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International Federation of Automatic Control World Congress 2023 in Australia?

Late June 2015, the council of the International Federation of Automatic Control accepted Australia’s expression of interest to host the 22nd IFAC World Congress in 2023 in Melbourne Australia, and has called for a full bid to be presented. On June 25, 2016, the NCACI’s bidding team will be able to present this final bid.

Three countries are in the race for the right to host the IFAC World Congress 2023: USA, who have Prof Frank Doyle for president-elect and choose Chicago for the host city; Japan who present Dr Shinji-Hara for president with Yokohama as the host city; and finally Australia with Prof Iven Mareels for president with Melbourne.

At present the team formulating the bid would like to hear from any researchers in Australia that will attend the “Joint Conference 6th IFAC Symposium on System Structure and Control (SSSC 2016), 13th IFAC Workshop on Time Delay Systems (TDS 2016)”so that they can be recruited to assist in the presentation of the final bid.

The 20th IFAC World Congress will be held in Toulouse, France https://www.ifac2017.org/ and the 21st IFAC World Congress will be held in Berlin, hosted by the VDI/VDE http://www.vdi.eu/index.php?id=50726.

Sydney hosted the 12th IFAC World Congress in 1993, hence 2023 will mark 30 years since Engineers Australia organised this conference.
All volunteers that want to support the bid for IFAC 2023 in Melbourne are most welcome! Your expression of interest to volunteer is gratefully anticipated! Hosting over 3,000 delegates is a conservative estimate for an IFAC World Congress in this era, hence, all researchers that call Australia home and are interested in participating in the organisation for the world conference will most likely be accommodated. Please contact Prof Mareels directly on i.mareels@unimelb.edu.au to indicate your support.

Contributed by Iven Mareels

**A Call for Australian Researchers to Organise IFAC Events**

On the world scene the two main organisations representing research advances in the control field are the International Federation of Automatic Control (IFAC) and the IEEE Control System Society. Australian researchers are major contributors in both organisations, not only through their contributions to the literature, but also as volunteers in managing the affairs of these organisations. In publication terms, conferences and journals, this contribution is well above the world average (both in volume as well as citation impact). Given this, one would expect that Australian researchers also contribute in a similar manner to all processes related to the peer review of these fields.

It would be nice to see a greater proportion of the available international events in Automation and Control be hosted here in Australia.

Therefore the committee is inviting members of the Australian control community to consider organising one of the future IFAC events in Australia. The committee will be prepared to assist you in terms of committing its resources.

If you are interested please contact the NCACI care of:

Karen Barletta, Team Leader Secretariat Services  
KBarletta@engineersaustralia.org.au  
(07) 3226 3034

**Call for Nominations for IFAC Technical Committee Membership**

Interested in IFAC conferences? Do you participate in IFAC conferences? Why not nominate for Technical Committee membership?

Every three year the chairs of the Technical Committees (TCs) that serve the International Federation of Automatic Control (IFAC) are determined through a semi-democratic process that is ultimately decided by the council of the IFAC. The membership of the technical committees is in turn decided by the chairs on advice from the National Member Organisations (NMOs) that make up the IFAC. In Australia, Engineers Australia (EA), is the relevant NMO, and the National Committee for Automation, Control and Instrumentation (NCACI), executes this role on behalf of EA.

Presently Australia has some 40 members across the 9 coordinating committees, and the 39 technical committees.
If you are interested in volunteering your review time into IFAC (and are not at present a member of the TCs in the IFAC), please contact Prof Iven Mareels by e-mail with the following information:

a) Nominate the TC(s) you are interested in
b) Provide a short up to date CV
c) A short statement of why you feel that you are qualified to support the nominated TC(s)

IFAC Technical Committees: [http://www.ifac-control.org/areas/talist](http://www.ifac-control.org/areas/talist)
Professor Iven Mareels: i.mareels@unimelb.edu.au

The 2015 IEEE Multiconference on Systems and Control

The 2015 IEEE Multiconference on Systems and Control (MSC) was held on September 21-23, 2015 at the Novotel Manly Pacific hotel in Sydney Australia ([http://www.msc2015.org/](http://www.msc2015.org/)). The Conference is made up of the Conference on Control Applications (CCA) and the International Symposium on Intelligent Control (ISIC). The MSC started in 2006 and is held in a different country each year. This is the penultimate year of the conference and in 2017 it will be replaced by the Conference on Control Technology and Applications (CCTA).

