	Morning tutorial, part 2
12:30–14:00	Lunch break*
14:00–16:00	Afternoon tutorial, part 1
16:00–16:30	Coffee break
16:30–18:00	Afternoon tutorial, part 2 (Quarter-day tutorials that start after the afternoon break may finish at 18:15.)

* Lunch is not provided.

August 21st, 2017
Melbourne Convention Center, Level 2

Workshops' timetable	
8:00–8:30	Registration
8:30–10:00	Morning workshop part 1
10:00–10:30	Coffee break
10:30–12:30	Morning workshop, part 2
12:30–14:00	Lunch break*
14:00–16:00	Afternoon workshop, part 1
16:00–16:30	Coffee break
16:30–18:00	Afternoon workshop, part 2

* Lunch is not provided.

Tutorial program

	Title	Tutors	Date
T1	Argumentation in Artificial Intelligence: From Theory to Practice	Federico Cerutti, Mauro Vallati	Aug 21 (Morning)
T2	IoT Big Data Stream Mining	Joao Gama, Gianmarco de Francisci Morales, Latifur Khan, Wei Fan, Albert Bifet	Aug 19 (Morning)
T3	Interactive Machine Learning: From Classifiers to Robotics	Ece Kamar, Bradley Hayes , Matthew Taylor	Aug 20 (Morning)
T5	Acquisition, Representation and Usage of Conceptual Hierarchies	Marius Pasca	Aug 21 (Afternoon)
T6	Computational Models for Social Influence and Diffusion	Yang Yang, Jie Tang	Aug 19 (Morning)
T7	Energy-based machine learning	Takayuki Osogami, Sakyasingha Dasgupta	Aug 21 (Afternoon)
T8	Declarative Spatial Reasoning: Theory, Methods, and Applications	Carl Schultz, Przemysław WałĐga, Mehul Bhatt	Aug 20 (Morning)
T9	Data Mining and Machine Learning using Constraint Programming Languages	Siegfried Nijssen, Tias Guns, Ian Davidson	Aug 19 (Afternoon)
T10	Markov Logic Networks: Recent Advances and Practical Applications	Deepak Venugopal, Vincent Ng, Vibhav Gogate	Aug 21 (Morning)
T11	Machine learning for dynamic social network analysis	Manuel Gomez Rodrieguez	Aug 19 (Afternoon)
T12	Learning and Decision-Making from Rank Data	Lirong Xia	Aug 21 (Morning)
T13	Theory and practice of revenue optimal mechanism design	Pingzhong Tang, Zihe Wang	Aug 19 (Afternoon)
T14	Multiwinner Elections: Applications, Axioms, and Algorithms	Piotr Faliszewski and Piotr Skowron	Aug 20 (Morning)
T15	Deep Reinforcement Learning	Igor Mordatch	Aug 20 (Afternoon)
T16	Programming by Optimization: A Practical Paradigm for Computer-Aided Algorithm Design	Holger Hoos, Frank Hutter	Aug 21 (Morning)
T17	Multiagent Learning: Foundations and Recent Trends	Stefano V. Albrecht, Peter Stone	Aug 19 (Morning)
T18	Unifying Logic, Dynamics and Probability: Foundations, Algorithms and Challenges	Vaishak Belle	Aug 20 (Afternoon)
T19	Theoretical Analysis of Policy Iteration	Shivaram Kalyanakrishnan	Aug 21 (Afternoon)
T20	First-Order Multi-agent Logics in Action	Vaishak Belle	Aug 20 (Afternoon)
T21	Heterogeneous Learning: Recent Advance and Future Studies	Jingrui He	Aug 21 (Afternoon)
T22	Strategic Voting and AI	Reshef Meir	Aug 20 (Afternoon)
T23	Strategic Voting and Strategic Candidacy in Multi-Agent Systems	Maria Polukarov, Svetlana Obraztsova, Zinovi Rabinovich	Aug 20 (Afternoon)

Tutorials' location

	August 19 *AM*	August 19 *PM*	August 20 *AM*	Aug 20 *PM1*	Aug 20 *PM2*	August 21 *AM*	Aug 21 *PM1*	Aug 21 *PM2*
T1						MCEC 210		
T2	80.02.07							
T3			80.02.07					
T5							MCEC 210	
T6	80.04.06							
T7							MCEC 211	
T8			80.04.06					
T9		80.02.07						
T10						MCEC 211		
T11		80.04.06						
T12						MCEC 212		
T13		80.04.11						
T14			80.04.11					
T15				80.02.07				
T16						MCEC 213		
T17	80.04.11							
T18				80.04.06				
T19							212	
T20					80.04.06			
T21							213	
T22				80.04.11				
T23					80.04.11			

Co-located Conference Location

	Aug 19 *AM*	Aug 19 *PM*	Aug 20 *AM*	Aug 20 *PM*	Aug 21 *AM*	Aug 21 *PM*
KSEM Keynote	80.10.17	80.10.17	80.10.17	80.10.17		
KSEM 1	80.11.06	80.11.06	80.11.06	80.11.06		
KSEM 2	80.11.07	80.11.07	80.11.07	80.11.07		
KSEM 3	80.11.08	80.11.08	80.11.08	80.11.08		
AusDM 1	80.10.14	80.10.14	80.10.14	80.10.14		
AusDM 2	80.10.15	80.10.15	80.10.15	80.10.15		
AI4KM+AIAI			80.11.09	80.11.09		
AusAI	80.11.10	80.11.10	80.11.10	80.11.10		

Workshop program

	Title	Date
W1	Fourth International Workshop on Theory and Applications of Formal Argumentation	August 19–20
W2	Fifth International Workshop on Graph Structures for Knowledge Representation and Reasoning (GKR 2017)	August 21
W3	Third International Workshop on Social Influence Analysis (SocInf 2017)	August 19
W5	Workshop on Computer Games	August 20
W6	Workshop on Language Sense on Computer	August 19–20
W7	Workshop on Learning in the Presence of Class Imbalance and Concept Drift	August 20
W8	Impedance Matching in Cognitive Partnerships	August 21
W9	Evaluating General-Purpose AI (EGPAI2017)	August 20
W10	The 3rd workshop on Algorithmic Game Theory	August 20
W11	Workshop on Linked Democracy: Artificial Intelligence for Democratic Innovation	August 19
W12	Workshop on Cognitive Knowledge Acquisition and Applications (Cognitum 2017)	August 20
W13	Third Workshop on Conflict Resolution in Decision Making (COREDEMA 2017)	August 21
W15	Explainable AI	August 20
W16	Workshop on AI Applications in E-Commerce	August 19
W17	Workshop on Linguistic and Cognitive Approaches to Dialogue Agents (LaCATODA)	August 21
W18	Workshop on Knowledge Discovery in Healthcare II: Towards Learning Healthcare Systems	August 20
W19	Ninth International Workshop on Modelling and Reasoning in Context (MRC 2017)	August 21
W20	Workshop on Artificial Intelligence and Constraint Programming	August 21
W21	The Taboo Challenge Competition	August 21
W22	30th Workshop on Qualitative Reasoning (QR2017)	August 21
W23	International Workshop on Artificial Intelligence in Security	August 20
W24	Cognition and Artificial Intelligence for Human-Centred Design	August 19
W25	Advances in Bioinformatics and Artificial Intelligence: Bridging the Gap (3rd edition)	August 20
W26	Third Workshop on Representation Learning for Graphs	August 20
W27	Workshop on Semantic Machine Learning	August 20
W28	Workshop on Declarative Learning Based Programming	August 19
W29	First International Workshop on Sharing and Reuse of AI Work Products	August 19
W30	Workshop on Human-Robot Engagement in the Home, Workplace and Public Spaces	August 19
W31	AI in the Oceans and Space	August 19
W32	Workshop on AI for Internet of Things	August 19
W33	BOOM: 2nd International Workshop on Biomedical infOrmatics with Optimization and Machine learning	August 21
W34	Logical Foundations for Uncertainty and Learning	August 20
W35	First International Workshop on Affective Computing (AC)	August 20
W36	Workshop on Abuse Preventive Data Mining	August 20
W37	Third International Workshop on Smart Simulation and Modelling for Complex Systems	August 21
W38	Workshop on Goal Reasoning	August 19
W39	Ninth International Workshop on Multimedia for Cooking and Eating Activities	August 20
W40	Workshop on Architectures for Generality & Autonomy	August 19
W41	Fifth Workshop on Heterogeneous Information Network Analysis (HINA)	August 20

Workshops' location

	Aug 19 *AM*	Aug 19 *PM*	Aug 20 *AM*	Aug 20 *PM*	Aug 21 *AM*	Aug 21 *PM*
W1	80.10.10					
W2					MCEC 204	
W3		80.03.15				
W5			80.03.15			
W6	80.04.20					
W7			80.04.21			
W8					MCEC 207	
W9			80.05.12			
W10			80.09.12			
W11	80.04.21					
W12			80.04.22			
W13					MCEC 208	
W15			80.02.02			
W16	80.05.12					
W17					MCEC 209	
W18			80.08.10			
W19					MCEC 215	
W20						MCEC 216
W21					MCEC 216	
W22					MCEC 218	
W23			80.09.06			
W24	80.04.24					
W25			80.04.24			
W26			80.09.10			
W27			80.04.25			
W28	80.04.25					
W29	80.07.02					
W30	80.07.06					
W31	80.07.09					
W32	80.09.12					
W33					MCEC 219	
W34			80.07.09			
W35			80.07.02			
W36			80.07.06			
W37					MCEC 220	
W38	80.08.10					
W39			80.07.07			
W40	80.09.10					
W41			80.10.11			

Doctoral Consortium

Monday August 21st, 2017
08:45
Room MCEC 203 (Convention Center)

Doctoral Consortium Co-chairs
Maria Gini
University of Minnesota, USA

Jimmy Lee
The Chinese University of Hong Kong, China

Schedule

Timetable	Activity
8:45 – 9:15	Welcome and Overview of the Day
9:15 – 10:00	Lightning advertisement talks (14 papers)
10:00 – 10:30	Coffee break
10:30 – 11:30	Poster session
11:30 – 12:30	Invited Talk: Optimising your PhD and postdoc life: not an easy task!, Maria Garcia de la Banda
12:30 – 14:15	Lunch
14:15 – 15:00	Lightning advertisement talks (14 papers)
15:00 – 16:00	Poster session
16:00 – 16:30	Coffee break
16:30 – 17:45	Career Panel
17:45 – 18:00	Summing up the Day and Q/A

Panels

PANEL: AI and Autonomy: Current Opportunity or Future Threat?
Tuesday August 22nd
15:00 - 16:00
Plenary

While autonomy has been a focus of interest in the research community for many years, recent developments in the adoption of AI and other technologies have brought new challenges or have made real those that until now had been largely abstract and theoretical. Autonomous vehicles on the road, in the sea and in the air, the proliferation of drones including for military purposes, and the availability of personal digital assistants are just some current examples raising important questions that we seek to explore in this panel from a variety of perspectives.

Moderator: Michael Luck (King's College, London)

PANEL: AI and Societal Challenges
Wednesday August 23rd
15:00 - 16:00
Plenary

A panel discussion whose goal is to show actual success cases of uses of AI that are beneficial to society. Recently we have seen in the media many opinions and warnings about risks of AI. Without denying at all that such risks actually exist, in this panel we would like to highlight the other side of the AI coin.

Moderator: Ramon Lopez de Mantaras (Artificial Intelligence Research Institute, Barcelona)

PANEL: AI in 2027
Thursday August 24th
15:00 - 16:00
Plenary

What will AI be ten years from now? A technology so pervasive in our daily lives that we will no longer think about it? A dream that has failed to materialize? A mix of successes and failures still far from achieving its promises? The panel will explore possible futures from a variety of perspectives.

Moderator: Maria Gini (University of Minnesota, Minneapolis)

Distinguished Papers

The winner for each category will be announced at the Opening Ceremony.

Finalists for Distinguished Paper
Mark Kaminski, Bernardo Cuenca Grau, Egor V. Kostylev, Boris Motik, Ian Horrocks: Foundations of Declarative Data Analysis Using Limit Datalog Programs

Frédéric Koriche, Sylvain Lagrue, Éric Piette, Sébastien Tabary: Constraint-Based Symmetry Detection in General Game Playing

Yong Luo, Yonggang Wen, Tongliang Liu, Dacheng Tao: General Heterogeneous Transfer Distance Metric Learning via Knowledge Fragments Transfer

Finalists for Distinguished Student Paper
Chaoyue Wang, Chaohui Wang, Chang Xu, Dacheng Tao: Tag Disentangled Generative Adversarial Network for Object Image Re-rendering

Wei-Cheng Chang, Chun-Liang Li, Yiming Yang, Barnabas Poczos: Data-driven Random Fourier Features using Stein Effect

Yanyu Xu, Nianyi Li, Junru Wu, Jingyi Yu, Shenghua Gao: Beyond Universal Saliency: Personalized Saliency Prediction with Multi-task CNN

Distinguished Reviewers

The top ten reviewers according to the peer assessments made after the review process are the following:

Top ten Distinguished Senior Program Committee Members
Ingrid Zukerman
Ning Chen
Roman Bartak
Philippe Laborie
Gerhard Lakemeyer
Carlos Linares Lopez
Eva Onaindia
Michael Winikoff
Chang Xu
Pietro Baroni

Top ten Distinguished Program Committee Members
Carlos Mencía
Brian Milch
Kenneth Heafield
Stefan Borgwardt
Ismail Ilkan Ceylan
Leslie Kaelbling
Markus Krötzsch
Domenico Lembo
Patricia Riddle
Bruno Martins

Robotics Showcase

Tuesday to Friday
Main Foyer and Room 208

Robotics continues to be a significant focus of research and development in AI. Following previous years, robotics will feature as part of the IJCAI program. The purpose of the showcase is to highlight current research and development being carried out in robotics by universities and research institutions as well as showcasing some of the platforms currently being used. This year's robotics showcase feature three events:

1. RoboCup Standard Platform League exhibition tournament.
The RoboCup Standard Platform league is a humanoid robot soccer competition using the SoftBank Nao robot. Matches will be played on a regular basis in the main foyer.

2. Robotics demonstrations.
Several universities and research organisations will be providing demonstrations of their robot platforms. This event is located in room 208 of the convention centre and runs during the exhibition program. It provides an opportunity for delegates to interact directly with researchers from these organisations.

3. Robotics video program.
International research and development in robotics are highlighted through a series of videos. These videos are displayed in both the main foyer and alongside the robotics demonstrations in room 208. They run in a continuous loop during the conference.

Demonstrations

Tuesday August 22nd
18:00-19:00
Main Foyer

Friday August 25th
10:00-12:00
Main Foyer

The Demonstration track provides a framework for exchanging ideas between theory and practice, and to showcase the applicability of different AI technologies to real-world problems. Please check the conference program for the dedicated time slots when you can visit and interact with the exciting and innovative applications. Some of the demonstrations include a speech-based medical decision support systems, a scientific writing advisor, a math word problem solver, a solution for urban traffic management, a tool for planning community evacuations in Australia, real—time UAV Maneuvering in simulations, The Superhuman AI for no-limit poker, tag recommendation to enhance social popularity, a debugging system for intelligent agents in Eclipse and a reasoning system for limited belief.

AI Video Competition

Tuesday to Friday
Main Foyer

IJCAI 2017 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 in the spirit of earlier AI Video Competitions, our intention is to provide researchers with a showcase for demonstrating how exciting and interesting Artificial Intelligence can be, as well as offering to the public and the media accurate information crafted first-hand by researchers.
Awards will be given to the best video and the best robotics video, other categories may be considered depending on the submissions received.

The jury of the video competition is composed by:
Giulia Sabbadini (Nowhere), Italy
Pierre Roy (Sony CSL Paris), France
Emanuele Ruffaldi (Scuola Superiore Sant'Anna), Italy
Lissette Lemus (IIIA-CSIC), Spain
Ariel Rosenfeld (Bar-Ilan University), Israel
Francesca Rossi (IBM), United States of America
Oliver Bown (UNSW), Australia
Annette Werth (Sony Computer Science Laboratories), Japan

Customer Flow Forecasts on Koubei.com Challenge

Tuesday August 22nd
10:30-12:30
Room 206

With the prevalent mobile location-based service, Alibaba and Ant Financial accumulate huge amount of user data on the platform every day, from brick and mortar store receipts to online shopping records. Koubei, Ant Financial's online-to-offline platform utilizes the data to provide merchants with customized back-end business intelligence services, including transaction statistics, sales analysis and marketing recommendations. For example, Koubei aims to offer sales forecast services for every merchant on the platform. Basing on the forecasts, merchants can optimize their operations, reduce cost and improve user experience.

We present this challenge by properly reformulating the problem. We encourage innovative ideas to help achieve a more intelligent business platform which serves the business and the society better. Further details can be found at goo.gl/hZ56zm.

The Eighth International Automated Negotiating Agent Competition

Wednesday August 23rd
15:00-18:30
Room 206

The goal of the Automated Negotiating Agent Competition is to provide an incentive for the development of effective and efficient negotiation strategies for bidding, accepting and opponent modeling for different negotiation scenarios. This year, the competition introduces three leagues with different challenges:
–Repeated Multilateral Negotiation for Arbitrary Domains
–Negotiation Strategies for the Diplomacy Strategy Game
–Human-Agent Negotiation

In qualification rounds on July 15th, the agents who qualify for the final rounds will be announced on the Web site: http://web.tuat.ac.jp/~katfuji/ANAC2017/. In the ANAC session, which will be held in conjunction with IJCAI on August 23rd, the winners of each league will be announced and a short presentation for each winner strategy will be given by the winners. Each league offers a prize of USD 500 which will be shared between the top agents. We will conclude the ANAC session with a discussion of next year challenges. Everyone who is interested in agent systems for negotiation is very welcome to share their ideas/suggestions.

AIBIRDS 2017: The 6th Angry Birds AI Competition

Tuesday August 22nd
15:00 to 18:30
Room 206

Thursday August 24th
All day
Room 206

Friday August 25th
All day
Main Foyer

Now that AI can beat humans at playing Go, a recent survey of AI researchers identified Angry Birds as the next AI milestone where AI will beat humans.

IJCAI 2017 hosts the annual Angry Birds AI Competition where we test if this milestone can already be achieved. The competition consists of two parts. The first part is the AI competition on August 24 in room 206 where the world's best Angry Birds AI agents compete for the title of AIBIRDS 2017 Champion. There will be several elimination rounds, accompanied by team presentations and other related paper presentations. The Grand Final of the best two agents will be at 17:30 in room 206. Further details and a complete schedule can be found at http://aibirds.org.

The second part of the competition is the Angry Birds Human vs Machine Challenge on August 25 at (location) where we test if AI can beat human players. During the day, everyone is invited to play four new Angry Birds levels for ten minutes. At the end of the day at 16:00, the best AI agents will challenge humans and play the same levels for ten minutes.

Come and see for yourself if you can still beat AI and be part of AI history. The ten best players, human or machine, will receive prizes.

Best Papers in Sister Conferences Track

Within the main program, various sessions (session acronyms starting with "SIS")

In continuation of the tradition started at IJCAI 2011, this track celebrates excellence in the field by featuring about 40 presentations of award-winning papers from AI-related conferences. As the applicability of AI is ever growing, we believe this track can potentially foster interdisciplinary collaborations. The track will run throughout the whole technical program.

■ The best papers that will be presented at IJCAI 2017 are from the following conferences that took place in 2016: AAMAS, IJCAR, EC, CP, CHI, NIPS, SAT, ICCBR, UAI, ICLP, RSS, HCOMP, ICDM, ICRA, CogSci, ICAPS, COLING, ICML.

Journal Track

August 22nd - 25th, 2017
Within the main program, various sessions (session acronyms starting with "JOU")

The journal track is a relatively new feature for IJCAI (started at IJCAI-13), which invites authors to present their research papers published in top AI journals and have never been presented at a large AI conference such as IJCAI or AAAI.

The authors of such papers are given an opportunity to present their work during the conference and publish an extended abstract of this work in the conference proceedings.

This track provides both a very useful service to the community who are interested in keeping up with the literature in the top AI journals as well as an opportunity for the authors of such papers, who will have a platform to present their results to a broad AI audience and receive feedback in a highly interactive manner. To achieve these goals, authors are instructed to make the extended abstract as well as the presentation as accessible as possible to a general AI audience.

The 2017 IJCAI journal track includes 28 papers that have appeared in AIJ or JAIR over the previous two years.

Closing event

August 25th, 2017
17:30-18:30
Main Foyer

Please join us for our closing ceremony! This will be your opportunity to thank the members of the local arrangements committee whose hard work made the conference possible. There will also be a preview of the next IJCAI-ECAI that will be held in Stockholm, Sweden, in July 2018. Also not be missed will be a raffle for a couple of Amazon Fire HD 8s' as well as of a load of books donated by publishers. After this there will be food and drink!

Eventbase, Free App for your IJCAI Program

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-17". 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.

To download Eventbase:

Participant registration for IJCAI 2017

Onsite registration will be located from Saturday August 19th to Sunday August 20th at the entrance of Building 80, RMIT University and from Monday August 21st to Friday August 25th in the Ground Floor Foyer of the Melbourne Convention Centre, outside the main Plenary Room. All attendees must pick up their registration packages for admittance to programs.

Registration Desk Schedule

Day	Location	Time
Saturday August 19th	RMIT University, Building 80 (Entrance, Level 2 Foyer)	8:00–17:30
Sunday August 20th	RMIT University, Building 80 (Entrance, Level 2 Foyer)	8:00–17:30
Monday August 21st	MCEC (Melbourne Convention and Exhibition Centre) (Main Foyer of the Convention Center)	8:00–17:30
Tuesday August 22nd	MCEC (Melbourne Convention and Exhibition Centre) (Main Foyer of the Convention Center)	8:00–17:30
Wednesday August 23rd	MCEC (Melbourne Convention and Exhibition Centre) (Main Foyer of the Convention Center)	8:00–17:30
Thursday August 24th	MCEC (Melbourne Convention and Exhibition Centre) (Main Foyer of the Convention Center)	8:00–17:30
Friday August 25th	MCEC (Melbourne Convention and Exhibition Centre) (Main Foyer of the Convention Center)	8:00–12:00

Tourist information at IJCAI

There are a range of discounted tours offered for IJCAI delegates, including visits to the stunning coastal Great Ocean Road, or to Phillip Island to see the fairy penguins, guided Melbourne city walks to explore its hidden laneways, and day trips to the Yarra Valley for all things food, wine and Australian wildlife.

You can book these tours online via the discount links on the conference website (http://ijcai-17.org/melbourne-city.html). For more information on what to see and do whilst in Melbourne you can visit the registration desk from August 21st - 25th, or the City of Melbourne information desk at the main foyer of the Melbourne Convention Centre.

IJCAI 2017 Exhibit program

ACS
www.acs.org.au
ACS is the professional association for Australia's Information and Communication Technology (ICT) sector. With over 22,000 members working across business, education, government and the community, we are passionate about the ICT profession being recognised as a driver of innovation and business – able to deliver real, tangible outcomes.

We are proud to be the independent voice of Australian ICT, representing practitioners in business, government and education. Our Code of Ethics upholds professional standards while our advocacy and policies help our profession thrive.

ACS members have the opportunity to develop their skills through access to extensive educational resources, and network with industry professionals at hundreds of events across Australia. Members can also receive international, independent recognition for their skills through the ACS certification program.

ACS helps members realise their professional ambitions in the global economy, making the most of an era of extraordinary possibility.

Adobe Systems
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.

AI Access Foundation
AI Access Foundation is a nonprofit corporation whose purpose is to facilitate the dissemination of scientific results in artificial intelligence. Founded in 1993, the Foundation publishes the open access Journal of AI Research. The Foundation also runs AI Access books, a not-for-profit publisher with a heavy-weight scientific board that publishes open access monographs and collected works which are available electronically for free and in hard copy at close to cost. The Foundation welcomes charitable donations, including individual and corporate gifts of money, equipment, and personnel to help support its operations.

Alibaba
Alibaba group's mission is to make it easy to do business anywhere.

We provide the fundamental technology infrastructure and marketing reach to help merchants, brands and other businesses that provide products, services and digital content to leverage the power of the Internet to engage with their users and customers. Our businesses are comprised of core commerce, cloud computing, digital media and entertainment, innovation initiatives and others. Through investee affiliates, we also participate in the logistics and local services sectors.

ANT FINANCIAL SERVICE GROUP
Ant Financial Services Group, hereinafter referred to as "Ant Financial" was officially established in October 2014 and originated from Alipay which is the world's leading third-party payment platform founded in 2004, Ant Financial is dedicated to creating an open ecosystem, enabling financial institutions and partners to make rapid progress towards "internet plus" goals through its "Internet Booster Plan", and providing inclusive financial services to small and micro enterprises and individual consumers. Ant Financial subsidiaries and affiliates include Alipay, Ant Fortune, Ant Financial Cloud, MYbank and Zhima Credit , an independent third-party credit scoring agency. Ant Financial's invested companies also work with these businesses to foster an open ecosystem. Ant Financial back the whole ecosystem of Alibaba, has a very rich and large data (such: Based on the basis of identity, financial information, credit information, risk, and relationships, behaviors, Consumer information, And based on the product, location, marketing, accounts, and etc.)

AUSTRALIAN NATIONAL UNIVERSITY
https://cecs.anu.edu.au/
The Australian National University (ANU) is a world-leading university in Australia's capital city, Canberra.
Our location points to our unique history, ties to the Australian Government and special standing as a resource for the Australian people. Our focus on research as an asset, and an approach to education, ensures our graduates are in demand the world-over for their abilities to understand, and apply vision and creativity to addressing complex contemporary challenges. We are the leading Australian university in Artificial Intelligence research, with over 150 academics, adjuncts, and PhD students covering almost the whole spectrum of AI. Come and study with us, work with us, or collaborate with our outstanding researchers.

Baidu
www.baidu.com
Baidu was founded in 2000 by Internet pioneer Robin Li, creator of visionary search technology Hyperlink Analysis, with the mission of providing the best way for people to find what they're looking for online. Over the past decade we have strived to fulfill this mission by listening carefully to our users' needs and wants. 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. Our deep understanding of Chinese language and culture is central to our success and this kind of knowledge allows us to tailor our search technology for our users' needs. Just to cite one example, we believe there are at least 38 ways of saying "I" in the Chinese language. It is important that we recognize these nuances to effectively address our users' requests.

Centre for Artificial Intelligence, UTS
The Centre for Artificial Intelligence (CAI) at the University of Technology Sydney, is a world leading research centre in artificial intelligence. The CAI's vision is to achieve excellence and innovation in sustainable and comprehensible artificial intelligence by developing powerful theoretical foundations, innovative technologies and application systems, and leading knowledge advancement which translates into significant social and economic impacts. Our research expertise spans the areas of computational intelligence, business intelligence, computer vision, data science, machine learning, brain computer interface, social robotics and information systems. Residing in a state of the art facility in the Faculty of Engineering at UTS, the CAI employs nearly 50 academic and postdoctoral researchers, and supervises over 120 HDR students. The Centre is also a partner with a number of joint research centres in China.

Consilium Technology Pty Ltd
Consilium Technology is an Adelaide-based Research Service Provider that designs intelligent machines to complement, augment, and replace human cognition. We bring cutting-edge technology to Australian organisations to automate decisions and make products more intelligent. Our broad Machine Intelligence capability encompasses a number of specialised areas; including modelling, simulation, machine learning, data analytics, mixed reality, and human science.

We recognise the importance of implementing a human-centric approach when developing intelligent systems and applications, which are in turn taught to automatically learn from real data and experience. As a result, our agile solutions can adapt to different situations and remain relevant in dynamic environments. Some of the machine learning techniques that we employ include Deep Neural Networks ('Deep Learning'), Recurrent Neural Networks, and Reinforcement Learning.

DiDi
Didi Chuxing is the world's leading mobile transportation platform. The company offers a full range of mobile tech-based mobility options for nearly 400 million users, including taxi hailing, private car hailing, Hitch (social ride-sharing), DiDi Chauffeur, DiDi Bus, DiDi Minibus, DiDi Car Rental and DiDi Enterprise Solutions. As many as 20 million rides were completed on DiDi's platform on a daily basis in October 2016, making DiDi the world's second largest online transaction platform. DiDi acquired Uber China in August 2016.

DiDi is committed to working with communities and partners to solve the world's transportation, environmental and employment challenges using big data-driven deep-learning algorithms that optimize resource allocation. In 2016, Didi was included in Fortune's Change the World list, and named one of the World's 50 Smartest Companies by MIT Technology Review. In 2015, DiDi was named as a Davos Global Growth Company.

ESSENCE
ESSENCE is a European research training network funded by the Marie Curie programme of the European Commissions that conducts world-leading research into the evolution and negotiation of meaning among human and artificial agents. Over the past four years, it has supported fifteen early-career researchers working on topics that investigate semantic technologies, language games, multiagent communication, ontology learning, and human dialogue, and which all contribute to a broader research vision of diversity-aware AI. This vision emphasises creating next-generation AI technologies that can be used to bridge the gap between heterogeneous agents by exploring how representation, reasoning, and interaction can be used to allow diverse collectives of agents to share information and knowledge, coordinate their activities, and combine their individual capabilities. ESSENCE aims to build a sustainable community around this vision and to promote this vision as an important future challenge for AI.

Global Business College of Australia (GBCA)
Global Business College of Australia (GBCA) is the Australian arm of the Huashang Education Group, specialising in vocational and tertiary education as well as corporate training across diverse disciplines including IT, business, accounting and interpretation. GBCA is a strategic partner of the University of Canberra (UC) delivering UC Bachelor courses with a focus on IT and Commerce and is scheduled to deliver the Master degrees commencing February 2018. GBCA offers a range of customised programs to serve varied needs for different cohorts such as large Chinese companies, Australian SMEs, high-profile executives and talented youths. GBCA pioneers in introducing AI in education, for example collaborating with the University of Technology Sydney (UTS) to conduct research on interactive cyberbullying detection and prevention systems, exposing students and staff to the latest development in AI and supporting AI related projects and startups.

IBM Research
From landing the first astronauts on the moon to the discovery of fractals, from the technology behind laser surgery to building the first cognitive system to win the Jeopardy! competition, IBM has been the spark of the technology revolutions that have shaped our world today. At the core of IBM's innovation are its 12 global research labs. IBM Research - Australia is a vibrant and relatively young community within IBM Research. The lab is primarily an industry solutions lab that focuses on conceiving, designing and building next generation systems that will transform health and life sciences, government sector and financial services.

JD.COM
JD.com is the largest e-commerce company in China and the largest Chinese retailer, both in terms of revenue. The company strives to offer consumers the best online shopping experience. Through its user-friendly website, native mobile apps, and WeChat and Mobile QQ entry points, JD offers consumers a superior shopping experience. The company has the largest fulfillment infrastructure of any e-commerce company in China. As of March 31, 2017, JD.com operated 7 fulfillment centers and 263 warehouses covering 2,672 counties and districts across China, staffed by its own employees. JD.com is a member of the NASDAQ100 and a Fortune Global 500 company.

King Abdullah University of Science and Technology (KAUST)
KAUST advances science and technology through distinctive and collaborative research integrated with graduate education. Located on the Red Sea coast in Saudi Arabia, KAUST conducts curiosity-driven and goal-oriented research to address global challenges related to food, water, energy and the environment. Established in 2009, KAUST is a catalyst for innovation, economic development and social prosperity in Saudi Arabia and the world. The university currently educates and trains over 900 master's and doctoral students, supported by an academic community of 150 faculty members, 400 postdocs and 300 research scientists. With 100 nationalities working and living at KAUST, the university brings together people and ideas from all over the world.

Meitu
MTLAB (Meitu Imageing & Vision Lab) is a state-of-the-art R&D team within Xiamen Meitu Technology Co., with a focus on the area of computer vision and machine learning. MTLAB is the core research department of Meitu, aiming to provide support the current and also future products of the company with its unique core algorithm, as well as help with advancing the development of the products through cutting-edge technology.

MIT Press
The MIT Press is the only university press in the United States whose list is based in science and technology. This does not mean that science and engineering are all we publish, but it does mean that we are committed to the edges and frontiers of the world—to exploring new fields and new modes of inquiry. We publish about 200 new books a year and 150 issues from over 30 journals. Our goal is to create content that is challenging, creative, attractive, and yet affordable to individual readers.

NNAISENSE
NNAISENSE leverages the 25-year proven track record of one of the leading research teams in artificial intelligence to build large-scale neural network solutions for superhuman perception and intelligent automation, with the ultimate goal of marketing general-purpose neural network-based AIs. The company is an outgrowth of the internationally renowned Swiss AI Lab, IDSIA, which has been at the forefront of scientific breakthroughs in artificial neural networks (invented LSTM), deep learning, reinforcement learning, artificial evolution, and general purpose AI, since the early '90s. Over the last two years, NNAISENSE has successfully partnered with major players in diverse industries including steel production (ArcelorMittal), finance (Acatis Investments) and autonomous vehicles (Audi) in an effort to validate our proprietary

technology, and significantly advance the state of the art beyond artificial perception toward general AI.

RMIT University
RMIT is a global university of technology, design and enterprise and one of Australia's original tertiary institutions, founded in 1887. With its city campus in the heart of Melbourne's CBD, the University enjoys an international reputation for excellence in research and teaching that is engaged with industry and the community. RMIT is a world leader in architecture, design, engineering, technology, and many other areas. The Schools of Science and of Engineering at RMIT are jointly rated by the Excellence in Research for Australia (ERA) scoring as "Above World Standard" in Artificial Intelligence research, particularly in industry-oriented research, with strengths in multi-agent systems, complex systems, evolutionary computing, applied machine learning and combinatorial optimisation. RMIT is a major contributor to IJCAI 2017, hosting two days of workshops and tutorials, and providing a wide range of support to the conference. RMIT hopes all attendees enjoy its city campus and the surrounding cosmopolitan charm of Melbourne.

Shanghai Xiaoi Robot Technology Co., LTD
Shanghai Xiaoi Robot Technology Co.,Ltd (Xiaoi) is a world-leading smart machine technology supplier and platform operator. It has set up a complete framework which includes knowledge representation, inference and prediction, machine learning (deep learning), semantic understanding, analysis and decision making, and Bot development architecture, and has the widest bots applications globally. Xiaoi's business covers telecommunications, financial services, e-government, e-commerce, smart homes and smart vehicle, providing services to ICBC, CCB, China Mobile, Huawei, SF Express, GE, Wanda Group, as well as hundreds of large and medium enterprises, government branches, thousands of SMEs and developers. Its users have exceeded 500 million. The world leading smart machine analyst Tom Austin comments Xiaoi as follows: There are increasing organizations focusing on smart machine technologies, but regarding actual applications, Xiaoi can realize various functions, its technologies and products are among the best and can be ranked top 3 in the world.

Springer Nature
www.springernature.com
Springer Nature is one of the world's leading global research, educational and professional publishers, home to an array of respected and trusted brands providing quality content through a range of innovative products and services. Springer Nature is the world's largest academic book publisher, publisher of the world's most influential journals and a pioneer in the field of open research. The company numbers almost 13,000 staff in over 50 countries and has a turnover of approximately EUR 1.5 billion. Springer Nature was formed in 2015 through the merger of Nature Publishing Group, Palgrave Macmillan, Macmillan Education and Springer Science+Business Media.

Tencent Technology (Shenzhen) Co., Ltd.
Tencent uses technology to enrich the lives of Internet users. Every day, hundreds of millions of people communicate, share experiences, consume information, and seek entertainment through our diversified services including QQ, Weixin/WeChat for communications; Qzone for social networking; Tencent Games for entertainment; Tencent News and Tencent Video for information and content. In 2017, the monthly active user accounts of QQ reached 861 million, while those of Weixin and WeChat combinedly reached 938 million. Meanwhile, we seek to evolve with the Internet by investing in the development of artificial intelligence. Our research facilities endeavor to advance the state of the art of machine learning, computer vision, speech recognition and natural language processing. Built on massive data from Tencent's vast community of users, its powerful computing capabilities, accumulated expertise and technical advantages in the vertical fields of the Internet, our team leads the forces that convert AI advances into tangible and usable features for a plethora of apps and services.

University of Melbourne
The University of Melbourne's School of Computing and Information Systems is Australia's number one university in the discipline and ranked 14th globally. It focused on delivering impact in three key areas of Data and Knowledge, Platforms and Systems, and People and Organisations. The School participates in several major research centres, and for example was recently successful in being awarded Australia's first Academic Centre of Cyber Security Excellence and an ARC Training Centre in Cognitive Computing for Medical Technologies. The University is a leader in several other areas, and in particular is home to one of the world's largest biomedical research precincts. Positioned near the centre of a city that is also home to several other major Universities and numerous major companies, the School engages in a vigorous local research culture and a wide range of industrial partnerships.

Joint NTU-UBC Research Centre of Excellence in Active Living for the Elderly, Nanyang Technological University
The Joint NTU-UBC Research Centre of Excellence in Active Living for the Elderly (LILY) is a world-class research centre focusing on the AI+ Aging technologies that can help the elderly enjoy an active, independent and dignified lifestyle. The LILY research centre was set up in August 2012 with support from the National Research Foundation (NRF) of Singapore, Nanyang Technological University (NTU) and The University of British Columbia (UBC). It is Singapore's first research centre dedicated to aging technology research, development and prototyping. LILY aims to be one of the world's leading incubators of inter-disciplinary research ideas to promote an active and independent lifestyle for the elderly, and to establish Singapore as a hub in designing and building technology enabled age-friendly communities.

IJCAI-ECAI-18
www.ijcai-18.org
We will have a booth to publicize the forthcoming IJCAI-ECAI-18 conference in Stockholm, Sweden. This will be the first joint IJCAI-ECAI conference held in co-location with AAMAS 2018 and ICML 2018.

Proceedings available at: **http://www.ijcai.org/proceedings/2017**

DAY 1 TUESDAY, AUGUST 22ND

Timetable	Place	Session	Paper ID	Title	Author/ Authors
08:00 - 09:00	**Plenary**	**Opening** *Fahiem Bacchus*		Opening Remarks	
09:00 - 10:00	**Plenary**	**Keynote** *Carles Sierra*		Provably beneficial AI	Stuart Russell
10:00 - 10:30		Coffee Break + Posters			
10:30 - 12:00	**Room 204**	**Classification 1** **ML-CL1** *James Kwok*	#912	Locality Adaptive Discriminant Analysis	Xuelong Li, Mulin Chen, Feiping Nie, Qi Wang
			#1160	Interactive Image Segmentation via Pairwise Likelihood Learning	Tao Wang, Quansen Sun, Qi Ge, Zexuan Ji, Qiang Chen, Guiyu Xia
			#2367	Unsupervised Deep Video Hashing with Balanced Rotation	Gengshen Wu, Li Liu, Yuchen Guo, Guiguang Ding, Jungong Han, Jialie Shen, Ling Shao
			#2473	MAM-RNN: Multi-level Attention Model Based RNN for Video Captioning	Xuelong Li, Bin Zhao, Xiaoqiang Lu
			#3338	JM-Net and Cluster-SVM for Aerial Scene Classification	Xiaoqiang Lu, Yuan Yuan, Jie Fang
			#3645	Multi-Class Support Vector Machine via Maximizing Multi-Class Margins	Jie Xu, Xianglong Liu, Zhouyuan Huo, Cheng Deng, Feiping Nie, Heng Huang
10:30 - 12:00	**Room 210**	**Feature Selection & Construction 1** **ML-FSC1** *Chang Xu*	#1236	TUCH: Turning Cross-view Hashing into Single-view Hashing via Generative Adversarial Nets	Xin Zhao, Guiguang Ding, Yuchen Guo, Jungong Han, Yue Gao
			#2966	Predicting Human Interaction via Relative Attention Model	Yichao Yan, Bingbing Ni, Xiaokang Yang
			#4040	Optimal Feature Selection for Decision Robustness in Bayesian Networks	YooJung Choi, Adnan Darwiche, Guy Van den Broeck
			#1185	Semi-supervised Feature Selection via Rescaled Linear Regression	Xiaojun Chen, Guowen Yuan, Feiping Nie, Joshua Zhexue Huang
			#1739	Multimodal Linear Discriminant Analysis via Structural Sparsity	Yu Zhang, Yuan Jiang
			#2240	Learning Mahalanobis Distance Metric: Considering Instance Disturbance Helps	Han-Jia Ye, De-Chuan Zhan, Xue-Min Si, Yuan Jiang
10:30 - 12:00	**Room 211**	**Data Mining 1** **ML-DM1** *Jingrui He*	#1655	Enhancing Campaign Design in Crowdfunding: A Product Supply Optimization Perspective	Qi Liu, Guifeng Wang, Hongke Zhao, Chuanren Liu, Tong Xu, Enhong Chen
			#1203	Video Question Answering via Hierarchical Spatio-Temporal Attention Networks	Zhou Zhao, Qifan Yang, Deng Cai, Xiaofei He, Yueting Zhuang
			#1514	Link Prediction via Ranking Metric Dual-Level Attention Network Learning	Zhou Zhao, Ben Gao, Vincent W. Zheng, Deng Cai, Xiaofei He, Yueting Zhuang
			#2730	Deep Matrix Factorization Models for Recommender Systems	Hong-Jian Xue, Xinyu Dai, Jianbing Zhang, Shujian Huang, Jiajun Chen
			#2816	Image-embodied Knowledge Representation Learning	Ruobing Xie, Zhiyuan Liu, Huanbo Luan, Maosong Sun
			#2848	Two dimensional Large Margin Nearest Neighbor for Matrix Classification	Kun Song, Feiping Nie, Junwei Han

10:30 - 12:00	**Room 212**	**Learning Graphical Models ML-LGM** *Liz Sonenberg*	#1339	Deep Graphical Feature Learning for Face Sketch Synthesis	Mingrui Zhu, Nannan Wang, Xinbo Gao, Jie Li
			#2538	Locally Consistent Bayesian Network Scores for Multi-Relational Data	Oliver Schulte, Sajjad Gholami
			#2743	Deep-dense Conditional Random Fields for Object Co-segmentation	Zehuan Yuan, Tong Lu, Yirui Wu
			#2824	Discriminative Bayesian Nonparametric Clustering	Vu Nguyen, Dinh Phung, Trung Le, Hung Bui
			#3236	A Density-based Nonparametric Model for Online Event Discovery from the Social Media Data	Jinjin Guo, Zhiguo Gong
			#3743	Inverse Covariance Estimation with Structured Groups	Shaozhe Tao, Yifan Sun, Daniel Boley
10:30 - 12:00	**Room 213**	**Active Learning ML-AL** *Sarah Erfani*	#1321	On Gleaning Knowledge from Multiple Domains for Active Learning	Zengmao Wang, Bo Du, Lefei Zhang, Liangpei Zhang, Ruimin Hu, Dacheng Tao
			#2865	High Dimensional Bayesian Optimization using Dropout	Cheng Li, Sunil Gupta, Santu Rana, Vu Nguyen, Svetha Venkatesh, Alistair Shilton
			#3183	Cost-Effective Active Learning from Diverse Labelers	Sheng-Jun Huang, Jia-Lve Chen, Xin Mu, Zhi-Hua Zhou
			#3192	Multi-instance multi-label active learning	Sheng-Jun Huang, Nengneng Gao, Songcan Chen
			#3228	COBRA: A Fast and Simple Method for Active Clustering with Pairwise Constraints	Toon Van Craenendonck, Sebastijan Dumancic, Hendrik Blockeel
			#3879	Correlational Dueling Bandits with Application to Clinical Treatment in Large Decision Spaces	Yanan Sui, Joel W. Burdick
10:30 - 12:00	**Room 216**	**Constraint Satisfaction 1 CS-CS1** *Felip Manyà*	#2075	On Neighborhood Singleton Consistencies	Anastasia Paparrizou, Kostas Stergiou
			#2485	Automatic Synthesis of Smart Table Constraints by Abstraction of Table Constraints	Baudouin Le Charlier, Minh Thanh Khong, Christophe Lecoutre, Yves Deville
			#2568	Learning to Run Heuristics in Tree Search	Elias B. Khalil, Bistra Dilkina, George L. Nemhauser, Shabbir Ahmed, Yufen Shao
			#3557	Learning-Based Abstractions for Nonlinear Constraint Solving	Sumanth Dathathri, Nikos Arechiga, Sicun Gao, Richard M. Murray
			#3941	The Hard Problems Are Almost Everywhere For Random CNF-XOR Formulas	Jeffrey M. Dudek, Kuldeep S. Meel, Moshe Y. Vardi
			#4190	Personnel Scheduling as Satisfiability Modulo Theories	Christoph Erkinger, Nysret Musliu
10:30 - 12:00	**Room 217**	**Approximate Probabilistic Inference 1 UAI-API1** *Vanina Martinez*	#1803	Nonlinear Maximum Margin Multi-View Learning with Adaptive Kernel	Jia He, Changying Du, Changde Du, Fuzhen Zhuang, Qing He, Guoping Long
			#1969	Variational Mixtures of Gaussian Processes for Classification	Chen Luo, Shiliang Sun
			#2477	Order Statistics for Probabilistic Graphical Models	David Smith, Sara Rouhani, Vibhav Gogate
			#3042	Dynamic Programming Bipartite Belief Propagation For Hyper Graph Matching	Zhen Zhang, Julian McAuley, Yong Li, Wei Wei, Yanning Zhang, Qinfeng Shi
			#3305	Coarse-to-Fine Lifted MAP Inference in Computer Vision	Haroun Habeeb, Ankit Anand, Mausam, Parag Singla
			#3911	Efficient Inference for Untied MLNs	Somdeb Sarkhel, Deepak Venugopal, Nicholas Ruozzi, Vibhav Gogate

10:30 - 12:00	**Room 218**	**Vision and Perception ROB-VP** *Qi Wang*	#1935	Learning to Hallucinate Face Images via Component Generation and Enhancement	Yibing Song, Jiawei Zhang, Shengfeng He, Linchao Bao, Qingxiong Yang
			#4018	Single-Image 3D Scene Parsing Using Geometric Commonsense	Chengcheng Yu, Xiaobai Liu, Song-Chun Zhu
			#1810	Image Gradient-based Joint Direct Visual Odometry for Stereo Camera	Jianke Zhu
			#2522	Salient Object Detection with Semantic Priors	Tam V. Nguyen, Luoqi Liu
			#1361	Large-scale Subspace Clustering by Fast Regression Coding	Jun Li, Handong Zhao, Zhiqiang Tao, Yun Fu
			#1432	Projective Low-rank Subspace Clustering via Learning Deep Encoder	Jun Li, Liu Hongfu, Handong Zhao, Yun Fu
10:30 - 12:00	**Room 219**	**Agent Theories and Models MAS-ATM** *Virginia Dignum*	#1295	Plan Explanations as Model Reconciliation: Moving Beyond Explanation as Soliloquy	Tathagata Chakraborti, Sarath Sreedharan, Yu Zhang, Subbarao Kambhampati
			#1930	Don't Bury your Head in Warnings: A Game-Theoretic Approach for Intelligent Allocation of Cyber-security Alerts	Aaron Schlenker, Haifeng Xu, Mina Guirguis, Christopher Kiekintveld, Arunesh Sinha, Milind Tambe, Solomon Sonya, Darryl Balderas, Noah Dunstatter
			#3043	Pure Nash Equilibria in Online Fair Division	Martin Aleksandrov, Toby Walsh
			#3293	Synchronisation Games on Hypergraphs	Sunil Simon, Dominik Wojtczak
			#3739	The Off-Switch Game	Dylan Hadfield-Menell, Anca Dragan, Pieter Abbeel, Stuart Russell
			#3924	Score Aggregation via Spectral Method	Mingyu Xiao, Yuqing Wang
10:30 - 12:00	**Room 220**	**Natural Language Semantics NLP-NLS** *Yanghua Xiao*	#3061	Understanding and Exploiting Language Diversity	Fausto Giunchiglia, Khuyagbaatar Batsuren, Gabor Bella
			#1487	Entity Suggestion with Conceptual Expanation	Yi Zhang, Yanghua Xiao, Seung-won Hwang, Haixun Wang, X. Sean Wang, Wei Wang
			#1858	Learning Sentence Representation with Guidance of Human Attention	Shaonan Wang, Jiajun Zhang, Chengqing Zong
			#3027	Dynamic Compositional Neural Networks over Tree Structure	Pengfei Liu, Xipeng Qiu, Xuanjing Huang
			#4054	Lexical Sememe Prediction via Word Embeddings and Matrix Factorization	Ruobing Xie, Xingchi Yuan, Zhiyuan Liu, Maosong Sun
			#3660	Cognitive-Inspired Conversational-Strategy Reasoner for Socially-Aware Agents	Oscar J. Romero, Ran Zhao, Justine Cassell
10:30 - 12:30	**Room 206**	**Competition** *Shuang (Catherine) Wu*		Alibaba	

10:30 – 12:30	**Room 203**	**Sister Conference Track: Knowledge Representation SIS-KR** *Michael Thielscher*	#1330	A Verified SAT Solver Framework with Learn, Forget, Restart, and Incrementality	Jasmin Christian Blanchette, Mathias Fleury, Christoph Weidenbach
			#4215	Unsatisfiable Core Shrinking for Anytime Answer Set Optimization	Mario Alviano, Carmine Dodaro
			#4234	KSP: A Resolution-based Prover for Multimodal K, Abridged Report	Cláudia Nalon, Ullrich Hustadt, Clare Dixon
			#4240	Concerning Referring Expressions in Query Answers	Alexander Borgida, David Toman, Grant Weddell
			#4242	First-Order Modular Logic Programs and their Conservative Extensions (Extended Abstract)	Amelia Harrison, Yuliya Lierler
			#4271	nanoCoP: Natural Non-clausal Theorem Proving	Jens Otten
10:30 – 12:30	**Plenary**	**Early Career 1 EAR-1** *Edith Elkind*	#21	Game Theoretic Analysis of Security and Sustainability	Bo An
			#24	Committee Scoring Rules: A Call to Arms	Piotr Faliszewski
			#30	Reinforcement mechanism design	Pingzhong Tang
			#33	Securing and scaling cryptocurrencies	Aviv Zohar
12:00 – 12:30		Posters			
12:30 – 14:00	LUNCH BREAK				
14:00 – 15:00	**Plenary**	**Invited Talk** *Craig Knoblock*		As We Train the AI, so the AI Can Train Us	Marti Hearst
14:00 – 15:00	**203 – 204**	**Invited Talk** *Thomas Eiter*		Swift Logic for Big Data and Knowledge Graphs	Georg Gottlob
15:00 – 16:00	**Plenary**	**Panel** *Michael Luck*		AI and Autonomy: Current Opportunity or Future Threat?	Participants: TBD
15:00 – 16:00	**Room 206**	**Competition** *Jochen Renz*		Angry Birds	
15:00 – 16:00	**203 – 204**	**Relational Learning ML-RL** *Parag Singla*	#3270	Clustering-Based Relational Unsupervised Representation Learning with an Explicit Distributed Representation	Sebastijan Dumancic, Hendrik Blockeel
			#1162	Multilingual Knowledge Graph Embeddings for Cross-lingual Knowledge Alignment	Muhao Chen, Yingtao Tian, Mohan Yang, Carlo Zaniolo
			#1326	When Does Label Propagation Fail? A View from a Network Generative Model	Yuto Yamaguchi, Kohei Hayashi
			#1818	Tensor Decomposition with Missing Indices	Yuto Yamaguchi, Kohei Hayashi
15:00 – 16:00	**Room 210**	**Cooperative Games MAS-CG** *Nicholas Mattei*	#1629	How to Form Winning Coalitions in Mixed Human-Computer Settings	Yair Zick, Kobi Gal, Yoram Bachrach, Moshe Mash
			#2290	Attachment Centrality for Weighted Graphs	Jadwiga Sosnowska, Oskar Skibski
			#1753	The Condorcet Principle for Multiwinner Elections: From Shortlisting to Proportionality	Haris Aziz, Edith Elkind, Piotr Faliszewski, Martin Lackner, Piotr Skowron
			#3857	Core Stability in Hedonic Games among Friends and Enemies: Impact of Neutrals	Kazunori Ohta, Nathanaël Barrot, Anisse Ismaili, Yuko Sakurai, Makoto Yokoo
15:00 – 16:00	**Room 211**	**Computational Biology and eHealth MT-CBH** *Daniel Boley*	#1840	The DNA Word Design Problem: A New Constraint Model and New Results	Michael Codish, Michael Frank, Vitaly Lagoon
			#3199	Deep Neural Networks for High Dimension, Low Sample Size Data	Bo Liu, Ying Wei, Yu Zhang, Qiang Yang
			#3693	Fast Sparse Gaussian Markov Random Fields Learning Based on Cholesky Factorization	Ivan Stojkovic, Vladisav Jelisavcic, Veljko Milutinovic, Zoran Obradovic
			#3636	Predicting Alzheimer's Disease Cognitive Assessment via Robust Low-Rank Structured Sparse Model	Jie Xu, Cheng Deng, Xinbo Gao, Dinggang Shen, Heng Huang

15:00 – 16:00	**Room 212**	**Time Series and Data Streams 1 ML-TSDS1** *Maria Gini*	#1719	Retaining Data from Streams of Social Platforms with Minimal Regret	Nguyen Thanh Tam, Matthias Weidlich, Duong Chi Thang, Hongzhi Yin, Nguyen Quoc Viet Hung
			#3592	Disambiguating Energy Disaggregation: A Collective Probabilistic Approach	Sabina Tomkins, Jay Pujara, Lise Getoor
			#896	Modelling the Working Week for Multi-Step Forecasting using Gaussian Process Regression	Pasan Karunaratne, Masud Moshtaghi, Shanika Karunasekera, Aaron Harwood, Trevor Cohn
			#1941	Stochastic Online Anomaly Analysis for Streaming Time Series	Zhao Xu, Kristian Kersting, Lorenzo von Ritter
15:00 – 16:00	**Room 213**	**Common Sense Reasoning KR-CMR** *Anthony Cohn*	#1257	Explicit Knowledge-based Reasoning for Visual Question Answering	Peng Wang, Qi Wu, Chunhua Shen, Anthony Dick, Anton van den Hengel
			#2214	Induction of Interpretable Possibilistic Logic Theories from Relational Data	Ondrej Kuzelka, Jesse Davis, Steven Schockaert
			#2450	What Can You Do with a Rock? Affordance Extraction via Word Embeddings	Nancy Fulda, Daniel Ricks, Ben Murdoch, David Wingate
			#3792	How a General-Purpose Commonsense Ontology can Improve Performance of Learning-Based Image Retrieval	Rodrigo Toro Icarte, Jorge A. Baier, Cristian Ruz, Alvaro Soto
15:00 – 16:00	**Room 216**	**Constraint Satisfaction 2 CS-CS2** *Mateu Villaret*	#3049	Solving Integer Linear Programs with a Small Number of Global Variables and Constraints	Pavel Dvořák, Eduard Eiben, Robert Ganian, Dušan Knop, Sebastian Ordyniak
			#4013	Efficiency Through Procrastination: Approximately Optimal Algorithm Configuration with Runtime Guarantees	Robert Kleinberg, Kevin Leyton-Brown, Brendan Lucier
			#2619	An Effective Learnt Clause Minimization Approach for CDCL SAT Solvers	Mao Luo, Chu-Min Li, Fan Xiao, Felip Manyà, Zhipeng Lü
			#4108	Efficient Weighted Model Integration via SMT-Based Predicate Abstraction	Paolo Morettin, Andrea Passerini, Roberto Sebastiani
15:00 – 16:00	**Room 217**	**Approximate Probabilistic Inference 2 UAI-API2** *Guy Van den Broeck*	#3667	The Mixing of Markov Chains on Linear Extensions in Practice	Topi Talvitie, Teppo Niinimäki, Mikko Koivisto
			#1335	Approximating Discrete Probability Distribution of Image Emotions by Multi-Modal Features Fusion	Sicheng Zhao, Guiguang Ding, Yue Gao, Jungong Han
			#3347	Scalable Estimation of Dirichlet Process Mixture Models on Distributed Data	Ruohui Wang, Dahua Lin
			#3862	Compressed Nonparametric Language Modelling	Ehsan Shareghi, Gholamreza Haffari, Trevor Cohn
15:00 – 16:00	**Room 218**	**Motion and Path Planning ROB-MPP** *Chris Amato*	#1618	On the Power and Limitations of Deception in Multi-Robot Adversarial Patrolling	Noga Talmor, Noa Agmon
			#2822	Compromise-free Pathfinding on a Navigation Mesh	Michael Cui, Daniel D. Harabor, Alban Grastien
			#2991	Switched Linear Multi-Robot Navigation Using Hierarchical Model Predictive Control	Chao Huang, Xin Chen, Yifan Zhang, Shengchao Qin, Yifeng Zeng, Xuandong Li
			#2950	Maintaining Communication in Multi-Robot Tree Coverage	Mor Sinay, Noa Agmon, Oleg Maksimov, Sarit Kraus, David Peleg
15:00 – 16:00	**Room 219**	**Markov Decision Processes PL-MDP** *Eyal Shlomo Shimony*	#2921	Improved Strong Worst-case Upper Bounds for MDP Planning	Anchit Gupta, Shivaram Kalyanakrishnan
			#3464	Proactive and Reactive Coordination of Non-dedicated Agent Teams Operating in Uncertain Environments	Pritee Agrawal, Pradeep Varakantham
			#1909	Equi-Reward Utility Maximizing Design in Stochastic Environments	Sarah Keren, Luis Pineda, Avigdor Gal, Erez Karpas, Shlomo Zilberstein
			#2530	Reduction Techniques for Model Checking and Learning in MDPs	Suda Bharadwaj, Stephane Le Roux, Guillermo Perez, Ufuk Topcu

15:00 - 16:00	**Room 220**	**Natural Language Processing NLP-NLP** *Jiajun Zhang*	#1204	Microblog Sentiment Classification via Recurrent Random Walk Network Learning	Zhou Zhao, Hanqing Lu, Deng Cai, Xiaofei He, Yueting Zhuang
			#2094	A Variational Autoencoding Approach for Inducing Cross-lingual Word Embeddings	Liangchen Wei, Zhi-Hong Deng
			#2132	Automatic Assessment of Absolute Sentence Complexity	Sanja Stajner, Simone Paolo Ponzetto, Heiner Stuckenschmidt
			#4164	Why Can't You Convince Me? Modeling Weaknesses in Unpersuasive Arguments	Isaac Persing, Vincent Ng
16:00 - 16:30				Coffee Break + Posters	
16:30 - 18:00	**Room 204**	**Classification 2 ML-CL2** *Georg Dorffner*	#1569	Convolutional 2D LDA for Nonlinear Dimensionality Reduction	Qi Wang, Zequn Qin, Feiping Nie, Yuan Yuan
			#1766	Hierarchical Feature Selection with Recursive Regularization	Hong Zhao, Pengfei Zhu, Ping Wang, Qinghua Hu
			#1808	Classification and Representation Joint Learning via Deep Networks	Ya Li, Xinmei Tian, Xu Shen, Dacheng Tao
			#2228	Discriminant Tensor Dictionary Learning with Neighbor Uncorrelation for Image Set Based Classification	Fei Wu, Xiao-Yuan Jing, Wangmeng Zuo, Ruiping Wang, Xiaoke Zhu
			#2774	Learning Feature Engineering for Classification	Fatemeh Nargesian, Horst Samulowitz, Udayan Khurana, Elias B. Khalil, Deepak Turaga
			#2884	Instability Prediction in Power Systems using Recurrent Neural Networks	Ankita Gupta, Gurunath Gurrala, Pidaparthy S Sastry
16:30 - 18:00	**Room 210**	**Feature Selection & Construction 2 ML-FSC2** *Min-Ling Zhang*	#1359	Self-Paced Multitask Learning with Shared Knowledge	Keerthiram Murugesan, Jaime Carbonell
			#1541	Adaptive Hypergraph Learning for Unsupervised Feature Selection	Xiaofeng Zhu, Yonghua Zhu, Shichao Zhang, Rongyao Hu, Wei He
			#2634	Data-driven Random Fourier Features using Stein Effect	Wei-Cheng Chang, Chun-Liang Li, Yiming Yang, Barnabás Póczos
			#3088	Theoretic Analysis and Extremely Easy Algorithms for Domain Adaptive Feature Learning	Wenhao Jiang, Cheng Deng, Wei Liu, Feiping Nie, Fu-lai Chung, Heng Huang
			#3486	Multiple Indefinite Kernel Learning for Feature Selection	Hui Xue, Yu Song, Hai-Ming Xu
			#3797	Learning Sparse Representations in Reinforcement Learning with Sparse Coding	Lei Le, Raksha Kumaraswamy, Martha White
16:30 - 18:00	**Room 211**	**Data Mining 2 ML-DM2** *Jeffrey Chan*	#1285	Doubly Sparsifying Network	Zhangyang Wang, Shuai Huang, Jiayu Zhou, Thomas S. Huang
			#1325	Improved Bounded Matrix Completion for Large-Scale Recommender Systems	Huang Fang, Zhang Zhen, Yiqun Shao, Cho-Jui Hsieh
			#2317	Multi-view Feature Learning with Discriminative Regularization	Jinglin Xu, Junwei Han, Feiping Nie
			#2724	LoCaTe: Influence Quantification for Location Promotion in Location-based Social Networks	Ankita Likhyani, Srikanta Bedathur, Deepak P
			#3355	Effective Representing of Information Network by Variational Autoencoder	Hang Li, Haozheng Wang, Zhenglu Yang, Haochen Liu
			#1455	Cross-Domain Recommendation: An Embedding and Mapping Approach	Tong Man, Huawei Shen, Xiaolong Jin, Xueqi Cheng

16:30 - 18:00	**Room 212**	**Time Series and Data Streams 2 ML-TSDS2** *Albert Bifet*	#1369	A Functional Dynamic Boltzmann Machine	Hiroshi Kajino
			#1824	Bayesian Dynamic Mode Decomposition	Naoya Takeishi, Yoshinobu Kawahara, Yasuo Tabei, Takehisa Yairi
			#2135	Hybrid Neural Networks for Learning the Trend in Time Series	Tao Lin, Tian Guo, Karl Aberer
			#2749	A Dual-Stage Attention-Based Recurrent Neural Network for Time Series Prediction	Yao Qin, Dongjin Song, Haifeng Chen, Wei Cheng, Guofei Jiang, Garrison W. Cottrell
			#3934	CHARDA: Causal Hybrid Automata Recovery via Dynamic Analysis	Adam Summerville, Joseph Osborn, Michael Mateas
			#4019	Sequential Prediction of Social Media Popularity with Deep Temporal Context Networks	Bo Wu, Wen-Huang Cheng, Yongdong Zhang, Qiushi Huang, Jintao Li, Tao Mei
16:30 - 18:00	**Room 213**	**Kernel Methods ML-KM** *James Kwok*	#1292	Large-scale Online Kernel Learning with Random Feature Reparameterization	Tu Dinh Nguyen, Trung Le, Hung Bui, Dinh Phung
			#1501	Multiple Kernel Clustering Framework with Improved Kernels	Yueqing Wang, Xinwang Liu, Yong Dou, Rongchun Li
			#1502	Approximate Large-scale Multiple Kernel k-means Using Deep Neural Network	Yueqing Wang, Xinwang Liu, Yong Dou, Rongchun Li
			#3931	Learning Co-Substructures by Kernel Dependence Maximization	Sho Yokoi, Daichi Mochihashi, Ryo Takahashi, Naoaki Okazaki, Kentaro Inui
			#3359	Student-t Process Regression with Student-t Likelihood	Qingtao Tang, Li Niu, Yisen Wang, Tao Dai, Wangpeng An, Jianfei Cai, Shu-Tao Xia
			#2898	Feature Selection via Scaling Factor Integrated Multi-Class Support Vector Machines	Jinglin Xu, Feiping Nie, Junwei Han
16:30 - 18:00	**Room 216**	**Solvers and Tools CS-ST** *Jordi Levy*	#1775	Scalable Constraint-based Virtual Data Center Allocation	Sam Bayless, Nodir Kodirov, Ivan Beschastnikh, Holger H. Hoos, Alan J. Hu
			#2495	On Computing World Views of Epistemic Logic Programs	Tran Cao Son, Tiep Le, Patrick Kahl, Anthony Leclerc
			#2513	Stochastic Constraint Programming with And-Or Branch-and-Bound	Behrouz Babaki, Tias Guns, Luc de Raedt
			#3279	An Improved Decision-DNNF Compiler	Jean-Marie Lagniez, Pierre Marquis
			#3369	Solving Stochastic Boolean Satisfiability under Random-Exist Quantification	Nian-Ze Lee, Yen-Shi Wang, Jie-Hong R. Jiang
			#2648	SVD-free Convex-Concave Approaches for Nuclear Norm Regularization	Yichi Xiao, Zhe Li, Tianbao Yang, Lijun Zhang
16:30 - 18:00	**Room 217**	**Automated Reasoning and Theorem Proving KR-ARTP** *Alessio Lomuscio*	#1842	The Impact of Treewidth on ASP Grounding and Solving	Bernhard Bliem, Marius Moldovan, Michael Morak, Stefan Woltran
			#1931	ATL Strategic Reasoning Meets Correlated Equilibrium	Xiaowei Huang, Ji Ruan
			#2292	Query Conservative Extensions in Horn Description Logics with Inverse Roles	Jean Christoph Jung, Carsten Lutz, Mauricio Martel, Thomas Schneider
			#3260	Efficient and Complete FD-solving for extended array constraints	Quentin Plazar, Mathieu Acher, Sébastien Bardin, Arnaud Gotlieb
			#3504	Symbolic LTLf Synthesis	Shufang Zhu, Lucas M. Tabajara, Jianwen Li, Geguang Pu, Moshe Y. Vardi
			#3551	Classical Generalized Probabilistic Satisfiability	Carlos Caleiro, Filipe Casal, Andreia Mordido

16:30 - 18:00	**Room 218**	**Robotics and Vision ROB-RV** *Arnau Ramisa*	#832	Locality Preserving Matching	Jiayi Ma, Ji Zhao, Hanqi Guo, Junjun Jiang, Huabing Zhou, Yuan Gao
			#1217	Fast Preprocessing for Robust Face Sketch Synthesis	Yibing Song, Jiawei Zhang, Linchao Bao, Qingxiong Yang
			#1510	Is My Object in This Video? Reconstruction-based Object Search in Videos	Tan Yu, Jingjing Meng, Junsong Yuan
			#1773	Combining Models from Multiple Sources for RGB-D Scene Recognition	Xinhang Song, Shuqiang Jiang, Luis Herranz
			#2315	Cross-Granularity Graph Inference for Semantic Video Object Segmentation	Huiling Wang, Tinghuai Wang, Ke Chen, Joni-Kristian Kämäräinen
			#2625	Synthesizing Samples for Zero-shot Learning	Yuchen Guo, Guiguang Ding, Jungong Han, Yue Gao
16:30 - 18:00	**Room 219**	**Noncooperative Games MAS-NCG** *Pingzhong Tang*	#2699	Playing Repeated Network Interdiction Games with Semi-Bandit Feedback	Qingyu Guo, Bo An, Long Tran-Thanh
			#2705	Comparing Strategic Secrecy and Stackelberg Commitment in Security Games	Qingyu Guo, Bo An, Branislav Bošanský, Christopher Kiekintveld
			#3136	Mechanism Design for Strategic Project Scheduling	Pradeep Varakantham, Na Fu
			#3581	Posted Pricing sans Discrimination	Shreyas Sekar
			#1836	Equilibria in Ordinal Games: A Framework based on Possibility Theory.	Nahla Ben Amor, Helene Fargier, Régis Sabbadin
			#3675	Convergence and Quality of Iterative Voting Under Non-Scoring Rules	Aaron Koolyk, Tyrone Strangway, Omer Lev, Jeffrey S. Rosenschein
16:30 - 18:00	**Room 220**	**NLP Applications and Tools 1 NLP-AT1** *Jiajun Zhang*	#1711	Multi-Modal Word Synset Induction	Jesse Thomason, Raymond J. Mooney
			#1448	DDoS Event Forecasting using Twitter Data	Zhongqing Wang, Yue Zhang
			#1449	A Neural Model for Joint Event Detection and Summarization	Zhongqing Wang, Yue Zhang
			#1841	Fast Parallel Training of Neural Language Models	Tong Xiao, Jingbo Zhu, Tongran Liu, Chunliang Zhang
			#2677	Joint Learning on Relevant User Attributes in Micro-blog	Jingjing Wang, Shoushan Li, Guodong Zhou
			#3802	Active Learning for Black-Box Semantic Role Labeling with Neural Factors	Chenguang Wang, Laura Chiticariu, Yunyao Li
16:30 - 18:00	**Plenary**	**AI & Autonomy: Security AUT-SEC** *Frank Dignum*	#2255	Context-Based Reasoning on Privacy in Internet of Things	Nadin Kokciyan, Pinar Yolum
			#3510	Privacy and Autonomous Systems	Jose M. Such
			#3518	Concrete Problems for Autonomous Vehicle Safety: Advantages of Bayesian Deep Learning	Rowan McAllister, Yarin Gal, Alex Kendall, Mark van der Wilk, Amar Shah, Roberto Cipolla, Adrian Weller
			#3889	Algorithmic Bias in Autonomous Systems	David Danks, Alex John London
16:30 - 18:30	**Room 206**	**Competition** *Jochen Renz*		Angry Birds	

16:30 - 18:30	**Room 203**	**Sister Conference Track: Planning SIS-PL** *Shivaram Kalyanakrishnan*	#4208	Dynamical System-Based Motion Planning for Multi-Arm Systems: Reaching for Moving Objects	Seyed Sina Mirrazavi Salehian, Nadia Figueroa, Aude Billard
			#4223	Lessons from the Amazon Picking Challenge: Four Aspects of Building Robotic Systems	Clemens Eppner, Sebastian Höfer, Rico Jonschkowski, Roberto Martín-Martín, Arne Sieverling, Vincent Wall, Oliver Brock
			#4232	Maximizing Awareness about HIV in Social Networks of Homeless Youth with Limited Information	Amulya Yadav, Hau Chan, Albert Xin Jiang, Haifeng Xu, Eric Rice, Milind Tambe
			#4241	I-dual: Solving Constrained SSPs via Heuristic Search in the Dual Space	Felipe Trevizan, Sylvie Thiebaux, Pedro Santana, Brian Williams
			#4257	An End-to-End System for Accomplishing Tasks with Modular Robots: Perspectives for the AI community	Gangyuan Jing, Tarik Tosun, Mark Yim, Hadas Kress-Gazit
			#4304	Value Iteration Networks	Aviv Tamar, Yi Wu, Garrett Thomas, Sergey Levine, Pieter Abbeel
18:00 - 18:30		Posters			
18:00 - 19:00	**Lobby**	**Demonstrations** *John Thangarajah*			

Timetable	Place	Session	Paper ID	Title	Author/ Authors
08:30 – 10:00	**Room 204**	**Classification 3** **ML-CL3** *Freddy Lecue*	#2163	Rescale-Invariant SVM for Binary Classification	Mojtaba Montazery, Nic Wilson
			#2410	Analogy-preserving functions: A way to extend Boolean samples	Miguel Couceiro, Nicolas Hug, Henri Prade, Gilles Richard
			#2563	Further Results on Predicting Cognitive Abilities for Adaptive Visualizations	Cristina Conati, Sébastien Lallé, Md. Abed Rahman, Dereck Toker
			#3530	Logistic Markov Decision Processes	Martin Mladenov, Craig Boutilier, Dale Schuurmans, Ofer Meshi, Gal Elidan, Tyler Lu
			#1200	Fast SVM Trained by Divide-and-Conquer Anchors	Meng Liu, Chang Xu, Chao Xu, Dacheng Tao
			#3171	Accelerated Doubly Stochastic Gradient Algorithm for Large-scale Empirical Risk Minimization	Zebang Shen, Hui Qian, Tongzhou Mu, Chao Zhang
08:30 – 10:00	**Room 210**	**Deep Learning 3** **ML-DL3** *Longbing Cao*	#2139	Variational Deep Embedding: An Unsupervised and Generative Approach to Clustering	Zhuxi Jiang, Yin Zheng, Huachun Tan, Bangsheng Tang, Hanning Zhou
			#2397	Convolutional-Match Networks for Question Answering	Spyridon Samothrakis, Tom Vodopivec, Michael Fairbank, Maria Fasli
			#2919	Improved Deep Embedded Clustering with Local Structure Preservation	Xifeng Guo, Long Gao, Xinwang Liu, Jianping Yin
			#2988	Modeling Hebb Learning Rule for Unsupervised Learning	Jia Liu, Maoguo Gong, Qiguang Miao
			#3002	DRLnet: Deep Difference Representation Learning Network and An Unsupervised Optimization Framework	Puzhao Zhang, Maoguo Gong, Hui Zhang, Jia Liu
			#3596	SEVEN: Deep Semi-supervised Verification Networks	Vahid Noroozi, Lei Zheng, Sara Bahaadini, Sihong Xie, Philip S. Yu
08:30 – 10:00	**Room 211**	**Data Mining and** **Personalization** **ML-DMP** *Jose Such*	#3308	FolkPopularityRank: Tag Recommendation for Enhancing Social Popularity using Text Tags in Content Sharing Services	Toshihiko Yamasaki, Jiani Hu, Shumpei Sano, Kiyoharu Aizawa
			#1512	Sampling for Approximate Maximum Search in Factorized Tensor	Zhi Lu, Yang Hu, Bing Zeng
			#2183	Attentional Factorization Machines: Learning the Weight of Feature Interactions via Attention Networks	Jun Xiao, Hao Ye, Xiangnan He, Hanwang Zhang, Fei Wu, Tat-Seng Chua
			#2665	Learning User's Intrinsic and Extrinsic Interests for Point-of-Interest Recommendation: A Unified Approach	Huayu Li, Yong Ge, Defu Lian, Hao Liu
			#2708	Tracking the Evolution of Customer Purchase Behavior Segmentation via a Fragmentation- Coagulation Process	Ling Luo, Bin Li, Irena Koprinska, Shlomo Berkovsky, Fang Chen
			#2737	Life-Stage Modeling by Customer-Manifold Embedding	Jing-Wen Yang, Yang Yu, Xiao-Peng Zhang
08:30 – 10:00	**Room 212**	**Semi-Supervised** **Learning 1** **ML-SSL1** *Ming Li*	#1846	Storage Fit Learning with Unlabeled Data	Bo-Jian Hou, Lijun Zhang, Zhi-Hua Zhou
			#1856	Multi-Positive and Unlabeled Learning	Yixing Xu, Chang Xu, Chao Xu, Dacheng Tao
			#1414	Adaptively Unified Semi-supervised Learning for Cross-Modal Retrieval	Liang Zhang, Bingpeng Ma, Jianfeng He, Guorong Li, Qingming Huang, Qi Tian
			#1457	Instance-Level Label Propagation with Multi-Instance Learning	Qifan Wang, Gal Chechik, Chen Sun, Bin Shen
			#2727	Learning Discriminative Recommendation Systems with Side Information	Feipeng Zhao, Yuhong Guo
			#1276	Adaptive Semi-Supervised Learning with Discriminative Least Squares Regression	Minnan Luo, Lingling Zhang, Feiping Nie, Xiaojun Chang, Buyue Qian, Qinghua Zheng

08:30 – 10:00	**Room 213**	**Computer Games** **MT-CG** *Sven Koenig*	#1222	Real-Time Navigation in Classical Platform Games via Skill Reuse	Michael Dann, Fabio Zambetta, John Thangarajah
			#2404	Player Movement Models for Video Game Level Generation	Sam Snodgrass, Santiago Ontañón
			#1293	Stratified Strategy Selection for Unit Control in Real-Time Strategy Games	Levi H. S. Lelis
			#2034	Focused Depth-first Proof Number Search using Convolutional Neural Networks for the Game of Hex	Chao Gao, Martin Müller, Ryan Hayward
			#3929	Interactive Narrative Personalization with Deep Reinforcement Learning	Pengcheng Wang, Jonathan Rowe, Wookhee Min, Bradford Mott, James Lester
			#4152	Game Engine Learning from Video	Matthew Guzdial, Boyang Li, Mark O. Riedl
08:30 – 10:00	**Room 216**	**Modeling and** **Formulation** **CS-MOTR** *Mark Wallace*	#3673	Cardinality Encodings for Graph Optimization Problems	Alexey Ignatiev, Antonio Morgado, Joao Marques-Silva
			#3037	Temporal Planning with Clock-Based SMT Encodings	Jussi Rintanen
			#3157	Finding Robust Solutions to Stable Marriage	Begum Genc, Mohamed Siala, Barry O'Sullivan, Gilles Simonin
			#3233	Nonlinear Hybrid Planning with Deep Net Learned Transition Models and Mixed-Integer Linear Programming	Buser Say, Ga Wu, Yu Qing Zhou, Scott Sanner
			#3418	Relaxed Exists-Step Plans in Planning as SMT	Miquel Bofill, Joan Espasa, Mateu Villaret
			#3676	Compact MDDs for Pseudo-Boolean Constraints with At-Most-One Relations in Resource- Constrained Scheduling Problems	Miquel Bofill, Jordi Coll, Josep Suy, Mateu Villaret
08:30 – 10:00	**Room 217**	**Description** **Logics ad** **Ontologies 1** **KR-DL01** *Sebastian Rudolph*	#936	Role Forgetting for ALCOQH (universal role)-Ontologies Using an Ackermann-Based Approach	Yizheng Zhao, Renate A. Schmidt
			#2278	Ontology-Mediated Querying with the Description Logic EL: Trichotomy and Linear Datalog Rewritability	Carsten Lutz, Leif Sabellek
			#2396	A Characterization Theorem for a Modal Description Logic	Paul Wild, Lutz Schröder
			#2411	Learning from Ontology Streams with Semantic Concept Drift	Jiaoyan Chen, Freddy Lecue, Jeff Z. Pan, Huajun Chen
			#2542	The Bag Semantics of Ontology-Based Data Access	Charalampos Nikolaou, Egor V. Kostylev, George Konstantinidis, Mark Kaminski, Bernardo Cuenca Grau, Ian Horrocks
			#3549	Ontology-Mediated Query Answering for Key-Value Stores	Meghyn Bienvenu, Pierre Bourhis, Marie-Laure Mugnier, Sophie Tison, Federico Ulliana
08:30 – 10:00	**Room 218**	**Geometric,** **Spatial, and** **Temporal** **Reasoning** **KR-GSTR** *Pavel Naumov*	#1860	Efficiently Enforcing Path Consistency on Qualitative Constraint Networks by Use of Abstraction	Michael Sioutis, Jean-François Condotta
			#2788	Inferring Human Attention by Learning Latent Intentions	Ping Wei, Dan Xie, Nanning Zheng, Song-Chun Zhu
			#3490	Dynamic Logic for Data-aware Systems: Decidability Results	Francesco Belardinelli, Andreas Herzig
			#3604	Temporal Sequences of Qualitative Information: Reasoning about the Topology of Constant-Size Moving Regions	Quentin Cohen-Solal, Maroua Bouzid, Alexandre Niveau
			#3903	Temporalising Separation Logic for Planning with Search Control Knowledge	Xu Lu, Cong Tian, Zhenhua Duan
			#4107	Bounded Timed Propositional Temporal Logic with Past Captures Timeline-based Planning with Bounded Constraints	Dario Della Monica, Nicola Gigante, Angelo Montanari, Pietro Sala, Guido Sciavicco

08:30 - 10:00	**Room 219**	**Economic Paradigms 1 MAS-EP1** *Bo An*	#1271	Why You Should Charge Your Friends for Borrowing Your Stuff	Kijung Shin, Euiwoong Lee, Dhivya Eswaran, Ariel D. Procaccia
			#2063	Representativeness-aware Aspect Analysis for Brand Monitoring in Social Media	Lizi Liao, Xiangnan He, Zhaochun Ren, Liqiang Nie, Huan Xu, Tat-Seng Chua
			#2341	Contest Design with Uncertain Performance and Costly Participation	Priel Levy, David Sarne, Igor Rochlin
			#2378	Pessimistic Leader-Follower Equilibria with Multiple Followers	Stefano Coniglio, Nicola Gatti, Alberto Marchesi
			#3174	Bounding the Inefficiency of Compromise	Ioannis Caragiannis, Panagiotis Kanellopoulos, Alexandros A. Voudouris
			#3402	Computing Bayes-Nash Equilibria in Combinatorial Auctions with Continuous Value and Action Spaces	Vitor Bosshard, Benedikt Bünz, Benjamin Lubin, Sven Seuken
08:30 - 10:00	**Room 220**	**Search in Planning and Scheduling PL-SPS** *Gabriele Röger*	#3790	Landmarks for Numeric Planning Problems	Enrico Scala, Patrik Haslum, Daniele Magazzeni, Sylvie Thiébaux
			#3849	Faster Conflict Generation for Dynamic Controllability	Nikhil Bhargava, Tiago Vaquero, Brian Williams
			#3883	Numeric Planning via Abstraction and Policy Guided Search	León Illanes, Sheila A. McIlraith
			#1235	Lossy Compression of Pattern Databases Using Acyclic Random Hypergraphs	Mehdi Sadeqi, Howard J. Hamilton
			#2416	A Scalable Approach to Chasing Multiple Moving Targets with Multiple Agents	Fan Xie, Adi Botea, Akihiro Kishimoto
			#3047	Efficient Optimal Search under Expensive Edge Cost Computation	Masataro Asai, Akihiro Kishimoto, Adi Botea, Radu Marinescu, Elizabeth M. Daly, Spyros Kotoulas
08:30 - 10:00	**Room 203**	**Sister Conference Track: Search and Constraints SIS-SECO** *Christian Bessiere*	#4207	Using Constraint Programming to solve a Cryptanalytic Problem	David Gerault, Marine Minier, Christine Solnon
			#4246	A SAT Approach to Branchwidth	Neha Lodha, Sebastian Ordyniak, Stefan Szeider
			#4262	Blockedness in Propositional Logic: Are You Satisfied With Your Neighborhood?	Benjamin Kiesl, Martina Seidl, Hans Tompits, Armin Biere
			#4270	Solving Very Hard Problems: Cube-and-Conquer, a Hybrid SAT Solving Method	Marijn J.H. Heule, Oliver Kullmann, Victor W. Marek
08:30 - 10:00	**Plenary**	**Early Career 2 EAR-2** *Wai Kiang Yeap*	#28	Multimodal News Article Analysis	Arnau Ramisa
			#25	Towards understanding stories in videos	Sanja Fidler
			#20	Robotic Strategic Behavior in Adversarial Environments	Noa Agmon
10:00 - 10:30				Coffee Break + Posters	
10:30 - 12:00	**Room 204**	**Classification 4 ML-CL4** *Jennifer Neville*	#1319	Adaptive Manifold Regularized Matrix Factorization for Data Clustering	Lefei Zhang, Qian Zhang, Bo Du, Jane You, Dacheng Tao
			#1562	Efficient Kernel Selection via Spectral Analysis	Jian Li, Yong Liu, Hailun Lin, Yinliang Yue, Weiping Wang
			#1733	Adaptive Learning Rate via Covariance Matrix Based Preconditioning for Deep Neural Networks	Yasutoshi Ida, Yasuhiro Fujiwara, Sotetsu Iwamura
			#2883	Robust Softmax Regression for Multi-class Classification with Self-Paced Learning	Yazhou Ren, Peng Zhao, Yongpan Sheng, Dezhong Yao, Zenglin Xu
			#3955	Recommendation vs Sentiment Analysis: A Text-Driven Latent Factor Model for Rating Prediction with Cold-Start Awareness	Kaisong Song, Wei Gao, Shi Feng, Daling Wang, Kam-Fai Wong, Chengqi Zhang
			#4014	Regional Concept Drift Detection and Density Synchronized Drift Adaptation	Anjin Liu, Yiliao Song, Guangquan Zhang, Jie Lu

10:30 - 12:00	**Room 210**	**Deep Learning and NLP ML-DLNLP** *Yuhong Guo*	#1442	Multimodal Storytelling via Generative Adversarial Imitation Learning	Zhiqian Chen, Xuchao Zhang, Arnold P. Boedihardjo, Jing Dai, Chang-Tien Lu
			#1258	Combining Knowledge with Deep Convolutional Neural Networks for Short Text Classification	Jin Wang, Zhongyuan Wang, Dawei Zhang, Jun Yan
			#3036	Adaptive Semantic Compositionality for Sentence Modelling	Pengfei Liu, Xipeng Qiu, Xuanjing Huang
			#3898	Exploration of Tree-based Hierarchical Softmax for Recurrent Language Models	Nan Jiang, Wenge Rong, Min Gao, Yikang Shen, Zhang Xiong
			#3768	Deep Ordinal Regression Based on Data Relationship for Small Datasets	Yanzhu Liu, Adams Wai Kin Kong, Chi Keong Goh
			#3933	Random Shifting for CNN: a Solution to Reduce Information Loss in Down-Sampling Layers	Gangming Zhao, Jingdong Wang, Zhaoxiang Zhang
10:30 - 12:00	**Room 211**	**Data Mining and Feature Selection ML-DMFS** *Qiang Yang*	#1274	Top-k Supervise Feature Selection via ADMM for Integer Programming	Mingyu Fan, Xiaojun Chang, Xiaoqin Zhang, Di Wang, Liang Du
			#2165	Symmetric Non-negative Latent Factor Models for Undirected Large Networks	Xin Luo, Ming-Sheng Shang
			#3144	SitNet: Discrete Similarity Transfer Network for Zero-shot Hashing	Yuchen Guo, Guiguang Ding, Jungong Han, Yue Gao
			#3368	Handling Noise in Boolean Matrix Factorization	Radim Belohlavek, Martin Trnecka
			#3401	Single-Pass PCA of Large High-Dimensional Data	Wenjian Yu, Yu Gu, Jian Li, Shenghua Liu, Yaohang Li
			#3770	Learning Homophily Couplings from Non-IID Data for Joint Feature Selection and Noise-Resilient Outlier Detection	Guansong Pang, Longbing Cao, Ling Chen, Huan Liu
10:30 - 12:00	**Room 212**	**Semi-Supervised Learning 2 ML-SSL2** *Ramon López de Màntaras*	#3684	Scaling Active Search using Linear Similarity Functions	Sibi Venkatesan, James K. Miller, Jeff Schneider, Artur Dubrawski
			#1943	Projection Free Rank-Drop Steps	Edward Cheung, Yuying Li
			#2114	Semi-Supervised Deep Hashing with a Bipartite Graph	Xinyu Yan, Lijun Zhang, Wu-Jun Li
			#2444	Learning to Learn Programs from Examples: Going Beyond Program Structure	Kevin Ellis, Sumit Gulwani
			#3071	Semi-Supervised Learning for Surface EMG-based Gesture Recognition	Yu Du, Yongkang Wong, Wenguang Jin, Wentao Wei, Yu Hu, Mohan Kankanhalli, Weidong Geng
			#1263	Improving Learning-from-Crowds through Expert Validation	Mengchen Liu, Liu Jiang, Junlin Liu, Xiting Wang, Jun Zhu, Shixia Liu
10:30 - 12:00	**Room 213**	**Security and Privacy 1 MT-SP1** *Jose Such*	#1379	Online Reputation Fraud Campaign Detection in User Ratings	Chang Xu, Jie Zhang, Zhu Sun
			#2010	Defending Against Man-In-The-Middle Attack in Repeated Games	Shuxin Li, Xiaohong Li, Jianye Hao, Bo An, Zhiyong Feng, Kangjie Chen, Chengwei Zhang
			#2752	Staying Ahead of the Game: Adaptive Robust Optimization for Dynamic Allocation of Threat Screening Resources	Sara Marie Mc Carthy, Phebe Vayanos, Milind Tambe
			#3397	A Monte Carlo Tree Search approach to Active Malware Analysis	Riccardo Sartea, Alessandro Farinelli
			#3497	Tactics of Adversarial Attack on Deep Reinforcement Learning Agents	Yen-Chen Lin, Zhang-Wei Hong, Yuan-Hong Liao, Meng-Li Shih, Ming-Yu Liu, Min Sun
			#2072	Efficient Private ERM for Smooth Objectives	Jiaqi Zhang, Kai Zheng, Wenlong Mou, Liwei Wang

10:30 - 12:00	**Room 216**	**Heuristic Search CS-HS** *Yang Yu*	#1967	A Random Model for Argumentation Framework: Phase Transitions, Empirical Hardness, and Heuristics	Yong Gao
			#3239	Beyond Forks: Finding and Ranking Star Factorings for Decoupled Search	Daniel Gnad, Valerie Poser, Jörg Hoffmann
			#2880	Online Bridged Pruning for Real-Time Search with Arbitrary Lookaheads	Carlos Hernandez, Adi Botea, Jorge A. Baier, Vadim Bulitko
			#3400	An Admissible HTN Planning Heuristic	Pascal Bercher, Gregor Behnke, Daniel Höller, Susanne Biundo
			#3431	Optimizing Ratio of Monotone Set Functions	Chao Qian, Jing-Cheng Shi, Yang Yu, Ke Tang, Zhi-Hua Zhou
			#4132	On Subset Selection with General Cost Constraints	Chao Qian, Jing-Cheng Shi, Yang Yu, Ke Tang
10:30 - 12:00	**Room 217**	**Description Logics and Ontologies 2 KR-DL02** *Jérôme Euzenat*	#1540	Combining DL-Lite_{bool}^N with Branching Time: A gentle Marriage	Víctor Gutiérrez-Basulto, Jean Christoph Jung
			#1667	Query Rewriting for DL-Lite with n-ary Concrete Domains	Franz Baader, Stefan Borgwardt, Marcel Lippmann
			#3213	Making Cross Products and Guarded Ontology Languages Compatible	Pierre Bourhis, Michael Morak, Andreas Pieris
			#3791	Query Answering in Ontologies under Preference Rankings	Ismail Ilkan Ceylan, Thomas Lukasiewicz, Rafael Peñaloza, Oana Tifrea-Marciuska
			#4109	Mapping Repair in Ontology-based Data Access Evolving Systems	Domenico Lembo, Riccardo Rosati, Valerio Santarelli, Domenico Fabio Savo, Evgenij Thorstensen
			#4125	Most Probable Explanations for Probabilistic Database Queries	Ismail Ilkan Ceylan, Stefan Borgwardt, Thomas Lukasiewicz
10:30 - 12:00	**Room 218**	**Social Sciences 1 MT-SS1** *Haris Aziz*	#3439	A Causal Framework for Discovering and Removing Direct and Indirect Discrimination	Lu Zhang, Yongkai Wu, Xintao Wu
			#2080	Fast Network Embedding Enhancement via High Order Proximity Approximation	Cheng Yang, Maosong Sun, Zhiyuan Liu, Cunchao Tu
			#1770	Cake Cutting: Envy and Truth	Xiaohui Bei, Ning Chen, Guangda Huzhang, Biaoshuai Tao, Jiajun Wu
			#2166	Networked Fairness in Cake Cutting	Xiaohui Bei, Youming Qiao, Shengyu Zhang
			#3690	Deterministic, Strategyproof, and Fair Cake Cutting	Vijay Menon, Kate Larson
			#1546	Modeling Physicians' Utterances to Explore Diagnostic Decision-making	Xuan Guo, Rui Li, Qi Yu, Anne Haake
10:30 - 12:00	**Room 219**	**Economic Paradigms 2 MAS-EP2** *Makoto Yokoo*	#1584	Diverse Weighted Bipartite b-Matching	Faez Ahmed, John P. Dickerson, Mark Fuge
			#2042	Online Optimization of Video-Ad Allocation	Hanna Sumita, Yasushi Kawase, Sumio Fujita, Takuro Fukunaga
			#2191	Near-Feasible Stable Matchings with Budget Constraints	Yasushi Kawase, Atsushi Iwasaki
			#2791	Optimal Posted-Price Mechanism in Microtask Crowdsourcing	Zehong Hu, Jie Zhang
			#3476	Learning a Ground Truth Ranking Using Noisy Approval Votes	Ioannis Caragiannis, Evi Micha
			#3765	Thwarting Vote Buying Through Decoy Ballots	David C. Parkes, Paul Tylkin, Lirong Xia

10:30 - 12:00	**Room 220**	**Planning Algorithms PL-PA** *Eyal Shlomo (Solomon) Shimony*	#2223	On Creating Complementary Pattern Databases	Santiago Franco, Álvaro Torralba, Levi H. S. Lelis, Mike Barley
			#2508	Additive Merge-and-Shrink Heuristics for Diverse Action Costs	Gaojian Fan, Martin Müller, Robert Holte
			#3078	From Qualitative to Quantitative Dominance Pruning for Optimal Planning	Álvaro Torralba
			#3251	Search and Learn: On Dead-End Detectors, the Traps they Set, and Trap Learning	Marcel Steinmetz, Jörg Hoffmann
			#3386	Robust Advertisement Allocation	Shaojie Tang
			#3647	Purely Declarative Action Descriptions are Overrated: Classical Planning with Simulators	Guillem Francès, Miquel Ramírez, Nir Lipovetzky, Hector Geffner
10:30 - 12:30	**Room 203**	**Sister Conference Track: Knowledge Representation & Natural Language Processing SIS-KRNLP** *Mausam*	#4222	User-Based Opinion-based Recommendation	Ruihai Dong, Barry Smyth
			#4231	Predicting Human Similarity Judgments with Distributional Models: The Value of Word Associations	Simon De Deyne, Amy Perfors, Daniel J. Navarro
			#4238	Lexicons on Demand: Neural Word Embeddings for Large-Scale Text Analysis	Ethan Fast, Binbin Chen, Michael S. Bernstein
			#4244	Adapting Deep Network Features to Capture Psychological Representations: An Abridged Report	Joshua C. Peterson, Joshua T. Abbott, Thomas L. Griffiths
			#4249	Grounding Abstract Spatial Concepts for Language Interaction with Robots	Rohan Paul, Jacob Arkin, Nicholas Roy, Thomas M. Howard
			#4259	Intuitionistic Layered Graph Logic	Simon Docherty, David Pym
10:30 - 12:30	**Plenary**	**Early Career 3 EAR-3** *Gerhard Lakemeyer*	#23	Logic meets Probability: Towards Explainable AI Systems for Uncertain Worlds	Vaishak Belle
			#27	Knowledge Engineering for Intelligent Decision Support	María Vanina Martínez
			#32	Improving Group Decision-Making by Artificial Intelligence	Lirong Xia
			#29	Towards Certified Unsolvability in Classical Planning	Gabriele Röger
12:00 - 12:30			Posters		
12:30 - 14:00	LUNCH				
14:00 - 15:00	**Plenary**	**Invited Talk** *Qiang Yang*		Improving health-care: challenges and opportunities for reinforcement learning	Joelle Pineau
14:00 - 15:00	**203 - 204**	**Invited Talk** *Michael Wooldridge*		Super-Human AI for Strategic Reasoning: Beating Top Pros in Heads-Up No-Limit Texas Hold'em	Tuomas Sandholm
15:00 - 16:00	**Plenary**	**Panel**		AI and Societal Challenges	
15:00 - 16:00	**Room 206**	**Competition** *Reyhan Aydogan*		ANAC	
15:00 - 16:00	**203 - 204**	**Structured Learning ML-SL** *Daniel Boley*	#3671	Parsing Natural Language Conversations using Contextual Cues	Shashank Srivastava, Amos Azaria, Tom Mitchell
			#1328	ROUTE: Robust Outlier Estimation for Low Rank Matrix Recovery	Xiaojie Guo, Zhouchen Lin
			#2115	Sense Beauty by Label Distribution Learning	Yi Ren, Xin Geng
			#2565	Efficient Inexact Proximal Gradient Algorithm for Nonconvex Problems	Quanming Yao, James T. Kwok, Fei Gao, Wei Chen, Tie-Yan Liu

15:00 - 16:00	Room 210	**Miscelaneous: Robotics and Voting** **ROB-XXX** *Daniel Harabor*	#1987	Integrating Answer Set Programming with Semantic Dictionaries for Robot Task Planning	Dongcai Lu, Yi Zhou, Feng Wu, Zhao Zhang, Xiaoping Chen
			#2064	Dual Track Multimodal Automatic Learning through Human-Robot Interaction	Shuqiang Jiang, Weiqing Min, Xue Li, Huayang Wang, Jian Sun, Jiaqi Zhou
			#3644	Temporal Grounding Graphs for Language Understanding with Accrued Visual-Linguistic Context	Rohan Paul, Andrei Barbu, Sue Felshin, Boris Katz, Nicholas Roy
			#2353	Voting by sequential elimination with few voters	Sylvain Bouveret, Yann Chevaleyre, François Durand, Jérôme Lang
15:00 - 16:00	Room 211	**Agent-Based Simulation** **MAS-ABS** *Hanna Kurniawati*	#2205	Enhancing Sustainability of Complex Epidemiological Models through a Generic Multilevel Agent-based Approach	Sébastien Picault, Yu-Lin Huang, Vianney Sicard, Pauline Ezanno
			#2309	Factorized Asymptotic Bayesian Policy Search for POMDPs	Masaaki Imaizumi, Ryohei Fujimaki
			#2482	Interaction-based ontology alignment repair with expansion and relaxation	Jérôme Euzenat
			#3826	Aggressive, Tense or Shy? Identifying Personality Traits from Crowd Videos	Aniket Bera, Tanmay Randhavane, Dinesh Manocha
15:00 - 16:00	Room 212	**Satisfiability** **CS-SAT** *Jussi Rintanen*	#2254	A Recursive Shortcut for CEGAR: Application To The Modal Logic K Satisfiability Problem	Jean-Marie Lagniez, Daniel Le Berre, Tiago de Lima, Valentin Montmirail
			#2826	Intelligent Belief State Sampling for Conformant Planning	Alban Grastien, Enrico Scala
			#1253	Generating Hard Random Boolean Formulas and Disjunctive Logic Programs	Giovanni Amendola, Francesco Ricca, Miroslaw Truszczynski
			#3123	Locality in Random SAT Instances	Jesús Giráldez-Cru, Jordi Levy
15:00 - 16:00	Room 213	**Discourse** **NLP-DIS** *Frank Dignum*	#3222	A Deep Neural Network for Chinese Zero Pronoun Resolution	Qingyu Yin, Weinan Zhang, Yu Zhang, Ting Liu
			#4141	Inferring Implicit Event Locations from Context with Distributional Similarities	Jin-Woo Chung, Wonsuk Yang, Jinseon You, Jong C. Park
			#3348	SWIM: A Simple Word Interaction Model for Implicit Discourse Relation Recognition	Wenqiang Lei, Xuancong Wang, Meichun Liu, Ilija Ilievski, Xiangnan He, Min-Yen Kan
			#1658	Tosca: Operationalizing Commitments Over Information Protocols	Thomas C. King, Akın Günay, Amit K. Chopra, Munindar P. Singh
15:00 - 16:00	Room 216	**Activity and Plan Recognition** **PL-APR** *Noa Agmon*	#1934	New Metrics and Algorithms for Stochastic Goal Recognition Design Problems	Christabel Wayllace, Ping Hou, William Yeoh
			#2709	Deceptive Path-Planning	Peta Masters, Sebastian Sardina
			#3561	Heuristic Online Goal Recognition in Continuous Domains	Mor Vered, Gal A. Kaminka
			#4136	Bridging the Gap between Observation and Decision Making: Goal Recognition and Flexible Resource Allocation in Dynamic Network Interdiction	Kai Xu, Kaiming Xiao, Quanjun Yin, Yabing Zha, Cheng Zhu
15:00 - 16:00	Room 217	**Computational Complexity of Reasoning** **KR-CCR** *Georg Gottlob*	#3102	On the Kernelization of Global Constraints	Clément Carbonnel, Emmanuel Hebrard
			#1669	On the Complexity of Enumerating the Extensions of Abstract Argumentation Frameworks	Markus Kröll, Reinhard Pichler, Stefan Woltran
			#1829	A General Notion of Equivalence for Abstract Argumentation	Ringo Baumann, Wolfgang DvoÐák, Thomas Linsbichler, Stefan Woltran
			#3620	On the Computational Complexity of Gossip Protocols	Krzysztof R. Apt, Eryk KopczyÐski, Dominik Wojtczak

15:00 - 16:00	Room 218	**Knowledge-Based Software Engineering** **MT-KBSE** *Takahira Yamaguchi*	#3019	Leveraging Human Knowledge in Tabular Reinforcement Learning: A Study of Human Subjects	Ariel Rosenfeld, Matthew E. Taylor, Sarit Kraus
			#3230	Supervised Deep Features for Software Functional Clone Detection by Exploiting Lexical and Syntactical Information in Source Code	Huihui Wei, Ming Li
			#3618	Enhancing the Unified Features to Locate Buggy Files by Exploiting the Sequential Nature of Source Code	Xuan Huo, Ming Li
			#3884	DeepAM: Migrate APIs with Multi-modal Sequence to Sequence Learning	Xiaodong Gu, Hongyu Zhang, Dongmei Zhang, Sunghun Kim
15:00 - 16:00	Room 219	**Sentiment Analysis and Text Mining** **NLP-SATM** *Rafal Rzepka*	#1561	Opinion-aware Knowledge Graph for Political Ideology Detection	Wei Chen, Xiao Zhang, Tengjiao Wang, Bishan Yang, Yi Li
			#2376	End-to-End Adversarial Memory Network for Cross-domain Sentiment Classification	Zheng Li, Yu Zhang, Ying Wei, Yuxiang Wu, Qiang Yang
			#2608	Stance Classification with Target-specific Neural Attention	Jiachen Du, Ruifeng Xu, Yulan He, Lin Gui
			#3880	Interactive Attention Networks for Aspect-Level Sentiment Classification	Dehong Ma, Sujian Li, Xiaodong Zhang, Houfeng Wang
15:00 - 16:00	Room 220	**Machine Translation** **NLP-MT** *Shujian Huang*	#1749	ME-MD: An Effective Framework for Neural Machine Translation with Multiple Encoders and Decoders	Jinchao Zhang, Qun Liu, Jie Zhou
			#2011	Joint Training for Pivot-based Neural Machine Translation	Yong Cheng, Qian Yang, Yang Liu, Maosong Sun, Wei Xu
			#2573	Improved Neural Machine Translation with Source Syntax	Shuangzhi Wu, Ming Zhou, Dongdong Zhang
			#2989	Maximum Expected Likelihood Estimation for Zero-resource Neural Machine Translation	Hao Zheng, Yong Cheng, Yang Liu
16:00 - 16:30		Coffee Break + Posters			
16:30 - 17:30	Room 218	**Special Session** *Francesca Rossi*		2017 IJCAI-JAIR Best Paper Prize	
16:30 - 18:00	Room 204	**Classification 5** **ML-CL5** *Tongliang Liu*	#1231	Exclusivity Regularized Machine: A New Ensemble SVM Classifier	Xiaojie Guo, Xiaobo Wang, Haibin Ling
			#1312	Vertex-Weighted Hypergraph Learning for Multi-View Object Classification	Lifan Su, Yue Gao, Xibin Zhao, Hai Wan, Ming Gu, Jiaguang Sun
			#2077	Improving the Generalization Performance of Multi-class SVM via Angular Regularization	Jianxin Li, Haoyi Zhou, Pengtao Xie, Yingchun Zhang
			#2101	Ordinal Zero-Shot Learning	Zengwei Huo, Xin Geng
			#3935	Distributed Accelerated Proximal Coordinate Gradient Methods	Yong Ren, Jun Zhu
			#3962	Open Category Classification by Adversarial Sample Generation	Yang Yu, Wei-Yang Qu, Nan Li, Zimin Guo
16:30 - 18:00	Room 210	**Deep Learning and Vision 1** **ML-DLV1** *David Hogg*	#1490	Fashion Style Generator	Shuhui Jiang, Yun Fu
			#1170	EigenNet: Towards Fast and Structural Learning of Deep Neural Networks	Ping Luo
			#2096	DeepFacade: A Deep Learning Approach to Facade Parsing	Hantang Liu, Jialiang Zhang, Jianke Zhu, Steven C. H. Hoi
			#2196	Training Group Orthogonal Neural Networks with Privileged Information	Yunpeng Chen, Xiaojie Jin, Jiashi Feng, Shuicheng Yan
			#2409	Forecast the Plausible Paths in Crowd Scenes	Hang Su, Jun Zhu, Yinpeng Dong, Bo Zhang
			#2879	Deep Optical Flow Estimation Via Multi-Scale Correspondence Structure Learning	Shanshan Zhao, Xi Li, Omar El Farouk Bourahla

16:30 - 18:00	**Room 211**	**Data Mining and Social Sciences ML-DMSS** *Longbing Cao*	#1401	A Robust Noise Resistant Algorithm for POI Identification from Flickr Data	Yiyang Yang, Zhiguo Gong, Qing Li, Leong Hou U, Ruichu Cai, Zhifeng Hao
			#2427	Learning Concise Representations of Users' Influences through Online Behaviors	Shenghua Liu, Houdong Zheng, Huawei Shen, Xueqi Cheng, Xiangwen Liao
			#2611	TransNet: Translation-Based Network Representation Learning for Social Relation Extraction	Cunchao Tu, Zhengyan Zhang, Zhiyuan Liu, Maosong Sun
			#2688	Accelerated Local Anomaly Detection via Resolving Attributed Networks	Ninghao Liu, Xiao Huang, Xia Hu
			#2984	ContextCare: Incorporating Contextual Information Networks to Representation Learning on Medical Forum Data	Stan Zhao, Meng Jiang, Quan Yuan, Bing Qin, Ting Liu, ChengXiang Zhai
			#3812	SPMC: Socially-Aware Personalized Markov Chains for Sparse Sequential Recommendation	Chenwei Cai, Ruining He, Julian McAuley
16:30 - 18:00	**Room 212**	**Semi-Supervised Learning 3 ML-SSL3** *Ming Li*	#1287	Semi-supervised Max-margin Topic Model with Manifold Posterior Regularization	Wenbo Hu, Jun Zhu, Hang Su, Jingwei Zhuo, Bo Zhang
			#1426	Learning deep structured network for weakly supervised change detection	Salman Khan, Xuming He, Fatih Porikli, Mohammed Bennamoun, Ferdous Sohel, Roberto Togneri
			#1590	Using Graphs of Classifiers to Impose Declarative Constraints on Semi-supervised Learning	Lidong Bing, William W. Cohen, Bhuwan Dhingra
			#1747	Incomplete Attribute Learning with auxiliary labels	Kongming Liang, Yuhong Guo, Hong Chang, Xilin Chen
			#1959	Decreasing Uncertainty in Planning with State Prediction	Senka Krivic, Michael Cashmore, Daniele Magazzeni, Bram Ridder, Sandor Szedmak, Justus Piater
			#3440	Semi-supervised Learning over Heterogeneous Information Networks by Ensemble of Meta-graph Guided Random Walks	He Jiang, Yangqiu Song, Chenguang Wang, Ming Zhang, Yizhou Sun
16:30 - 18:00	**Room 213**	**Security and Privacy 2 MT-SP2** *Anika Schumann*	#1787	When Security Games Hit Traffic: Optimal Traffic Enforcement Under One Sided Uncertainty	Ariel Rosenfeld, Sarit Kraus
			#1831	A Convolutional Approach for Misinformation Identification	Feng Yu, Qiang Liu, Shu Wu, Liang Wang, Tieniu Tan
			#2181	Optimal Escape Interdiction on Transportation Networks	Youzhi Zhang, Bo An, Long Tran-Thanh, Zhen Wang, Jiarui Gan, Nicholas R. Jennings
			#2844	A Trust-based Mixture of Gaussian Processes Model for Reliable Regression in Participatory Sensing	Qikun Xiang, Jie Zhang, Ido Nevat, Pengfei Zhang
			#3243	A Group-Based Personalized Model for Image Privacy Classification and Labeling	Haoti Zhong, Anna Squicciarini, David Miller, Cornelia Caragea
			#3477	Efficient Label Contamination Attacks Against Black-Box Learning Models	Mengchen Zhao, Bo An, Wei Gao, Teng Zhang
16:30 - 18:00	**Room 216**	**Social Sciences 2 MT-SS2** *Mingyu Xiao*	#1509	Depression Detection via Harvesting Social Media: A Multimodal Dictionary Learning Solution	Guangyao Shen, Jia Jia, Liqiang Nie, Fuli Feng, Cunjun Zhang, Tianrui Hu, Tat-Seng Chua, Wenwu Zhu
			#3137	Who to Invite Next? Predicting Invitees of Social Groups	Yu Han, Jie Tang
			#3232	The Minds of Many: Opponent Modeling in a Stochastic Game	Friedrich Burkhard von der Osten, Michael Kirley, Tim Miller
			#3388	Social Pressure in Opinion Games	Diodato Ferraioli, Carmine Ventre
			#3396	No Time to Observe: Adaptive Influence Maximization with Partial Feedback	Jing Yuan, Shaojie Tang
			#3555	Unified Representation and Lifted Sampling for Generative Models of Social Networks	Pablo Robles-Granda, Sebastian Moreno, Jennifer Neville

16:30 - 18:00	**Room 217**	**Knowledge Representation Languages KR-KRL** *Mark Kaminski*	#1405	Discriminative Dictionary Learning With Ranking Metric Embedded for Person Re-Identification	De Cheng, Xiaojun Chang, Li Liu, Alexander G. Hauptmann, Yihong Gong, Nanning Zheng
			#2248	Knowledge Graph Representation with Jointly Structural and Textual Encoding	Jiacheng Xu, Xipeng Qiu, Kan Chen, Xuanjing Huang
			#2967	Context-aware Path Ranking for Knowledge Base Completion	Sahisnu Mazumder, Bing Liu
			#3706	A Model for Accountable Ordinal Sorting	Khaled Belahcene, Christophe Labreuche, Nicolas Maudet, Vincent Mousseau, Wassila Ouerdane
			#3821	Relatedness-based Multi-Entity Summarization	Kalpa Gunaratna, Amir Hossein Yazdavar, Krishnaprasad Thirunarayan, Amit Sheth, Gong Cheng
			#4081	A Reasoning System for a First-Order Logic of Limited Belief	Christoph Schwering
16:30 - 18:00	**Room 219**	**Economic Paradigms and Social Choice MAS-EPSC** *Thomas Meyer*	#3026	Mechanisms for Online Organ Matching	Nicholas Mattei, Abdallah Saffidine, Toby Walsh
			#1503	Computing an Approximately Optimal Agreeable Set of Items	Pasin Manurangsi, Warut Suksompong
			#1704	Recognizing Top-Monotonic Preference Profiles in Polynomial Time	Krzysztof Magiera, Piotr Faliszewski
			#1756	Proportional Rankings	Piotr Skowron, Martin Lackner, Markus Brill, Dominik Peters, Edith Elkind
			#1884	Manipulating Gale-Shapley Algorithm: Preserving Stability and Remaining Inconspicuous	Rohit Vaish, Dinesh Garg
			#2402	Fair Division of a Graph	Sylvain Bouveret, Katarína Cechlárová, Edith Elkind, Ayumi Igarashi, Dominik Peters
16:30 - 18:00	**Room 220**	**NLP Applications and Tools 2 NLP-AT2** *Freddy Lecue*	#3283	A Feature-Enriched Neural Model for Joint Chinese Word Segmentation and Part-of-Speech Tagging	Xinchi Chen, Xipeng Qiu, Xuanjing Huang
			#3642	Learning Conversational Systems that Interleave Task and Non-Task Content	Zhou Yu, Alexander Rudnicky, Alan Black
			#3692	Predicting the Quality of Short Narratives from Social Media	Tong Wang, Ping Chen, Boyang Li
			#2862	AGRA: An Analysis-Generation-Ranking Framework for Automatic Abbreviation from Paper Titles	Jianbing Zhang, Yixin Sun, Shujian Huang, Cam-Tu Nguyen, Xiaoliang Wang, Xinyu Dai, Jiajun Chen, Yang Yu
			#2888	Learning to Identify Ambiguous and Misleading News Headlines	Wei Wei, Xiaojun Wan
			#916	Learning to Explain Entity Relationships by Pairwise Ranking with Convolutional Neural Networks	Jizhou Huang, Wei Zhang, Shiqi Zhao, Shiqiang Ding, Haifeng Wang
16:30 - 18:00	**Plenary**	**AI & Autonomy: Technical issues AUT-TEC** *Maria Gini*	#2518	Online Decision-Making for Scalable Autonomous Systems	Kyle Hollins Wray, Stefan J. Witwicki, Shlomo Zilberstein
			#2932	Reinforcement Learning with a Corrupted Reward Channel	Tom Everitt, Victoria Krakovna, Laurent Orseau, Shane Legg
			#3130	Achieving Coordination in Multi-Agent Systems by Stable Local Conventions under Community Networks	Shuyue Hu, Ho-fung Leung
			#3783	A Goal Reasoning Agent for Controlling UAVs in Beyond-Visual-Range Air Combat	Michael W. Floyd, Justin Karneeb, Philip Moore, David W. Aha
16:30 - 18:30	**Room 206**	**Competition** *Reyhan Aydogan*		ANAC	

16:30 - 18:30	**Room 203**	**Journal Track: Search, Planning, Uncertainty and applications JOU-MISC** *Alessio Lomuscio*	#1370	Local Search for Minimum Weight Dominating Set with Two-Level Configuration Checking and Frequency Based Scoring Function (Extended Abstract)	Yiyuan Wang, Shaowei Cai, Minghao Yin
			#2116	Efficient Mechanism Design for Online Scheduling (Extended Abstract)	Xujin Chen, Xiaodong Hu, Tie-Yan Liu, Weidong Ma, Tao Qin, Pingzhong Tang, Changjun Wang, Bo Zheng
			#4194	Some Properties of Batch Value of Information in the Selection Problem (Extended Abstract)	Shahaf S. Shperberg, Solomon Eyal Shimony
			#4230	A generic approach to planning in the presence of incomplete information: Theory and implementation (Extended Abstract)	Son Thanh To, Tran Cao Son, Enrico Pontelli
			#4253	Coherent Predictive Inference under Exchangeability with Imprecise Probabilities (Extended Abstract)	Gert de Cooman, Jasper De Bock, Márcio Alves Diniz
			#4218	Computer Models Solving Intelligence Test Problems: Progress and Implications (Extended Abstract)	José Hernández-Orallo, Fernando Martínez-Plumed, Ute Schmid, Michael Siebers, David Dowe
18:00 - 18:30		Posters			
19:30 - 23:00	**Peninsula (Docklands)**	Conference Banquet			

Timetable	Place	Session	Paper ID	Title	Author/ Authors
08:30 - 10:00	**Room 219**	**Multi-Instance and Multi-Label Learning ML-MIML** *Andy Song*	#2001	Multi-Instance Learning with Key Instance Shift	Ya-Lin Zhang, Zhi-Hua Zhou
			#1621	Deep Multiple Instance Hashing for Object-based Image Retrieval	Wanqing Zhao, Ziyu Guan, Hangzai Luo, Jinye Peng, Jianping Fan
			#2276	Saliency Guided End-to-End Learning for Weakly Supervised Object Detection	Baisheng Lai, Xiaojin Gong
			#2073	Obtaining High-Quality Label by Distinguishing between Easy and Hard Items in Crowdsourcing	Wei Wang, Xiang-Yu Guo, Shao-Yuan Li, Yuan Jiang, Zhi-Hua Zhou
			#2235	Binary Linear Compression for Multi-label Classification	Wen-Ji Zhou, Yang Yu, Min-Ling Zhang
			#3379	Incomplete Label Distribution Learning	Miao Xu, Zhi-Hua Zhou
08:30 - 10:00	**Room 206**	**Competition** *Jochen Renz*		Angry Birds	
08:30 - 10:00	**Room 204**	**Classification and Neural Networks ML-CLNN** *Georg Dorffner*	#1592	Discriminative Deep Hashing for Scalable Face Image Retrieval	Jie Lin, Zechao Li, Jinhui Tang
			#1602	Confusion Graph: Detecting Confusion Communities in Large Scale Image Classification	Ruochun Jin, Yong Dou, Yueqing Wang, Xin Niu
			#2830	Identifying Human Mobility via Trajectory Embeddings	Qiang Gao, Fan Zhou, Kunpeng Zhang, Goce Trajcevski, Xucheng Luo, Fengli Zhang
			#3311	Name Nationality Classification with Recurrent Neural Networks	Jinhyuk Lee, Hyunjae Kim, Miyoung Ko, Donghee Choi, Jaehoon Choi, Jaewoo Kang
			#3712	Improving Classification Accuracy of Feedforward Neural Networks for Spiking Neuromorphic Chips	Antonio Jimeno Yepes, Jianbin Tang, Benjamin Scott Mashford
			#3963	Object Recognition with and without Objects	Zhuotun Zhu, Lingxi Xie, Alan Yuille
08:30 - 10:00	**Room 210**	**Deep Learning and Vision 2 ML-DLV2** *Guiguang Ding*	#1520	Importance-Aware Semantic Segmentation for Autonomous Driving System	Bi-ke Chen, Chen Gong, Jian Yang
			#1737	Multi-Stream Deep Similarity Learning Networks for Visual Tracking	Kunpeng Li, Yu Kong, Yun Fu
			#1899	Person Re-Identification by Deep Joint Learning of Multi-Loss Classification	Wei Li, Xiatian Zhu, Shaogang Gong
			#2039	Locality Constrained Deep Supervised Hashing for Image Retrieval	Hao Zhu, Shenghua Gao
			#2627	Deep Supervised Hashing with Nonlinear Projections	Sen Su, Gang Chen, Xiang Cheng, Rong Bi
			#2597	Cause-Effect Knowledge Acquisition and Neural Association Model for Solving A Set of Winograd Schema Problems	Quan Liu, Hui Jiang, Andrew Evdokimov, Zhen-Hua Ling, Xiaodan Zhu, Si Wei, Yu Hu
08:30 - 10:00	**Room 211**	**Data Mining 3 ML-DM3** *Joao Gama*	#2339	Linear Manifold Regularization with Adaptive Graph for Semi-supervised Dimensionality Reduction	Kai Xiong, Feiping Nie, Junwei Han
			#2350	Dynamic Weighted Majority for Incremental Learning of Imbalanced Data Streams with Concept Drift	Yang Lu, Yiu-ming Cheung, Yuan Yan Tang
			#2728	Semi-supervised Orthogonal Graph Embedding with Recursive Projections	Hanyang Liu, Junwei Han, Feiping Nie
			#2438	Self-paced Mixture of Regressions	Longfei Han, Dingwen Zhang, Dong Huang, Xiaojun Chang, Jun Ren, Senlin Luo, Junwei Han
			#3301	Locally Linear Factorization Machines	Chenghao Liu, Teng Zhang, Peilin Zhao, Jun Zhou, Jianling Sun
			#3336	Robust Survey Aggregation with Student-t Distribution and Sparse Representation	Qingtao Tang, Tao Dai, Li Niu, Yisen Wang, Shu-Tao Xia, Jianfei Cai

08:30 - 10:00	**Room 212**	**Transfer, Adaptation, Multi-Task Learning 1** **ML-TAML1** *Tongliang Liu*	#1741	Learning Latest Classifiers without Additional Labeled Data	Atsutoshi Kumagai, Tomoharu Iwata
			#1957	Dependency Exploitation: A Unified CNN-RNN Approach for Visual Emotion Recognition	Xinge Zhu, Liang Li, Weigang Zhang, Tianrong Rao, Min Xu, Qingming Huang, Dong Xu
			#2062	Learning Discriminative Correlation Subspace for Heterogeneous Domain Adaptation	Yuguang Yan, Wen Li, Michael Ng, Mingkui Tan, Hanrui Wu, Huaqing Min, Qingyao Wu
			#2690	AccGenSVM: Selectively Transferring from Previous Hypotheses	Diana Benavides-Prado, Yun Sing Koh, Patricia Riddle
			#2933	Privileged Multi-label Learning	Shan You, Chang Xu, Yunhe Wang, Chao Xu, Dacheng Tao
			#3006	Boosted Zero-Shot Learning with Semantic Correlation Regularization	Te Pi, Xi Li, Zhongfei (Mark) Zhang
08:30 - 10:00	**Room 213**	**Reinforcement Learning 1** **ML-REL1** *Jianye Hao*	#1444	Efficient Reinforcement Learning with Hierarchies of Machines by Leveraging Internal Transitions	Aijun Bai, Stuart Russell
			#2146	Multi-Task Deep Reinforcement Learning for Continuous Action Control	Zhaoyang Yang, Kathryn Merrick, Hussein Abbass, Lianwen Jin
			#2268	End-to-end optimization of goal-driven and visually grounded dialogue systems	Florian Strub, Harm de Vries, Jérémie Mary, Bilal Piot, Aaron Courville, Olivier Pietquin
			#2286	Sequence Prediction with Unlabeled Data by Reward Function Learning	Lijun Wu, Li Zhao, Tao Qin, Jianhuang Lai, Tie-Yan Liu
			#2776	Autonomous Task Sequencing for Customized Curriculum Design in Reinforcement Learning	Sanmit Narvekar, Jivko Sinapov, Peter Stone
			#2855	Improving Reinforcement Learning with Confidence-Based Demonstrations	Zhaodong Wang, Matthew E. Taylor
08:30 - 10:00	**Room 216**	**Game Theory** **KR-GT** *Son Tran*	#2787	Smoothing Method for Approximate Extensive-Form Perfect Equilibrium	Christian Kroer, Gabriele Farina, Tuomas Sandholm
			#2048	Weakening Covert Networks by Minimizing Inverse Geodesic Length	Haris Aziz, Serge Gaspers, Kamran Najeebullah
			#2347	The Tractability of the Shapley Value over Bounded Treewidth Matching Games	Gianluigi Greco, Francesco Lupia, Francesco Scarcello
			#3377	An Algorithm for Constructing and Solving Imperfect Recall Abstractions of Large Extensive-Form Games	Jiri Cermak, Branislav Bošanský, Viliam Lisý
			#3425	Nash Equilibria in Concurrent Games with Lexicographic Preferences	Julian Gutierrez, Aniello Murano, Giuseppe Perelli, Sasha Rubin, Michael Wooldridge
			#1938	Multiple-Profile Prediction-of-Use Games	Andrew Perrault, Craig Boutilier
08:30 - 10:00	**Room 217**	**Personalisation and user Modelling** **MT-PUM** *Reyhan Aydogan*	#1979	Learning User Dependencies for Recommendation	Yong Liu, Peilin Zhao, Xin Liu, Min Wu, Lixin Duan, Xiao-Li Li
			#873	Exploiting Music Play Sequence for Music Recommendation	Zhiyong Cheng, Jialie Shen, Lei Zhu, Mohan Kankanhalli, Liqiang Nie
			#1349	Beyond Universal Saliency: Personalized Saliency Prediction with Multi-task CNN	Yanyu Xu, Nianyi Li, Junru Wu, Jingyi Yu, Shenghua Gao
			#1588	Quantifying Aspect Bias in Ordinal Ratings using a Bayesian Approach	Lahari Poddar, Wynne Hsu, Mong Li Lee
			#3416	Socialized Word Embeddings	Ziqian Zeng, Yichun Yin, Yangqiu Song, Ming Zhang
			#3967	Exploring Personalized Neural Conversational Models	Satwik Kottur, Xiaoyu Wang, Vitor Carvalho

08:30 - 10:00	**Room 218**	**Belief Change** **KR-BC** *Yanjing Wang*	#1804	A General Multi-agent Epistemic Planner Based on Higher-order Belief Change	Xiao Huang, Biqing Fang, Hai Wan, Yongmei Liu
			#2492	Belief Change in a Preferential Non-monotonic Framework	Giovanni Casini, Thomas Meyer
			#1250	Strong Syntax Splitting for Iterated Belief Revision	Gabriele Kern-Isberner, Gerhard Brewka
			#2184	Non-Determinism and the Dynamics of Knowledge	Davide Grossi, Andreas Herzig, Wiebe van der Hoek, Christos Moyzes
			#2960	Belief Manipulation Through Propositional Announcements	Aaron Hunter, François Schwarzentruber, Eric Tsang
			#2982	Epistemic-entrenchment Characterization of Parikh's Axiom	Theofanis Aravanis, Pavlos Peppas, Mary-Anne Williams
08:30 - 10:00	**Room 220**	**Coordination and Cooperation** **MAS-COCO** *Stefano Albrecht*	#2466	COG-DICE: An Algorithm for Solving Continuous-Observation Dec-POMDPs	Madison Clark-Turner, Christopher Amato
			#1402	Coordinated Versus Decentralized Exploration In Multi-Agent Multi-Armed Bandits	Mithun Chakraborty, Kai Yee Phoebe Chua, Sanmay Das, Brendan Juba
			#1661	Probability Bounds for Overlapping Coalition Formation	Michail Mamakos, Georgios Chalkiadakis
			#2668	Multi-Agent Planning with Baseline Regret Minimization	Feng Wu, Shlomo Zilberstein, Xiaoping Chen
			#3514	Object Allocation via Swaps along a Social Network	Laurent Gourvès, Julien Lesca, Anaëlle Wilczynski
			#3865	Manipulating Opinion Diffusion in Social Networks	Robert Bredereck, Edith Elkind
08:30 - 10:00	**Room 203**	**Sister Conference Track: Multiagent Systems** **SIS-MAS** *Piotr Faliszewski*	#4201	Which is the Fairest (Rent Division) of Them All? (Extended Abstract)	Ya'akov (Kobi) Gal, Moshe Mash, Ariel D. Procaccia, Yair Zick
			#4229	Rationalisation of Profiles of Abstract Argumentation Frameworks: Extended Abstract	Stephane Airiau, Elise Bonzon, Ulle Endriss, Nicolas Maudet, Julien Rossit
			#4252	Summary: Multi-Agent Path Finding with Kinematic Constraints	Wolfgang Hönig, T. K. Satish Kumar, Liron Cohen, Hang Ma, Hong Xu, Nora Ayanian, Sven Koenig
			#4265	Evaluating Market User Interfaces for Electric Vehicle Charging using Bid2Charge	Sebastian Stein, Enrico H. Gerding, Adrian Nedea, Avi Rosenfeld, Nicholas R. Jennings
10:00 - 10:30			Coffee Break + Posters		
10:30 - 12:00	**Room 210**	**Neural Networks 1** **ML-NN1** *Longbing Cao*	#2032	Segmenting Chinese Microtext: Joint Informal-Word Detection and Segmentation with Neural Networks	Meishan Zhang, Guohong Fu, Nan Yu
			#1341	Privacy Issues Regarding the Application of DNNs to Activity-Recognition using Wearables and Its Countermeasures by Use of Adversarial Training	Yusuke Iwasawa, Kotaro Nakayama, Ikuko Yairi, Yutaka Matsuo
			#1689	Hierarchical LSTM with Adjusted Temporal Attention for Video Captioning	Jingkuan Song, Lianli Gao, Zhao Guo, Wu Liu, Dongxiang Zhang, Heng Tao Shen
			#3702	Right for the Right Reasons: Training Differentiable Models by Constraining their Explanations	Andrew Slavin Ross, Michael C. Hughes, Finale Doshi-Velez
			#2992	Self-paced Convolutional Neural Networks	Hao Li, Maoguo Gong
			#3638	Exemplar-centered Supervised Shallow Parametric Data Embedding	Martin Renqiang Min, Hongyu Guo, Dongjin Song

10:30 - 12:00	Room 211	**Data Mining and Unsupervised Learning 1 ML-DMUL1** *Chang Xu*	#1198	Discovering Relevance-Dependent Bicluster Structure from Relational Data	Iku Ohama, Takuya Kida, Hiroki Arimura
			#2036	Affinity Learning for Mixed Data Clustering	Nan Li, Longin Jan Latecki
			#2798	Understanding People Lifestyles: Construction of Urban Movement Knowledge Graph from GPS Trajectory	Chenyi Zhuang, Nicholas Jing Yuan, Ruihua Song, Xing Xie, Qiang Ma
			#3193	Mining Convex Polygon Patterns with Formal Concept Analysis	Aimene Belfodil, Sergei O. Kuznetsov, Céline Robardet, Mehdi Kaytoue
			#3720	See without looking: joint visualization of sensitive multi-site datasets	Debbrata K. Saha, Vince D. Calhoun, Sandeep R. Panta, Sergey M. Plis
			#3918	Beyond the Nystrom Approximation: Speeding up Spectral Clustering using Uniform Sampling and Weighted Kernel k-means	Mahesh Mohan, Claire Monteleoni
10:30 - 12:00	Room 212	**Transfer, Adaptation, Multi-Task Learning 2 ML-TAML2** *Jingrui He*	#1724	A Generalized Recurrent Neural Architecture for Text Classification with Multi-Task Learning	Honglun Zhang, Liqiang Xiao, Yongkun Wang, Yaohui Jin
			#2054	Cross-modal Common Representation Learning by Hybrid Transfer Network	Xin Huang, Yuxin Peng, Mingkuan Yuan
			#3196	Demystifying Neural Style Transfer	Yanghao Li, Naiyan Wang, Jiaying Liu, Xiaodi Hou
			#3777	Completely Heterogeneous Transfer Learning with Attention - What And What Not To Transfer	Seungwhan Moon, Jaime Carbonell
			#3956	Dynamic Multi-Task Learning with Convolutional Neural Network	Yuchun Fang, Zhengyan Ma, Zhaoxiang Zhang, Xu-Yao Zhang, Xiang Bai
			#3227	General Heterogeneous Transfer Distance Metric Learning via Knowledge Fragments Transfer	Yong Luo, Yonggang Wen, Tongliang Liu, Dacheng Tao
10:30 - 12:00	Room 213	**Reinforcement Learning 2 ML-REL2** *Matthew Taylor*	#1446	Weighted Double Q-learning	Zongzhang Zhang, Zhiyuan Pan, Mykel J. Kochenderfer
			#3824	Sample Efficient Policy Search for Optimal Stopping Domains	Karan Goel, Christoph Dann, Emma Brunskill
			#3966	Learning from Demonstrations with High-Level Side Information	Min Wen, Ivan Papusha, Ufuk Topcu
			#4163	Constrained Bayesian Reinforcement Learning via Approximate Linear Programming	Jongmin Lee, Youngsoo Jang, Pascal Poupart, Kee-Eung Kim
			#4185	Universal Reinforcement Learning Algorithms: Survey and Experiments	John Aslanides, Jan Leike, Marcus Hutter
			#4188	Count-Based Exploration in Feature Space for Reinforcement Learning	Jarryd Martin, Suraj Narayanan S., Tom Everitt, Marcus Hutter
10:30 - 12:00	Room 216	**Combinatorial Search and Optimisation CS-CSO** *Hiroshi Hosobe*	#1315	Weighted Model Integration with Orthogonal Transformations	David Merrell, Aws Albarghouthi, Loris D'Antoni
			#1445	Contextual Covariance Matrix Adaptation Evolutionary Strategies	Abbas Abdolmaleki, Bob Price, Nuno Lau, Luis Paulo Reis, Gerhard Neumann
			#1454	From Decimation to Local Search and Back: A New Approach to MaxSAT	Shaowei Cai, Chuan Luo, Haochen Zhang
			#1471	A Reduction based Method for Coloring Very Large Graphs	Jinkun Lin, Shaowei Cai, Chuan Luo, Kaile Su
			#2551	Front-to-End Bidirectional Heuristic Search with Near-Optimal Node Expansions	Jingwei Chen, Robert C. Holte, Sandra Zilles, Nathan R. Sturtevant
			#2694	Estimating the size of search trees by sampling with domain knowledge	Gleb Belov, Samuel Esler, Dylan Fernando, Pierre Le Bodic, George L. Nemhauser

10:30 - 12:00	Room 218	**Preferences KR-PREF** *Srdjan Vesic*	#3265	Revisiting Unrestricted Rebut and Preferences in Structured Argumentation.	Jesse Heyninck, Christian Straßer
			#1251	Pareto Optimal Allocation under Uncertain Preferences	Haris Aziz, Ronald de Haan, Baharak Rastegari
			#1282	Fair Allocation based on Diminishing Differences	Erel Segal-Halevi, Haris Aziz, Avinatan Hassidim
			#2167	Dominance and Optimisation Based on Scale-Invariant Maximum Margin Preference Learning	Mojtaba Montazery, Nic Wilson
			#2418	Efficient Inference and Computation of Optimal Alternatives for Preference Languages Based On Lexicographic Models	Nic Wilson, Anne-Marie George
			#3175	Proposing a Highly Accurate Hybrid Component-Based Factorised Preference Model in Recommender Systems	Farhad Zafari, Rasoul Rahmani, Irene Moser
10:30 - 12:00	Room 220	**Formal Verification, Validation and Synthesis MAS-FVVS** *Michael Winikoff*	#4148	Process Plan Controllers for Non-Deterministic Manufacturing Systems	Paolo Felli, Lavindra de Silva, Brian Logan, Svetan Ratchev
			#2521	Parameterised Verification of Data-aware Multi-Agent Systems	Francesco Belardinelli, Panagiotis Kouvaros, Alessio Lomuscio
			#3205	A Novel Symbolic Approach to Verifying Epistemic Properties of Programs	Nikos Gorogiannis, Franco Raimondi, Ioana Boureanu
			#3245	Verifying Fault-tolerance in Parameterised Multi-Agent Systems	Panagiotis Kouvaros, Alessio Lomuscio
			#3373	Verification of Broadcasting Multi-Agent Systems against an Epistemic Strategy Logic	Francesco Belardinelli, Alessio Lomuscio, Aniello Murano, Sasha Rubin
			#3627	An Abstraction-Refinement Methodology for Reasoning about Network Games	Guy Avni, Shibashis Guha, Orna Kupferman
10:30 - 12:30	Room 206	**Competition** *Jochen Renz*		Angry Birds	
10:30 - 12:30	Room 203	**Journal Track: Knowledge Representation 1 JOU-KR1** *Franz Baader*	#1522	New Canonical Representations by Augmenting OBDDs with Conjunctive Decomposition (Extended Abstract)	Yong Lai, Dayou Liu, Minghao Yin
			#4202	On the Expressivity of Inconsistency Measures (Extended Abstract)	Matthias Thimm
			#4205	The Ceteris Paribus Structure of Logics of Game Forms (Extended Abstract)	Davide Grossi, Emiliano Lorini, François Schwarzentruber
			#4210	A New Semantics for Overriding in Description Logics (Extended Abstract)	Piero Bonatti, Marco Faella, Iliana M. Petrova, Luigi Sauro
			#4228	Automated Conjecturing I: Fajtlowicz's Dalmatian Heuristic Revisited (Extended Abstract)	Craig E. Larson, Nico Van Cleemput
			#4226	Bayesian Network Structure Learning with Integer Programming: Polytopes, Facets and Complexity (Extended Abstract)	James Cussens, Matti Järvisalo, Janne H. Korhonen, Mark Bartlett
10:30 - 12:30	Room 204	**Sister Conference Track: HCI, CBR, Machine Learning, Robotics SIS-MISC** *Yair Zick*	#4247	Competence Guided Model for Casebase Maintenance	Ditty Mathew, Sutanu Chakraborti
			#4250	Local Topic Discovery via Boosted Ensemble of Nonnegative Matrix Factorization	Sangho Suh, Jaegul Choo, Joonseok Lee, Chandan K. Reddy
			#4274	Multi-Type Activity Recognition from a Robot's Viewpoint	Ilaria Gori, J. K. Aggarwal, Larry Matthies, Michael. S. Ryoo
			#4245	Efficient Techniques for Crowdsourced Top-k Lists	Luca de Alfaro, Vassilis Polychronopoulos, Neoklis Polyzotis
			#4243	The Many Benefits of Annotator Rationales for Relevance Judgments	Tyler McDonnell, Mucahid Kutlu, Tamer Elsayed, Matthew Lease
			#4237	Enhancing Crowdworkers' Vigilance	Avshalom Elmalech, David Sarne, Esther David, Chen Hajaj

10:30 - 12:30	**Plenary**	**Early Career 4 EAR-4** *Craig Knoblock*	#26	Learning from Data Heterogeneity: Algorithms and Applications	Jingrui He
			#31	Unsupervised Learning via Total Correlation Explanation	Greg Ver Steeg
			#34	Playing the Wrong Game	Reshef Meir
12:00 - 12:30		Coffee Break + Posters			
12:30 - 14:00		LUNCH			
14:00 - 15:00	**Plenary**	**Invited Talk** *Zhi-Hua Zhou*		Deep Learning at Alibaba	Rong Jin
14:00 - 15:00	**203 - 204**	**Invited Talk** *Pompeu Casanovas*		From Automation to Autonomous Systems: A Legal Phenomenology with Problems of Accountability	Ugo Pagallo
15:00 - 16:00	**Plenary**	**Panel** *Maria Gini*		AI in 2027	
15:00 - 16:00	**Room 206**	**Competition** *Jochen Renz*		Angry Birds	
15:00 - 16:00	**203 - 204**	**Knowledge-Based Learning ML-KBL** *Freddy Lecue*	#1378	Extracting Visual Knowledge from the Web with Multimodal Learning	Dihong Gong, Daisy Zhe Wang
			#1835	Adversarial Generation of Real-time Feedback with Neural Networks for Simulation-based Training	Xingjun Ma, Sudanthi Wijewickrema, Shuo Zhou, Yun Zhou, Zakaria Mhammedi, Stephen O'Leary, James Bailey
			#3101	Object Detection Meets Knowledge Graphs	Yuan Fang, Kingsley Kuan, Jie Lin, Cheston Tan, Vijay Chandrasekhar
			#3493	Logic Tensor Networks for Semantic Image Interpretation	Ivan Donadello, Luciano Serafini, Artur d'Avila Garcez
15:00 - 16:00	**Room 210**	**Uncertainty UAI-UAI** *Nic Wilson*	#1408	Plato's Cave in the Dempster-Shafer land--the Link between Pignistic and Plausibility Transformations	Chunlai Zhou, Biao Qin, Xiaoyong Du
			#2328	Adaptive Elicitation of Preferences under Uncertainty in Sequential Decision Making Problems	Nawal Benabbou, Patrice Perny
			#2437	Incremental Decision Making Under Risk with the Weighted Expected Utility Model	Hugo Gilbert, Nawal Benabbou, Patrice Perny, Olivier Spanjaard, Paolo Viappiani
			#2685	Causal Discovery from Nonstationary/ Heterogeneous Data: Skeleton Estimation and Orientation Determination	Kun Zhang, Biwei Huang, Jiji Zhang, Clark Glymour, Bernhard Schölkopf
15:00 - 16:00	**Room 211**	**Computational Sustainability MT-CS** *Zinovi Rabinovich*	#1585	Operation Frames and Clubs in Kidney Exchange	Gabriele Farina, John P. Dickerson, Tuomas Sandholm
			#1708	Contract Design for Energy Demand Response	Reshef Meir, Hongyao Ma, Valentin Robu
			#2142	Blue Skies: A Methodology for Data-Driven Clear Sky Modelling	Kartik Palani, Ramachandra Kota, Amar Prakash Azad, Vijay Arya
			#2383	Deep Multi-species Embedding	Di Chen, Yexiang Xue, Daniel Fink, Shuo Chen, Carla P. Gomes
15:00 - 16:00	**Room 212**	**Social Choice MAS-SC** *Liz Sonenberg*	#1614	Multiwinner Rules on Paths From k-Borda to Chamberlin–Courant	Piotr Faliszewski, Piotr Skowron, Arkadii Slinko, Nimrod Talmon
			#1964	Fair and Efficient Social Choice in Dynamic Settings	Rupert Freeman, Seyed Majid Zahedi, Vincent Conitzer
			#2097	Online Roommate Allocation Problem	Guangda Huzhang, Xin Huang, Shengyu Zhang, Xiaohui Bei
			#3687	On Coalitional Manipulation for Multiwinner Elections: Shortlisting	Robert Bredereck, Andrzej Kaczmarczyk, Rolf Niedermeier

15:00 - 16:00	**Room 213**	**Agent-Oriented Software Engineering MAS-AOSE** *Michael Winikoff*	#3334	Constraint Games revisited	Anthony Palmieri, Arnaud Lallouet
			#1406	Agent Design Consistency Checking via Planning	Nitin Yadav, John Thangarajah, Sebastian Sardina
			#1684	Omniscient Debugging for Cognitive Agent Programs	Vincent J. Koeman, Koen V. Hindriks, Catholijn M. Jonker
			#2593	No Pizza for You: Value-based Plan Selection in BDI Agents	Stephen Cranefield, Michael Winikoff, Virginia Dignum, Frank Dignum
15:00 - 16:00	**Room 216**	**Natural Language Generation NLP-NLG** *Ingrid Zukerman*	#3333	Human-Centric Justification of Machine Learning Predictions	Or Biran, Kathleen McKeown
			#1296	MAT: A Multimodal Attentive Translator for Image Captioning	Chang Liu, Fuchun Sun, Changhu Wang, Feng Wang, Alan Yuille
			#2061	From Neural Sentence Summarization to Headline Generation: A Coarse-to-Fine Approach	Jiwei Tan, Xiaojun Wan, Jianguo Xiao
			#2874	A Correlated Topic Model Using Word Embeddings	Guangxu Xun, Yaliang Li, Wayne Xin Zhao, Jing Gao, Aidong Zhang
15:00 - 16:00	**Room 217**	**Theoretical Foundations of Planning PL-TFP** *Sebastian Sardina*	#3395	Generalized Planning: Non-Deterministic Abstractions and Trajectory Constraints	Blai Bonet, Giuseppe De Giacomo, Hector Geffner, Sasha Rubin
			#1365	Efficient, Safe, and Probably Approximately Complete Learning of Action Models	Roni Stern, Brendan Juba
			#2106	An Improved Approximation Algorithm for the Subpath Planning Problem and Its Generalization	Hanna Sumita, Yuma Yonebayashi, Naonori Kakimura, Ken-ichi Kawarabayashi
			#3532	Hierarchical Task Network Planning with Task Insertion and State Constraints	Zhanhao Xiao, Andreas Herzig, Laurent Perrussel, Hai Wan, Xiaoheng Su
15:00 - 16:00	**Room 218**	**Applications of Planning PL-APLI** *Daniele Magazzeni*	#2500	Generalized Target Assignment and Path Finding Using Answer Set Programming	Van Nguyen, Philipp Obermeier, Tran Cao Son, Torsten Schaub, William Yeoh
			#3850	Temporal Planning for Compilation of Quantum Approximate Optimization Circuits	Davide Venturelli, Minh Do, Eleanor Rieffel, Jeremy Frank
			#3958	Softpressure: A Schedule-Driven Backpressure Algorithm for Coping with Network Congestion	Hsu-Chieh Hu, Stephen F. Smith
			#3097	Generating Context-Free Grammars using Classical Planning	Javier Segovia-Aguas, Sergio Jiménez, Anders Jonsson
15:00 - 16:00	**Room 219**	**Agreement Technologies: Argumentation MAS-ATA** *Matthias Thimm*	#893	Acceptability Semantics for Weighted Argumentation Frameworks	Leila Amgoud, Jonathan Ben-Naim, Dragan Doder, Srdjan Vesic
			#1249	Measuring the Intensity of Attacks in Argumentation Graphs with Shapley Value	Leila Amgoud, Jonathan Ben-Naim, Srdjan Vesic
			#2390	A Bayesian Approach to Argument-Based Reasoning for Attack Estimation	Hiroyuki Kido, Keishi Okamoto
			#3000	Efficient Computation of Extensions for Dynamic Abstract Argumentation Frameworks: An Incremental Approach	Gianvincenzo Alfano, Sergio Greco, Francesco Parisi
15:00 - 16:00	**Room 220**	**Question Answering NLP-QA** *Rafal Rzepka*	#3161	Automatic Generation of Grounded Visual Questions	Shijie Zhang, Lizhen Qu, Shaodi You, Zhenglu Yang, Jiawan Zhang
			#3544	Symbolic Priors for RNN-based Semantic Parsing	Chunyang Xiao, Marc Dymetman, Claire Gardent
			#3560	Solving Probability Problems in Natural Language	Anton Dries, Angelika Kimmig, Jesse Davis, Vaishak Belle, Luc de Raedt
			#3127	Finding Prototypes of Answers for Improving Answer Sentence Selection	Wai Lok Tam, Namgi Han, Juan Ignacio Navarro-Horñiacek, Yusuke Miyao
16:00 - 16:30		Coffee Break + Posters			

16:30 - 18:00	**Room 210**	**Neural Networks 2 ML-NN2** *Ziyu Guan*	#1958	Stacked Similarity-Aware Autoencoders	Wenqing Chu, Deng Cai
			#2267	Mention Recommendation for Twitter with End-to-end Memory Network	Haoran Huang, Qi Zhang, Xuanjing Huang
			#2319	Hashtag Recommendation for Multimodal Microblog Using Co-Attention Network	Qi Zhang, Jiawen Wang, Haoran Huang, Xuanjing Huang, Yeyun Gong
			#2986	Encoding and Recall of Spatio-Temporal Episodic Memory in Real Time	Poo-Hee Chang, Ah-Hwee Tan
			#3679	Deep Context: A Neural Language Model for Large-scale Networked Documents	Hao Wu, Kristina Lerman
			#3211	Earth Mover's Distance Pooling over Siamese LSTMs for Automatic Short Answer Grading	Sachin Kumar, Soumen Chakrabarti, Shourya Roy
16:30 - 18:00	**Room 211**	**Data Mining and Unsupervised Learning 2 ML-DMUL2** *Hady W. Lauw*	#1221	Reconstruction-based Unsupervised Feature Selection: An Embedded Approach	Jundong Li, Jiliang Tang, Huan Liu
			#2162	Multiple Medoids based Multi-view Relational Fuzzy Clustering with Minimax Optimization	Yangtao Wang, Lihui Chen, Xiao-Li Li
			#2326	Flexible Orthogonal Neighborhood Preserving Embedding	Tianji Pang, Feiping Nie, Junwei Han
			#2577	User Profile Preserving Social Network Embedding	Daokun Zhang, Jie Yin, Xingquan Zhu, Chengqi Zhang
			#2614	Multi-Component Nonnegative Matrix Factorization	Jing Wang, Feng Tian, Xiao Wang, Hongchuan Yu, Chang Hong Liu, Liang Yang
			#3342	Self-weighted Multiview Clustering with Multiple Graphs	Feiping Nie, Jing Li, Xuelong Li
16:30 - 18:00	**Room 212**	**Transfer, Adaptation, Multi-Task Learning 3 ML-TAML3** *Jingrui He*	#1965	Modal Consistency based Pre-Trained Multi-Model Reuse	Yang Yang, De-Chuan Zhan, Xiang-Yu Guo, Yuan Jiang
			#2712	Joint Image Emotion Classification and Distribution Learning via Deep Convolutional Neural Network	Jufeng Yang, Dongyu She, Ming Sun
			#3741	Tensor Based Knowledge Transfer Across Skill Categories for Robot Control	Chenyang Zhao, Timothy M. Hospedales, Freek Stulp, Olivier Sigaud
			#3822	Learning with Previously Unseen Features	Yuan Shi, Craig A. Knoblock
			#3200	Exploiting High-Order Information in Heterogeneous Multi-Task Feature Learning	Yong Luo, Dacheng Tao, Yonggang Wen
			#3404	Adaptive Group Sparse Multi-task Learning via Trace Lasso	Sulin Liu, Sinno Jialin Pan
16:30 - 18:00	**Room 213**	**Ensemble Methods ML-EM** *Min-Ling Zhang*	#1300	Positive unlabeled learning via wrapper-based adaptive sampling	Pengyi Yang, Wei Liu, Jean Yang
			#1418	Integrating Specialized Classifiers Based on Continuous Time Markov Chain	Zhizhong Li, Dahua Lin
			#1865	Unsupervised Learning of Deep Feature Representation for Clustering Egocentric Actions	Bharat Lal Bhatnagar, Suriya Singh, Chetan Arora, C.V. Jawahar
			#1903	Bayesian Aggregation of Categorical Distributions with Applications in Crowdsourcing	Alexandry Augustin, Matteo Venanzi, Alex Rogers, Nicholas R. Jennings
			#2015	Deep Forest: Towards An Alternative to Deep Neural Networks	Zhi-Hua Zhou, Ji Feng
			#2553	Stacking With Auxiliary Features	Nazneen Fatema Rajani, Raymond J. Mooney

16:30 - 18:00	**Room 216**	**Constraint Optimisation CS-CO** *Jordi Levy*	#1939	Constraint-Based Symmetry Detection in General Game Playing	Frédéric Koriche, Sylvain Lagrue, Éric Piette, Sébastien Tabary
			#2431	A Partitioning Algorithm for Maximum Common Subgraph Problems	Ciaran McCreesh, Patrick Prosser, James Trimble
			#2534	Robust Quadratic Programming for Price Optimization	Akihiro Yabe, Shinji Ito, Ryohei Fujimaki
			#3437	XOR-Sampling for Network Design with Correlated Stochastic Events	Xiaojian Wu, Yexiang Xue, Bart Selman, Carla P. Gomes
			#1441	Robust Regression via Heuristic Hard Thresholding	Xuchao Zhang, Liang Zhao, Arnold P. Boedihardjo, Chang-Tien Lu
			#2600	Restart and Random Walk in Local Search for Maximum Vertex Weight Cliques with Evaluations in Clustering Aggregation	Yi Fan, Nan Li, Chengqian Li, Zongjie Ma, Longin Jan Latecki, Kaile Su
16:30 - 18:00	**Room 217**	**Non-Monotonic Reasoning KR-NMR** *Matthias Thimm*	#797	Semantics for Active Integrity Constraints Using Approximation Fixpoint Theory	Bart Bogaerts, Luís Cruz-Filipe
			#846	Safe Inductions: An Algebraic Study	Bart Bogaerts, Joost Vennekens, Marc Denecker
			#1838	A Study of Unrestricted Abstract Argumentation Frameworks	Ringo Baumann, Christof Spanring
			#2298	Streaming Multi-Context Systems	Minh Dao-Tran, Thomas Eiter
			#2539	A Unifying Framework for Probabilistic Belief Revision	Zhiqiang Zhuang, James Delgrande, Abhaya Nayak, Abdul Sattar
			#3773	Lazy-Grounding for Answer Set Programs with External Source Access	Thomas Eiter, Tobias Kaminski, Antonius Weinzierl
16:30 - 18:00	**Room 218**	**Action, Change and Causality KR-ACC** *Franz Baader*	#2110	A Core-Guided Approach to Learning Optimal Causal Graphs	Antti Hyttinen, Paul Saikko, Matti Järvisalo
			#1278	Budget-Constrained Dynamics in Multiagent Systems	Rui Cao, Pavel Naumov
			#1605	GDL-III: A Description Language for Epistemic General Game Playing	Michael Thielscher
			#2312	Handling non-local dead-ends in Agent Planning Programs	Lukas Chrpa, Nir Lipovetzky, Sebastian Sardina
			#2509	Reasoning about Probabilities in Unbounded First-Order Dynamical Domains	Vaishak Belle, Gerhard Lakemeyer
			#3753	Transfer Learning in Multi-Armed Bandits: A Causal Approach	Junzhe Zhang, Elias Bareinboim
16:30 - 18:00	**Room 219**	**Learning Theory ML-LT** *Tianqing Zhu*	#1637	Understanding How Feature Structure Transfers in Transfer Learning	Tongliang Liu, Qiang Yang, Dacheng Tao
			#1894	Query-Driven Discovery of Anomalous Subgraphs in Attributed Graphs	Nannan Wu, Feng Chen, Jianxin Li, Jinpeng Huai, Bo Li
			#2784	Thresholding Bandits with Augmented UCB	Subhojyoti Mukherjee, Naveen Kolar Purushothama, Nandan Sudarsanam, Balaraman Ravindran
			#3478	No Learner Left Behind: On the Complexity of Teaching Multiple Learners Simultaneously	Xiaojin Zhu, Ji Liu, Manuel Lopes
			#3640	On the Complexity of Learning from Label Proportions	Benjamin Fish, Lev Reyzin
			#2220	Fast Stochastic Variance Reduced ADMM for Stochastic Composition Optimization	Yue Yu, Longbo Huang

16:30 – 18:00	**Room 220**	**Information Extraction NLP-IE** *Lidong Bing*	#2206	How to Keep a Knowledge Base Synchronized with Its Encyclopedia Source	Jiaqing Liang, Sheng Zhang, Yanghua Xiao
			#2164	Iterative Entity Alignment via Joint Knowledge Embeddings	Hao Zhu, Ruobing Xie, Zhiyuan Liu, Maosong Sun
			#2264	Conditional Generative Adversarial Networks for Commonsense Machine Comprehension	Bingning Wang, Kang Liu, Jun Zhao
			#2307	Inverted Bilingual Topic Models for Lexicon Extraction from Non-parallel Data	Tengfei Ma, Tetsuya Nasukawa
			#2499	Self-paced Compensatory Deep Boltzmann Machine for Semi-Structured Document Embedding	Shuangyin Li, Rong Pan, Jun Yan
			#3282	Effective Deep Memory Networks for Distant Supervised Relation Extraction	Xiaocheng Feng, Jiang Guo, Bing Qin, Ting Liu, Yongjie Liu
16:30 – 18:00	**Plenary**	**AI & Autonomy: Ethics and Responsibility AUT-ETH** *Michael Rovatsos*	#4197	Responsible Autonomy	Virginia Dignum
			#4204	Should Robots be Obedient?	Smitha Milli, Dylan Hadfield-Menell, Anca Dragan, Stuart Russell
			#3841	On Automating the Doctrine of Double Effect	Naveen Sundar Govindarajulu, Selmer Bringsjord
			#1923	When Will Negotiation Agents Be Able to Represent Us? The Challenges and Opportunities for Autonomous Negotiators	Tim Baarslag, Michael Kaisers, Enrico H. Gerding, Catholijn M. Jonker, Jonathan Gratch
16:30 – 18:30	**Room 206**	**Competition** *Jochen Renz*		Angry Birds	
16:30 – 18:30	**Room 203**	**Journal Track: Knowledge Representation 2 JOU-KR2** *Randy Goebel*	#3506	Exploiting Causality for Selective Belief Filtering in Dynamic Bayesian Networks (Extended Abstract)	Stefano V. Albrecht, Subramanian Ramamoorthy
			#4214	Construction of System of Spheres-based Transitively Relational Partial Meet Multiple Contractions: An Impossibility Result (Extended Abstract)	Maurício D. L. Reis, Eduardo Fermé, Pavlos Peppas
			#4216	Evaluating Epistemic Negation in Answer Set Programming (Extended Abstract)	Yi-Dong Shen, Thomas Eiter
			#4221	POPPONENT: Highly accurate, individually and socially efficient opponent preference model in bilateral multi issue negotiations (Extended Abstract)	Farhad Zafari, Faria Nassiri-Mofakham
			#4227	Relations Between Spatial Calculi About Directions and Orientations (Extended Abstract)	Till Mossakowski, Reinhard Moratz
			#4209	On Redundant Topological Constraints (Extended Abstract)	Sanjiang Li, Zhiguo Long, Weiming Liu, Matt Duckham, Alan Both
16:30 – 18:30	**Room 204**	**Sister Conference Track: Machine Learning SIS-ML** *Yang Yu*	#4217	On Thompson Sampling and Asymptotic Optimality	Jan Leike, Tor Lattimore, Laurent Orseau, Marcus Hutter
			#4235	Self-Adjusting Memory: How to Deal with Diverse Drift Types	Viktor Losing, Barbara Hammer, Heiko Wersing
			#4239	Learning and Applying Case Adaptation Rules for Classification: An Ensemble Approach	Vahid Jalali, David Leake, Najmeh Forouzandehmehr
			#4248	Open-World Probabilistic Databases: An Abridged Report	Ismail Ilkan Ceylan, Adnan Darwiche, Guy Van den Broeck
			#4251	Model Accuracy and Runtime Tradeoff in Distributed Deep Learning: A Systematic Study	Suyog Gupta, Wei Zhang, Fei Wang
			#4299	Ensuring Rapid Mixing and Low Bias for Asynchronous Gibbs Sampling	Christopher De Sa, Kunle Olukotun, Christopher Ré
18:00 – 18:30				Posters	
18:30 – 19:30	**Room 218**	**Special Session** *Michael Wooldridge*		Business Meeting	
18:30 – 20:00	**The Boat-builders Yard**			Student and Sponsor Reception	
20:00 – 23:00	**The Boat-builders Yard**			Student Reception	

Timetable	Place	Session	Paper ID	Title	Author/ Authors
08:30 – 10:00	**Plenary**	**EurAI Award Session** *Barry O'Sullivan*		EurAI Artificial Intelligence Dissertation Award 2016	
08:30 – 10:00	**Lobby**	**Competition** *Jochen Renz*		Angry Birds	
08:30 – 10:00	**Room 220**	**Industry Day** *Michael Georgeff*		Opening Talks	
08:30 – 10:00	**Room 204**	**Deep Learning 1 ML-DL1** *Truyen Tran*	#1327	DeepStory: Video Story QA by Deep Embedded Memory Networks	Kyung-Min Kim, Min-Oh Heo, Seong-Ho Choi, Byoung-Tak Zhang
			#1597	Learning Multi-level Region Consistency with Dense Multi-label Networks for Semantic Segmentation	Tong Shen, Guosheng Lin, Chunhua Shen, Ian Reid
			#1906	Towards Understanding the Invertibility of Convolutional Neural Networks	Anna Gilbert, Yi Zhang, Kibok Lee, Yuting Zhang, Honglak Lee
			#2217	Tag Disentangled Generative Adversarial Network for Object Image Re-rendering	Chaoyue Wang, Chaohui Wang, Chang Xu, Dacheng Tao
			#2245	Image Matching via Loopy RNN	Donghao Luo, Bingbing Ni, Yichao Yan, Xiaokang Yang
			#2470	Dual Inference for Machine Learning	Yingce Xia, Jiang Bian, Tao Qin, Nenghai Yu, Tie-Yan Liu
08:30 – 10:00	**Room 210**	**Neural Networks and Vision ML-NNV** *Arnau Ramisa*	#2065	CFNN: Correlation Filter Neural Network for Visual Object Tracking	Yang Li, Zhan Xu, Jianke Zhu
			#2071	WALKING WALKing walking: Action Recognition from Action Echoes	Qianli Ma, Lifeng Shen, Enhuan Chen, Shuai Tian, Jiabing Wang, Garrison W. Cottrell
			#2119	Global-residual and Local-boundary Refinement Networks for Rectifying Scene Parsing Predictions	Rui Zhang, Sheng Tang, Min Lin, Jintao Li, Shuicheng Yan
			#2864	Group-wise Deep Co-saliency Detection	Lina Wei, Shanshan Zhao, Omar El Farouk Bourahla, Xi Li, Fei Wu
			#2979	A Sequence Labeling Convolutional Network and Its Application to Handwritten String Recognition	Qingqing Wang, Yue Lu
			#3831	Learning to Read Irregular Text with Attention Mechanisms	Xiao Yang, Dafang He, Zihan Zhou, Daniel Kifer, C. Lee Giles
08:30 – 10:00	**Room 211**	**Unsupervised Learning 1 ML-UL1** *Kathryn Merrick*	#1219	Radar: Residual Analysis for Anomaly Detection in Attributed Networks	Jundong Li, Harsh Dani, Xia Hu, Huan Liu
			#2009	Online Robust Low-Rank Tensor Learning	Ping Li, Jiashi Feng, Xiaojie Jin, Luming Zhang, Xianghua Xu, Shuicheng Yan
			#1280	From Ensemble Clustering to Multi-View Clustering	Zhiqiang Tao, Hongfu Liu, Sheng Li, Zhengming Ding, Yun Fu
			#1173	Angle Principal Component Analysis	Qianqian Wang, Quanxue Gao, Xinbo Gao, Feiping Nie
			#1305	Locality Preserving Projections for Grassmann manifold	Boyue Wang, Yongli Hu, Junbin Gao, Yanfeng Sun, Haoran Chen, Muhammad Ali, Baocai Yin
			#2153	Robust Asymmetric Bayesian Adaptive Matrix Factorization	Xin Guo, Boyuan Pan, Deng Cai, Xiaofei He

08:30 – 10:00	Room 212	**Data Mining and Time Series ML-DMTS** *Masud Moshtaghi*	#1427	Cascade Dynamics Modeling with Attention-based Recurrent Neural Network	Yongqing Wang, Huawei Shen, Shenghua Liu, Jinhua Gao, Xueqi Cheng
			#1458	What to Do Next: Modeling User Behaviors by Time-LSTM	Yu Zhu, Hao Li, Yikang Liao, Beidou Wang, Ziyu Guan, Haifeng Liu, Deng Cai
			#2472	App Download Forecasting: An Evolutionary Hierarchical Competition Approach	Yingzi Wang, Nicholas Jing Yuan, Yu Sun, Chuan Qin, Xing Xie
			#2519	Fast Change Point Detection on Dynamic Social Networks	Yu Wang, Aniket Chakrabarti, David Sivakoff, Srinivasan Parthasarathy
			#2695	Link Prediction with Spatial and Temporal Consistency in Dynamic Networks	Wenchao Yu, Wei Cheng, Charu C Aggarwal, Haifeng Chen, Wei Wang
			#3117	LMPP: A Large Margin Point Process Combining Reinforcement and Competition for Modeling Hashtag Popularity	Bidisha Samanta, Abir De, Abhijnan Chakraborty, Niloy Ganguly
08:30 – 10:00	Room 213	**Learning Preferences or Rankings 1 ML-LPR1** *Hady W. Lauw*	#1465	Privileged Matrix Factorization for Collaborative Filtering	Yali Du, Chang Xu, Dacheng Tao
			#1466	Collaborative Rating Allocation	Yali Du, Chang Xu, Dacheng Tao
			#1913	Disguise Adversarial Networks for Click-through Rate Prediction	Yue Deng, Yilin Shen, Hongxia Jin
			#2618	DeepFM: A Factorization-Machine based Neural Network for CTR Prediction	Huifeng Guo, Ruiming TANG, Yunming Ye, Zhenguo Li, Xiuqiang He
			#3111	Diversifying Personalized Recommendation with User-session Context	Liang Hu, Longbing Cao, Shoujin Wang, Guandong Xu, Jian Cao, Zhiping Gu
			#1190	Tensor Completion with Side Information: A Riemannian Manifold Approach	Tengfei Zhou, Hui Qian, Zebang Shen, Chao Zhang, Congfu Xu
08:30 – 10:00	Room 218	**Logics for Knowledge Representation 1 KR-LKR1** *Angelo Montanari*	#1196	Strong Inconsistency in Nonmonotonic Reasoning	Gerhard Brewka, Matthias Thimm, Markus Ulbricht
			#2736	Strategically knowing how	Raul Fervari, Andreas Herzig, Yanjun Li, Yanjing Wang
			#3424	Conflict-driven ASP Solving with External Sources and Program Splits	Christoph Redl
			#1148	Model Checking Multi-Agent Systems against LDLK Specifications	Jeremy Kong, Alessio Lomuscio
			#2372	A Data-Driven Approach to Infer Knowledge Base Representation for Natural Language Relations	Kangqi Luo, Xusheng Luo, Xianyang Chen, Kenny Q. Zhu
			#3378	Characterising the Manipulability of Boolean Games	Paul Harrenstein, Paolo Turrini, Michael Wooldridge
08:30 – 10:00	Room 219	**Information Retrieval NLP-IR** *Yanghua Xiao*	#888	Dynamic Multi-View Hashing for Online Image Retrieval	Liang Xie, Jialie Shen, Jungong Han, Lei Zhu, Ling Shao
			#2026	A Structural Representation Learning for Multi-relational Networks	Lin Liu, Xin Li, William K. Cheung, Chengcheng Xu
			#1800	How Unlabeled Web Videos Help Complex Event Detection?	Huan Liu, Qinghua Zheng, Minnan Luo, Dingwen Zhang, Xiaojun Chang, Cheng Deng
			#1918	Bilateral Multi-Perspective Matching for Natural Language Sentences	Zhiguo Wang, Wael Hamza, Radu Florian
			#4084	An Attention-based Regression Model for Grounding Textual Phrases in Images	Ko Endo, Masaki Aono, Eric Nichols, Kotaro Funakoshi
			#1539	RHash: Robust Hashing via L_infinity-norm Distortion	Amirali Aghazadeh, Andrew Lan, Anshumali Shrivastava, Richard Baraniuk

08:30 – 10:00	Room 203	**Journal Track: Natural Language Processing JOU-NLP** *Mausam*	#1313	News Across Languages - Cross-Lingual Document Similarity and Event Tracking (Extended Abstract)	Jan Rupnik, Andrej MuhiĐ, Gregor Leban, Blaž Fortuna, Marko Grobelnik
			#4211	Automatic Description Generation from Images: A Survey of Models, Datasets, and Evaluation Measures (Extended Abstract)	Raffaella Bernardi, Ruket Cakici, Desmond Elliott, Aykut Erdem, Erkut Erdem, Nazli Ikizler-Cinbis, Frank Keller, Adrian Muscat, Barbara Plank
			#4220	Text Rewriting Improves Semantic Role Labeling (Extended Abstract)	Kristian Woodsend, Mirella Lapata
			#4225	Robust Multilingual Named Entity Recognition with Shallow Semi-supervised Features (Extended Abstract)	Rodrigo Agerri, German Rigau
10:00 – 10:30		Coffee Break + Posters			
10:00 – 12:00	Lobby	**Demonstrations** *John Thangarajah*			
10:30 – 12:00	Room 210	**Machine Learning and Applications ML-MLA** *Ramon López de Màntaras*	#2624	Crowd Learning: Improving Online Decision Making Using Crowdsourced Data	Yang Liu, Mingyan Liu
			#1267	Context Attentive Bandits: Contextual Bandit with Restricted Context	Djallel Bouneffouf, Irina Rish, Guillermo Cecchi, Raphaël Féraud
			#1788	Fast Recursive Low-rank Tensor Learning for Regression	Ming Hou, Brahim Chaib-draa
			#2068	Online Multitask Relative Similarity Learning	Shuji Hao, Peilin Zhao, Yong Liu, Steven C. H. Hoi, Chunyan Miao
			#2545	Neurogenesis-Inspired Dictionary Learning: Online Model Adaption in a Changing World	Sahil Garg, Irina Rish, Guillermo Cecchi, Aurelie Lozano
			#2570	Incremental Matrix Factorization: A Linear Feature Transformation Perspective	Xunpeng Huang, Le Wu, Enhong Chen, Hengshu Zhu, Qi Liu, Yijun Wang
10:30 – 12:00	Room 204	**Deep Learning 2 ML-DL2** *Ziyu Guan*	#1570	Autoencoder Regularized Network for Driving Style Representation Learning	Weishan Dong, Ting Yuan, Kai Yang, Changsheng Li, Shilei Zhang
			#1789	Diverse Neuron Type Selection for Convolutional Neural Networks	Guibo Zhu, Zhaoxiang Zhang, Xu-Yao Zhang, Cheng-Lin Liu
			#1798	Modeling Trajectories with Recurrent Neural Networks	Hao Wu, Ziyang Chen, Weiwei Sun, Baihua Zheng, Wei Wang
			#2926	Multiple-Weight Recurrent Neural Networks	Zhu Cao, Linlin Wang, Gerard de Melo
			#3119	End-to-End Prediction of Buffer Overruns from Raw Source Code via Neural Memory Networks	Min-je Choi, Sehun Jeong, Hakjoo Oh, Jaegul Choo
			#3182	Knowledge Transfer for Out-of-Knowledge-Base Entities: A Graph Neural Network Approach	Takuo Hamaguchi, Hidekazu Oiwa, Masashi Shimbo, Yuji Matsumoto
10:30 – 12:00	Room 211	**Unsupervised Learning 2 ML-UL2** *Masud Moshtaghi*	#2983	Aggregating Crowd Wisdoms with Label-aware Autoencoders	Li'ang Yin, Jianhua Han, Weinan Zhang, Yong Yu
			#1685	Sifting Common Information from Many Variables	Greg Ver Steeg, Shuyang Gao, Kyle Reing, Aram Galstyan
			#2069	Deep Descriptor Transforming for Image Co-Localization	Xiu-Shen Wei, Chen-Lin Zhang, Yao Li, Chen-Wei Xie, Jianxin Wu, Chunhua Shen, Zhi-Hua Zhou
			#2324	Grounding of Human Environments and Activities for Autonomous Robots	Muhannad Alomari, Paul Duckworth, Nils Bore, Majd Hawasly, David C. Hogg, Anthony G. Cohn
			#2335	Orthogonal and Nonnegative Graph Reconstruction for Large Scale Clustering	Junwei Han, Kai Xiong, Feiping Nie
			#3385	Scalable Normalized Cut with Improved Spectral Rotation	Xiaojun Chen, Feiping Nie, Joshua Zhexue Huang, Min Yang

10:30 – 12:00	**Room 212**	**Data Mining and Graphical Models ML-DMGM** *Randy Goebel*	#3115	Semantic Visualization for Short Texts with Word Embeddings	Tuan M. V. Le, Hady W. Lauw
			#1537	Understanding Users' Budgets for Recommendation with Hierarchical Poisson Factorization	Yunhui Guo, Congfu Xu, Hanzhang Song, Xin Wang
			#1620	Improving Stochastic Block Models by Incorporating Power-Law Degree Characteristic	Maoying Qiao, Jun Yu, Wei Bian, Qiang Li, Dacheng Tao
			#1822	SVD-Based Screening for the Graphical Lasso	Yasuhiro Fujiwara, Naoki Marumo, Mathieu Blondel, Koh Takeuchi, Hideaki Kim, Tomoharu Iwata, Naonori Ueda
			#3365	Joint Capped Norms Minimization for Robust Matrix Recovery	Feiping Nie, Zhouyuan Huo, Heng Huang
			#3771	Embedding-based Representation of Categorical Data by Hierarchical Value Coupling Learning	Songlei Jian, Longbing Cao, Guansong Pang, Kai Lu, Hang Gao
10:30 – 12:00	**Room 213**	**Learning Preferences or Rankings 2 ML-LPR2** *Yair Zick*	#1877	Category-aware Next Point-of-Interest Recommendation via Listwise Bayesian Personalized Ranking	Jing He, Xin Li, Lejian Liao
			#2951	Bernoulli Rank-1 Bandits for Click Feedback	Sumeet Katariya, Branislav Kveton, Csaba Szepesvári, Claire Vernade, Zheng Wen
			#3009	Learning Hedonic Games	Jakub Sliwinski, Yair Zick
			#3212	MRLR: Multi-level Representation Learning for Personalized Ranking in Recommendation	Zhu Sun, Jie Yang, Jie Zhang, Alessandro Bozzon, Yu Chen, Chi Xu
			#3323	Tag-Aware Personalized Recommendation Using a Hybrid Deep Model	Zhenghua Xu, Thomas Lukasiewicz, Cheng Chen, Yishu Miao, Xiangwu Meng
			#3035	Basket-Sensitive Personalized Item Recommendation	Duc-Trong Le, Hady W. Lauw, Yuan Fang
10:30 – 12:00	**Room 218**	**Logics for Knowledge Representation 2 KR-LKR2** *Pavel Naumov*	#2238	Reformulating Queries: Theory and Practice	Michael Benedikt, Egor V. Kostylev, Fabio Mogavero, Efthymia Tsamoura
			#2440	Foundations of Declarative Data Analysis Using Limit Datalog Programs	Mark Kaminski, Bernardo Cuenca Grau, Egor V. Kostylev, Boris Motik, Ian Horrocks
			#3309	On Querying Incomplete Information in Databases under Bag Semantics	Marco Console, Paolo Guagliardo, Leonid Libkin
			#3607	Answering Conjunctive Regular Path Queries over Guarded Existential Rules	Jean-François Baget, Meghyn Bienvenu, Marie-Laure Mugnier, Michael Thomazo
			#3661	Detecting Chase (Non)Termination for Existential Rules with Disjunctions	David Carral, Irina Dragoste, Markus Krötzsch
			#3680	Logic on MARS: Ontologies for Generalised Property Graphs	Maximilian Marx, Markus Krötzsch, Veronika Thost
10:30 – 12:30	**Lobby**	**Competition** *Jochen Renz*		Angry Birds	
10:30 – 12:30	**Room 220**	**Industry Day** *Michael Georgeff*		Start-ups	

10:30 – 12:30	**Room 203**	**Journal Track: Constraints JOU-CON** *Abdul Sattar*	#1393	Approximate Value Iteration with Temporally Extended Actions (Extended Abstract)	Timothy A. Mann, Shie Mannor, Doina Precup
			#4206	CCEHC: An Efficient Local Search Algorithm for Weighted Partial Maximum Satisfiability (Extended Abstract)	Chuan Luo, Shaowei Cai, Kaile Su, Wenxuan Huang
			#4212	AutoFolio: An Automatically Configured Algorithm Selector (Extended Abstract)	Marius Lindauer, Frank Hutter, Holger H. Hoos, Torsten Schaub
			#4213	Generating Models of a Matched Formula with a Polynomial Delay (Extended Abstract)	Petr Savický, Petr Kuđera
			#4219	On Minimum Representations of Matched Formulas (Extended Abstract)	Ondđej Đepek, Štefan Gurský, Petr Kuđera
			#4233	Robots in Retirement Homes: Applying Off-the-Shelf Planning and Scheduling to a Team of Assistive Robots (Extended Abstract)	Tony T. Tran, Tiago Vaquero, Goldie Nejat, J. Christopher Beck
12:00 – 12:30		Posters			
12:30 – 14:00	LUNCH				
14:00 – 15:00	**Plenary**	**Computers and Thought Award** *Fahiem Bacchus*		Words, Pictures, and Common Sense	Devi Parikh
14:00 – 16:00	**Room 220**	**Industry Day** *Michael Georgeff*		Large Companies	
15:00 – 16:00	**Plenary**	**John McCarthy Award** *Michael Wooldridge*		On the Necessity of Learning and Reasoning: A Perspective from Natural Language Understanding	Dan Roth
16:00 – 16:30	COFFEE BREAK				
16:30 – 17:30	**Plenary**	**Closing Remarks** *Fahiem Bacchus*		Closing Ceremony	
16:30 – 17:30	**Room 220**	**Industry Day** *Michael Georgeff*		Panel on the Future of AI	
17:30 – 18:30		Farewell: Food and Drinks			

Main conference venue

> MCEC - Melbourne Convention and Exhibition Centre

Address: 1 Convention Centre Pl, South Wharf VIC 3006, Australia

Recognised as Australasia's Leading Meetings and Conference Centre from 2012 - 2015 by the prestigious World Travel Awards; MCEC is a combination of amazing spaces, leading technology, creative food and wine and staff with the skills and experience to bring it all together. Add to this the amazing location. MCEC is set on the banks of the iconic Yarra River, a 20-minute drive from Melbourne airport and a short stroll to the city centre where you can explore cafés, incredible restaurants, lush parklands, leading fashion and inspiring galleries and museums.

When you arrive at the Convention and Exhibition Centre you will need to make your way to the Convention Centre part of the complex. Once you are on the ground floor of the Convention Centre you will see the IJCAI 2017 registration desk in the Ground Floor Foyer.

IJCAI exhibitions are allocated on the Ground Floor Foyer. The entrance of Plenary, where the opening ceremony and invited talks are held, is also on the ground floor facing the main foyer. Monday workshop, tutorial sessions and the main conference session are all allocated on Level 2, from Room 203 to Room 220. See the MCEC Floor Plan of the ground level and Level 2 in the map section.

> Workshops and tutorials venue on Sat 19th and Sunday 20th August:
RMIT University Building 80 (also known as SAB or Swanston Academic Building)

Address: 445 Swanston Street, Melbourne, Victoria, 3000

RMIT University City campus is located in the cosmopolitan heart of Melbourne and is surrounded by public transport, restaurants, cafes, theatres, galleries and parks. The city campus has 45,000 students studying in across all major interest areas. The campus has been an integral part of Melbourne's character for more than one hundred years.

RMIT Building 80 is one of the newest and most iconic buildings of RMIT University. The design approach to the building sought to locate it in dialogue with surrounding architecture, both in form and colour, resulting in a striking façade and interior that is uniquely Melbourne.

SAB has received a number of awards including Best Public Building in the 2014 Property Council of Australia awards. The building has a 5-star Green Star Education Design rating.

There are more than 80 learning and teaching spaces in SAB with computing and projection facilities. There are 22 Project Room spaces, each with a teacher's lectern connected to an AMX controller and touch-screen panel, and there are wall-mounted flat panel displays around the room.

Building 80 will host tutorials, workshops and co-located conferences on Saturday, August 19th and Sunday, August 20th. See the floor plan of the building and the rooms allocated to IJCAI 17 sessions in the map section.

(Note that on Monday 21st the workshops and tutorials will be held in the Convention Centre)

IJCAI 2017 Opening reception

Time: Monday August 21st, 19:00
Location: Melbourne Cricket Ground, 2 Brunton Ave, East Melbourne VIC 3002, Australia

IJCAI Women's lunch

Time: Tuesday August 22nd, 12:30
Location: Meat Market, 53 South Wharf Promenade, South Wharf VIC 3006, Australia

IJCAI 2017 Banquet

Time: Wednesday August 23rd,19:30
Location: Peninsula, Shed 14 – Central Pier, 161 Harbour Esplanade, Docklands VIC 3008, Australia

IJCAI 2017 Student reception

Time: Thursday August 24th, 18:30
Location: The Boatbuilders Yard, 23 South Wharf Promenade, South Wharf VIC 3006, Australia

How to get to

RMIT University Building 80
– (August 19th - 20th): Walk north about 100 meters from Melbourne Central along Swanston Street, the backbone of Melbourne CBD. With a valid Myki card, you can take any tram on Swanston Street travelling north, and get off at Stop 7 which is right in front of RMIT Building 80. Stop 7 is one stop away from Melbourne Central (Stop 8).

The Convention Center
– (August 21st - 25th): Take Tram 35, 70 or 75 and get off at Stop D5, cross Wurundjeri Way and Yarra River on the Seafarer Bridge, enter the MCEC complex. That is the ground level main foyer where you can see the registration desk and IJCAI exhibitions. You can also enter from Clarendon Street, walk through the Exhibition Center and reach the foyer of the Convention Center. Trams 12, 96 and 109 are available on Clarendon street. The stop in front of the Exhibition Center is not in the free tram zone. The closest free-zone stop to the Clarendon Street Entrance of MCEC is Stop 124, Batman Park, on the other side of the river.

> See the local maps in the map section.

Restaurants

No visit to Melbourne is complete without experiencing some of the city's world class bars, restaurants and cafes. Famous for its multicultural diversity, and labelled Australia's "foodie capital" Melbourne leads the way with endless dining opportunities. Uncover hidden bars, unique restaurants and incredible coffee around every corner. From Italian, to Greek, German, French, to Middle East, Indian, Thai, to Vietnamese, Japanese or Chinese, from budget, takeaway or high end dining experiences, there is something for everyone.

Please note lunches will not be provided within the program. RMIT Building 80 is surrounded by hundreds of restaurants and cafes and there are plenty of dining options around the Convention Center.

Discovering Melbourne

A packed agenda of food, wine, sports and arts is your introduction to the best of Melbourne – from its creative, exciting city centre, to its buzzing neighbourhood hubs, there's always something new to discover. Melbourne is set on the shores of Port Phillip Bay, the southern-most city of mainland Australia and is the gateway to Victoria's world class wineries, natural springs, peninsulas, spectacular coastline and alpine villages.

Rich in multicultural diversity, with a relaxed attitude, make it easy for visitors from anywhere around the world feel at home. Wind through the city's laneways to discover endless world class dining, shopping and cultural experiences or explore further afield and experience the unique natural beauty of regional Victoria.

As an intellectual hub of Australia, the city of seven universities, Melbourne is the playground of 350,000 tertiary students and the home of many world-class teams advancing in some of the research intensive fields including Artificial Intelligence, Information Retrieval, Photonics, Bionics and Medical Sciences.

Terms and conditions disclaimer

(To be accepted at registration time)

Cancellation and Changes
All cancellations must be sent to registration@ijcai.org via e-mail.
Any change of name will be dealt with as a cancellation and a new registration.
In case of cancellations until July 25th, 2017, payments will be refunded less U$ 100 processing fee.
No refund will be made for cancellations received after July 25th, 2017 or to the registrants who fail to attend.
In case of conference cancellation for reasons beyond the control of IJCAI-17 organizers, the liability of the IJCAI-17 organizers is limited to the fees already paid by the registrants. IJCAI-17 organizers will not be responsible for any personal inconvenience that may arise.

Photograph and Video Release
For valuable consideration received, I hereby give the International Joint Conferences on Artificial Intelligence Organization (IJCAI) the absolute and irrevocable right and permission, with respect to the photographs and film or tape that it will take of me during the 26th International Joint Conference on Artificial Intelligence (IJCAI-17) held August 19th-25th, 2017 at the Melbourne Convention and Exhibition Center, 1 Convention Centre Pl, South Wharf VIC 3006, Australia.

– (1) To copyright the same in its own name or any other name that it may choose.

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I am of legal age and have read the foregoing and fully understand the contents thereof.

Special meetings

Sunday August 20th

– IJCAI Trustees Meeting
08:30 - 18:30
RMIT University
ROOM 80.02.03

– AI Journal Steering Committee Meeting
18:45 - 19:45
RMIT University
ROOM 80.02.03

Monday August 21st

– IJCAI Trustees Meeting
08:30 - 12:45
Conference Centre (MCEC)
Meeting Room 214

– IJCAI-17 Media Briefing
11:00 - 12:00
Conference Centre (MCEC)
Organisers Office 201

– IJCAI Executive Committee Meeting
14:00 - 18:00
Crown Melbourne
Garden Room 2&3

Tuesday August 22nd

– AI Journal Editorial Board Meeting
12:30 - 14:00
Crown Melbourne
Garden Room 2&3

– International AI Societies Meeting
15:30 - 17:00
Crown Melbourne
Garden Room 2&3

– EurAI General Assembly
18:00 - 20:00
Crown Melbourne
Garden Room 2&3

Thursday August 24th

– IJCAI-17 and IJCAI-18 LAC Brief Meeting
11:30 - 12:30
Conference Center (MCEC)
Meeting Room 214

– IJCAI Annual Business Meeting
13:00 – 13:45
Conference Center (MCEC)
Meeting Room 219
OPEN TO PUBLIC

Friday August 25th

– IJCAI-17 Wrap-up Meeting
10:30– 11:30
Conference Center (MCEC)
Meeting Room 214

– IJCAI-17 Media Briefing
11:30 - 12:30
Conference Centre (MCEC)
Meeting Room 219

– IJCAI Trustees Meeting
12:30 – 14:00
Conference Center (MCEC)
Meeting Room 214

Social media

Join the conversation, connect your social media posts using the conference hashtag #IJCAI17 and tagging us at @IJCAI_2017.

Proceedings download information

Proceedings can be downloaded from:
https://www.ijcai.org/proceedings/2017

IJCAI 2017 T-Shirts

IJCAI-17 T-shirts are available for sale at the registration desk.

Internet

Free wireless internet access is available at the conference sites.

To log in to the complimentary delegate wireless at RMIT University, see the registration desk for detailed instructions.

To log in to the complimentary delegate wireless at the Melbourne Convention & Exhibition Centre please follow these steps;
- Select the ‘M Connect’ network as you would normally select a wireless internet network from your device
- Open your preferred internet browser (such as Chrome, Safari, Firefox or Internet Explorer)
- The M Connect login page will appear in your browser
- Read the Terms and Conditions page and choose to ‘agree’ in order to connect
- Click ‘Connect Now’ button
- Commence using M Connect free wireless internet

IJCAI-ECAI 2018

IJCAI-ECAI-18 will be held in Stockholm, Sweden in July 2018.

The 27th edition of IJCAI will be joint with the 23rd European Conference on Artificial Intelligence. IJCAI-ECAI 2018 will be held in Stockholm, Sweden, July 13-19, 2018.

This will be the second time that IJCAI is held in Stockholm, the capital of Sweden and the largest city in Scandinavia (the first time was in 1999). Stockholm is a city where modernity meets tranquility, with trend-setting restaurants and vibrant nightclubs next to an idyllic archipelago. Stockholm also has a strong tech and startup scene, and is ranked by some as the startup capital of Europe.

IJCAI-ECAI 2018 will be co-located with the 25th International Conference on Machine Learning (ICML 2018) and the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018), both held July 10-15, 2018. This is the first time that this type of federated conference on Artificial Intelligence has been organized. and we expect more than 5,000 researchers to attend. The three conferences will share the conference site and also share some events (including some common workshops and speakers), so this will be an excellent opportunity for scientific interchange.

IJCAI-ECAI 2018 will take place in Stockholmsmässan, an outstanding modern conference venue easily and quickly reachable from the city center of Stockholm. Attendees will enjoy a banquet dinner at the famous Vasa museum and an evening reception at the Skansen museum.

Come to IJCAI-ECAI 2018, and experience one of the most beautiful cities in the world, where the sun never sets, while taking part in a unique Artificial Intelligence gathering.

For further information, please contact one of the following:

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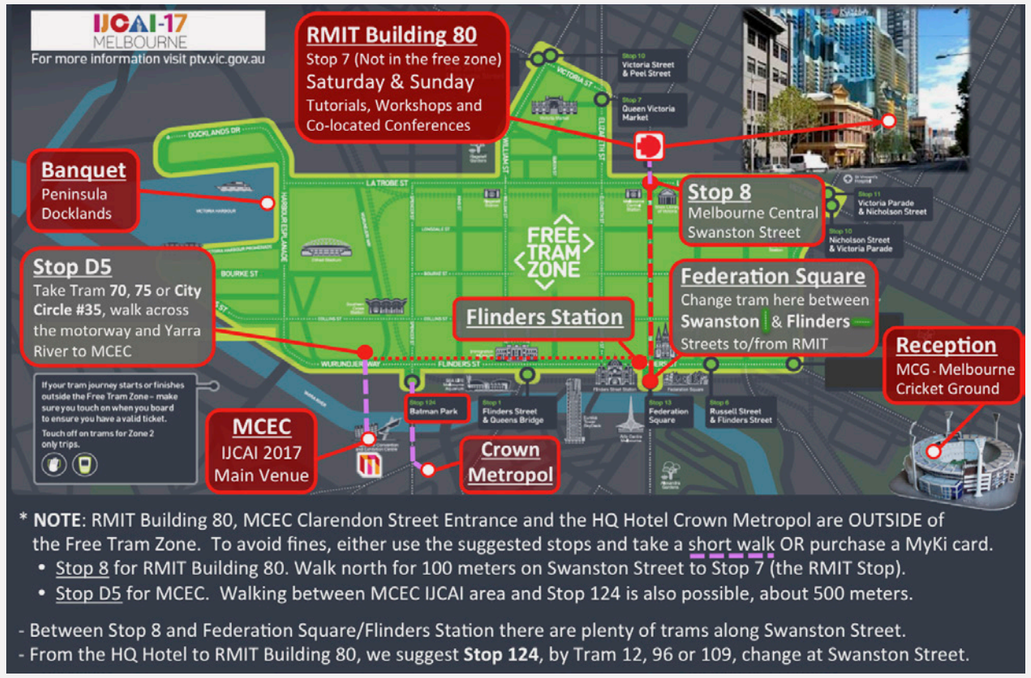
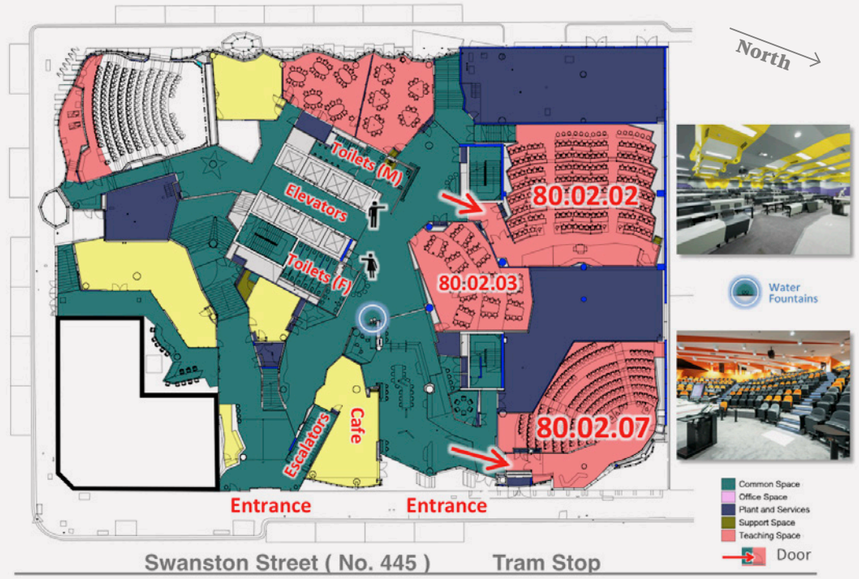
A-1040 Vienna, Austria
vsfritz@ijcai.org

Melbourne Free Tram Zone + IJCAI Main Venues

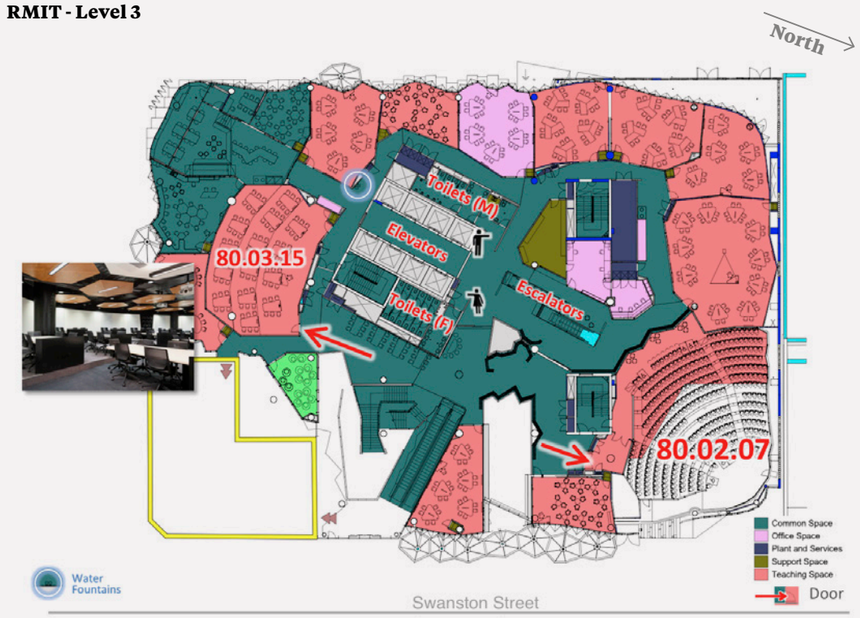


Maps of workshop/tutorial venue
RMIT Building 80

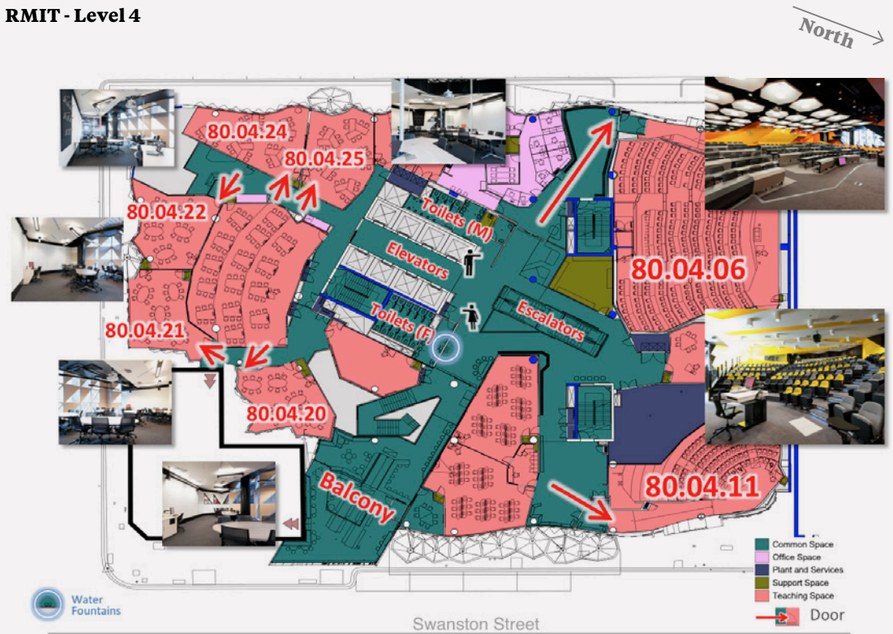
RMIT - Level 2 (Street Level and Entrance)



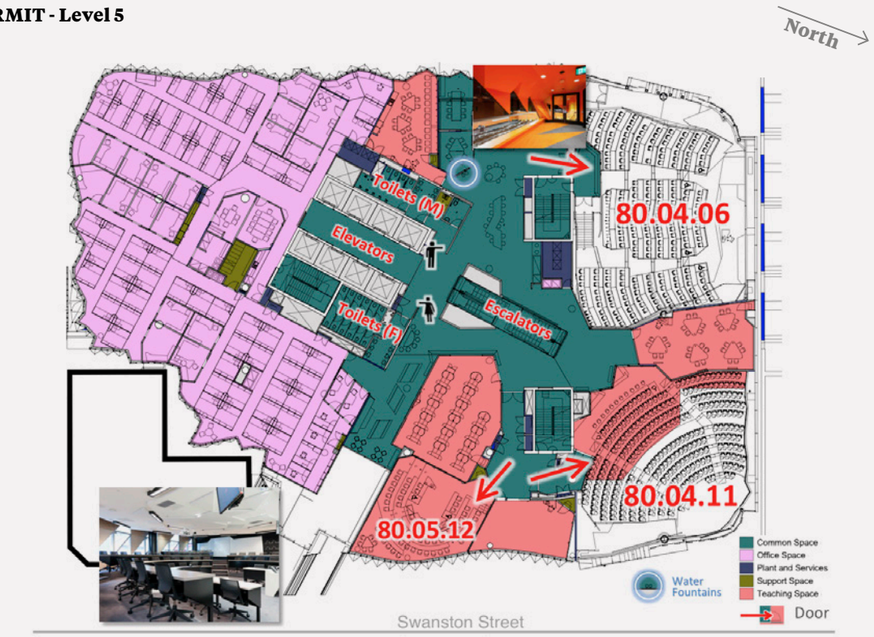
RMIT - Level 3



RMIT - Level 4

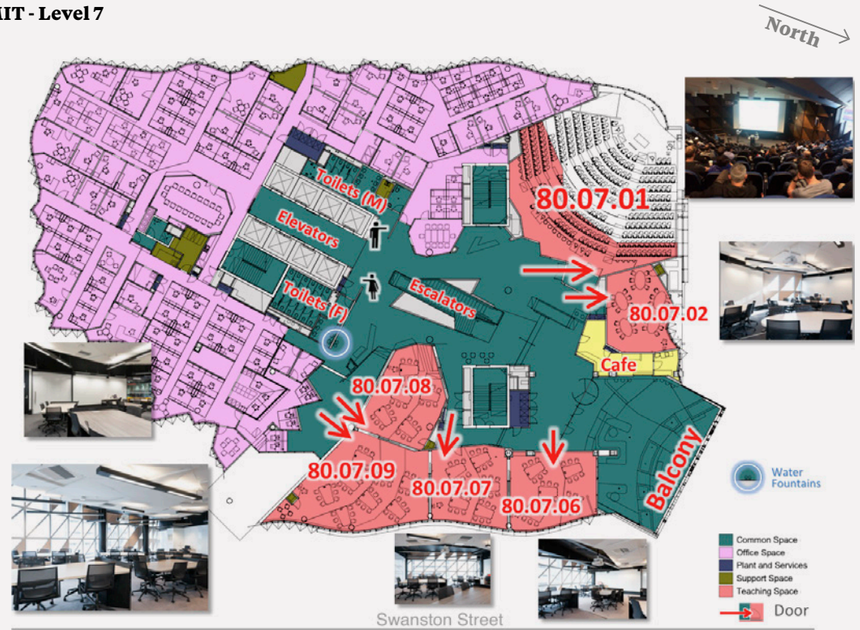


RMIT - Level 5

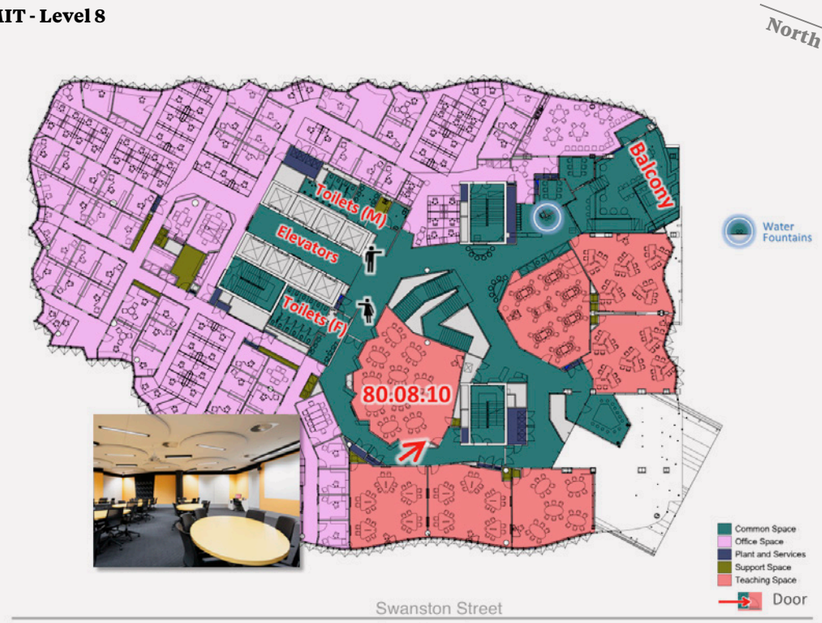


Maps of workshop/tutorial venue
RMIT Building 80

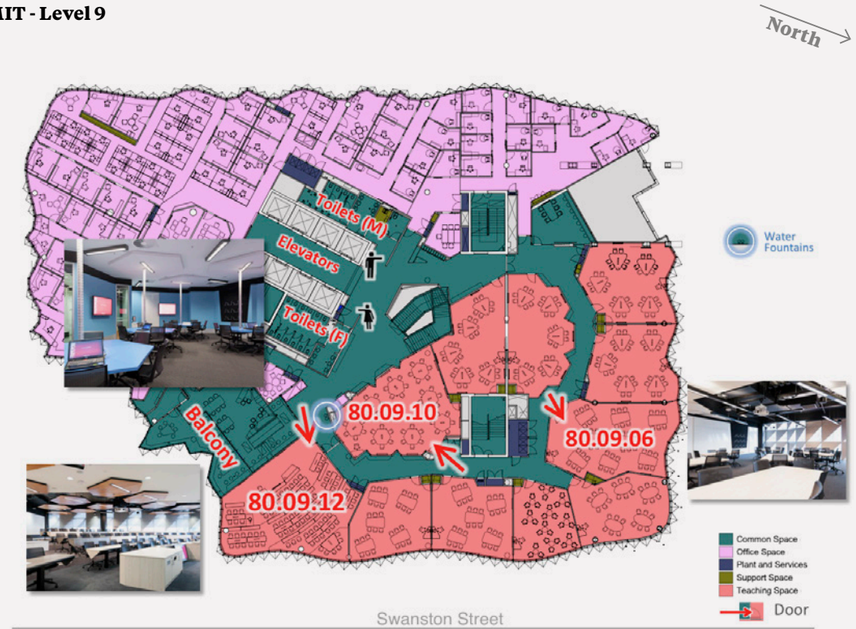
RMIT - Level 7



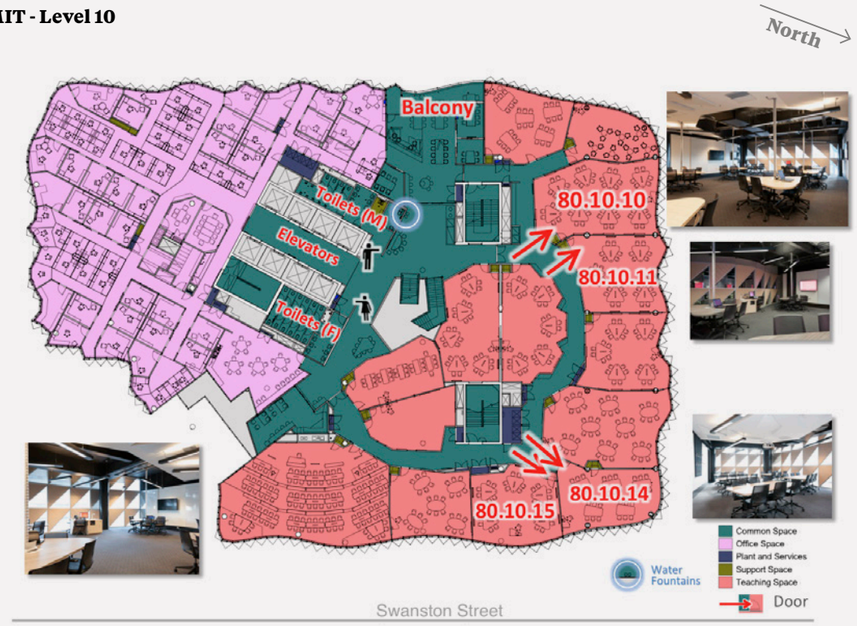
RMIT - Level 8



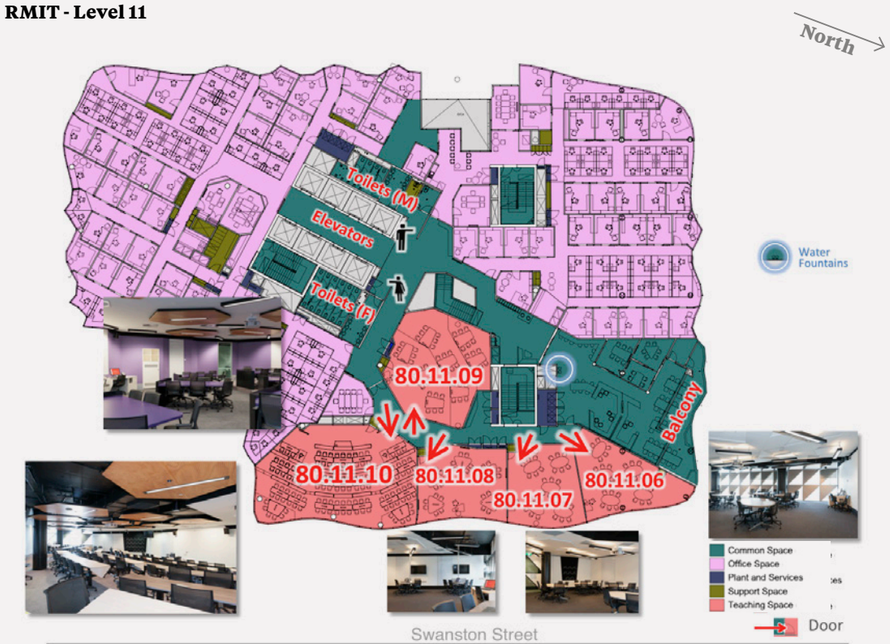
RMIT - Level 9



RMIT - Level 10



RMIT - Level 11

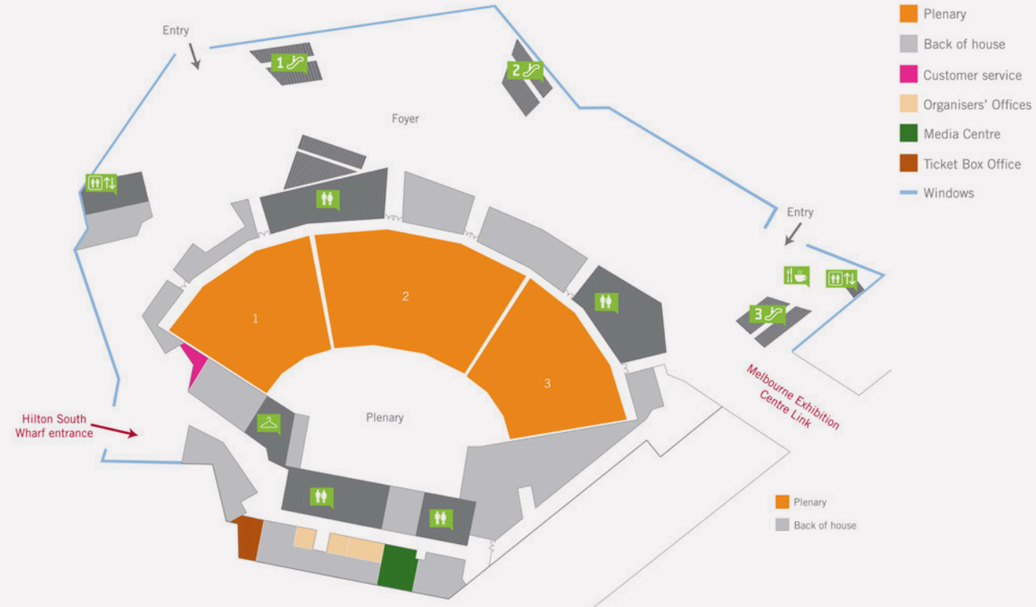


MAP - How to Enter the Convention Center

Entering MCEC from Tram Stop D5 & the HQ Hotel

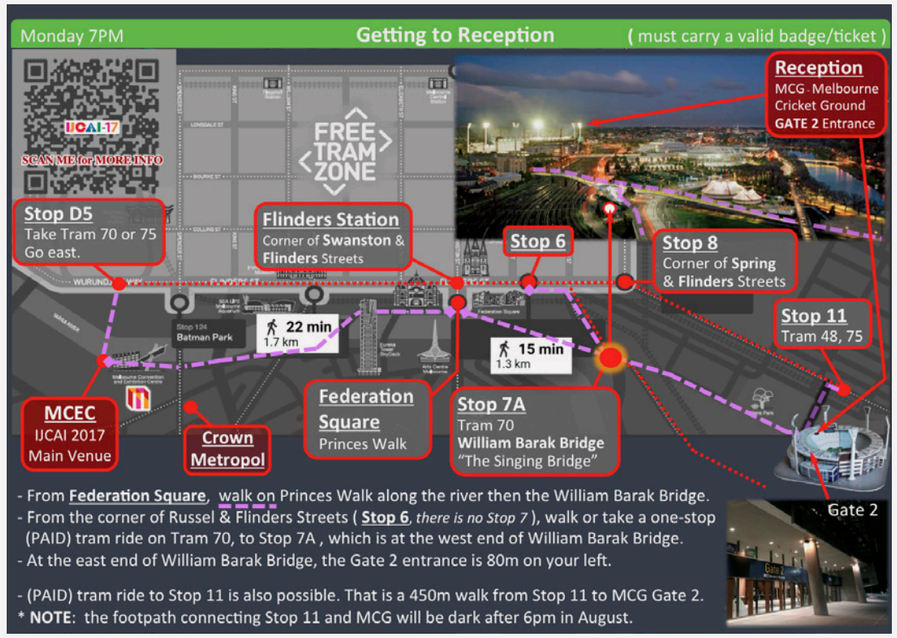
MAPS of MCEC

MCEC - Ground floor

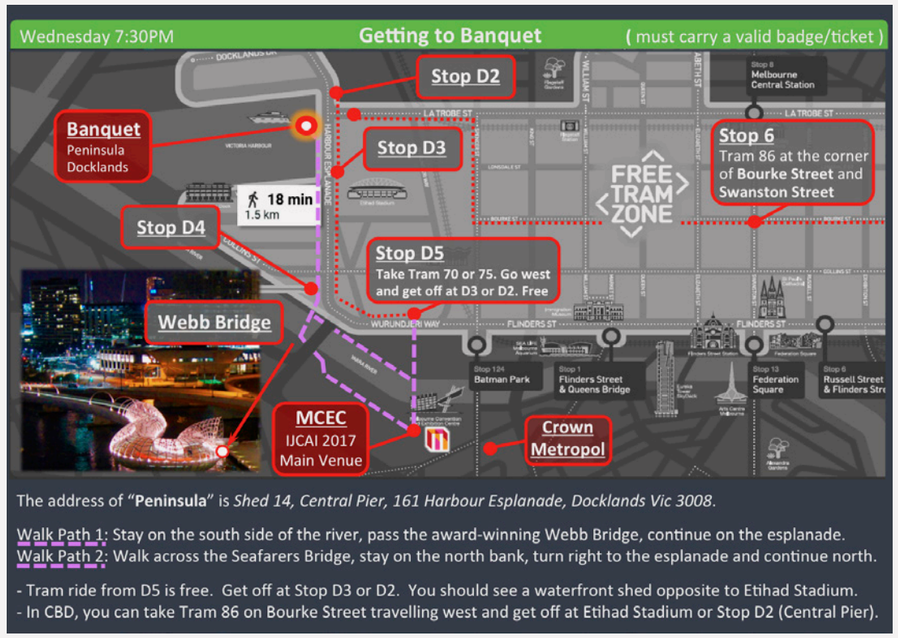


MCEC - Second floor

MAP - Get to Reception at MCG



MAP - Get to Banquet at Peninsula



The address of "**Peninsula**" is *Shed 14, Central Pier, 161 Harbour Esplanade, Docklands Vic 3008.*

Walk Path 1: Stay on the south side of the river, pass the award-winning Webb Bridge, continue on the esplanade.
Walk Path 2: Walk across the Seafarers Bridge, stay on the north bank, turn right to the esplanade and continue north.

- Tram ride from D5 is free. Get off at Stop D3 or D2. You should see a waterfront shed opposite to Etihad Stadium.
- In CBD, you can take Tram 86 on Bourke Street travelling west and get off at Etihad Stadium or Stop D2 (Central Pier).

NOTES

NOTES

Conference at a glance

	RMIT Building 80, 445 Swanston St		Melbourne Convention and Exhibition Center, South Wharf				
	August 19 (Sat)	August 20 (Sun)	August 21 (Mon)	August 22 (Tue)	August 23 (Wed)	August 24 (Thu)	August 25 (Fri)
08:00 –	Registration				Registration		
08:30 –	Workshops + Tutorials Co-located Conferences		Workshops Tutorials Doctoral Consortium	Opening + Keynote	Sessions	Sessions Competition	EurAI Award, Sessions Industry Day
10:00 –	Coffee Break			Coffee Break + Posters			
10:30 –	W/T/C Sessions		W/T/D Sessions	Sessions, Posters Competition	Sessions, Posters	Sessions, Posters Competition	Sessions, Posters Industry Day (Startups) Demonstrations
12:30 –	LUNCH BREAK						
14:00 –	W/T/C Sessions		W/T/D Sessions	2 Invited Talks	2 Invited Talks	2 Invited Talks	Awards Industry Day (Large Companies)
15:00 –				Sessions, Panel, Competition			
16:30 –				Coffee Break + Posters			Coffee Break
17:30 –	W/T/C Sessions		W/T/D Sessions	Sessions, Posters Competition, Demonstrations	Sessions, Posters Competition Best Paper Prize	Sessions, Posters Competition	Industry Day (Panel) Closing Ceremony
18:00 –							Farewell: Food & Drink
18:30 –						Student & Sponsor Reception	
19:00 –			Reception MCG (Richmond)		Banquet Penisula (Docklands)	The Boatbuilders Yard (outside of MCEC)	
19:30 –							

Digital
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23 AUGUST – 6 SEPTEMBER 2017

Welcoming delegates to the International Joint Conference on Artificial Intelligence

The Victorian Government, through the Digital Innovation Festival (DIF), is celebrating and showcasing excellence across the digital technology sector to ensure greater collaboration, connectivity and innovation.

Now in its 2nd year, the 2017 DIF brings together a range of crowdsourced, curated and sponsored events that highlight how Victoria's digital technology eco-system contributes to our society and economy. We are delighted to include the IJCAI as part of the DIF lineup.

During your visit to Melbourne, join our digital change makers, industry experts, thought leaders and inspiring entrepreneurs to create partnerships, enhance networks and experience the 'Victorian Difference'.

Connect to all DIF events vic.gov.au/digitalinnovation

VICTORIA
State
Government

DEDJTR 10941/17

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AUSTRALIA'S TOP TECH CITY

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