TECHNICAL PROGRAM

A successful call for papers was held with 424 papers being submitted from 52 countries. The program chair Reza Moheimani together with the 119 members of the Technical Program Committee then arranged for the reviewing of the submitted papers and constructed a technical program for the conference which consisted of 324 papers in 54 sessions including 4 invited sessions. The conference also included 3 plenary presentations, the CSS Transition to Practice Award presentation and 3 keynote presentations. The conference also included two pre-conference workshops which were held on the Sunday before the conference. These workshops were entitled "Model Predictive Control for Complex Trajectory Following and Disturbance Rejection" and "Enabling Secure, Scalable Networked Microgrids with High Penetration Renewables and Pulsed Power Loads".

The members of the conference organizing committee were

- General Chair: Ian Petersen
- Program Chair: Reza Moheimani
- Finance Chair: Rick Middleton
- Tutorial/workshop Chair: Andrey Savkin
- Local Arrangements Chair: Weixing Zheng
- Publicity Chair: Liuping Wang
- Publications Chair: Victor Sreeram
- Best student paper award Chair: Alessandro Beghi
- Student Activities and Developing Nations Program Chair: Tuan Hoang
- Registration Chair: Ying Tan
- Invited Session Chair: Ian Manchester
PLENARY PRESENTATIONS

The three plenary presentations from outstanding figures in the control community were a feature of the conference:

1. “Control of Networked Multi-Robot Systems” by Mark Spong, University of Texas at Dallas, USA.
2. “Industry 4.0 and the Smart Manufacturing of the Future: A Playground for Modern Control” by Frank Allgower, University of Stuttgart, Germany.
3. “The Application of Advanced Control to the Management of Type 1 Diabetes” by Graham Goodwin, University of Newcastle, Australia.

Also, Sirish L. Shah from University of Alberta, Canada, the recipient of the 2014 IEEE CSS Transition to Practice Award, gave the presentation: “Surfing the Digital Tsunami with Data Analytics Tools”.

KEYNOTE PRESENTATIONS

In addition three keynote presentations were featured as follows:

2. “Trying to Keep It Real: 25 Years of Trying to Get the Stuff I Learned in Grad School to Work on Mechatronic Systems” by Danny Abramovitch, Agilent Labs, USA.
3. “Model-Based Process Control in the Steel Industry” by Andreas Kugi, Vienna University of Technology, Austria.

OPENING, SOCIAL PROGRAM, CONTEST AND AWARDS

The conference opened with an opening ceremony on the first day of the conference. The General Chair Ian Petersen opened the conference and was followed by short remarks from Brian Anderson who was representing the President of IFAC Janan Zaytoon. This was followed by the Program Chair Reza Moheimani who introduced the first plenary speaker.

The social program began with a welcome reception on the Sunday before the conference. This was held at the Novotel Manly Pacific hotel. The other item on the social program was the conference gala dinner which was held at the Waterfront Restaurant in the Rocks district of Sydney. Participants in the conference travelled to the dinner via the famous Manly ferry and experienced outstanding views of Sydney Harbour, the Sydney Opera House and the Sydney Harbour Bridge.

A feature of the gala dinner was the presentation of the MSC student best paper awards by the Best Student Paper Award Chair Alessandro Beghi. The short listed authors for the Best Student Paper Award were Yik R. Teo, Hugo Omar Garces Hernandez and Serhat Obuz.

The winner of the Best Student Paper Award was Serhat Obuz, for the paper "Unknown Time-Varying Input Delay Compensation for Neuromuscular Electrical Stimulation" with co-authors Ryan J. Downey, Justin R. Klotz, and Warren E. Dixon.

During the presentations at the gala dinner, the IEEE CSS past president Jay Farrell also presented plaques to the General Chair and the Program Chair.
The conference also featured the winners of the IEEE CSS Video Clip Contest. After a very successful first round in 2014, a second edition of the public video clip contest was held in 2015 (http://www.ieeecss.org/video-contest). Participants were again asked to create short video clips explaining or promoting the field of automatic control in some or all of its aspects, including theory and applications. After the submission deadline in August the winners of the Video Clip Contest 2015 were determined by a jury and officially announced during the CSS Video Clip Contest Awards ceremony that was held on Wednesday, September 23, 2015. This year's winners were:


Overall, the conference was a very successful event and its excellent organization can be attributed to the efforts of the organizing committee and the professional conference organizer ICMS Australasia.

Ian Petersen  
*General Chair*

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**2015 ACI Undergraduate Thesis Prize – Call for Entries**

The National Committee on Automation Control and Instrumentation (ACI) awards the Undergraduate Thesis Prize every year.

This prize recognises excellence in undergraduate project work in ACI engineering. The award aims to:

- encourage undergraduate interest in ACI Engineering;
- enhance student knowledge and application of ACI Engineering disciplines
- encourage academic participation in ACI Engineering as part of undergraduate education.

**Eligibility:**
Any project work undertaken as part of the award of a professional undergraduate qualification relevant to Automation, Control and/or Instrumentation and reported in the form of an academic thesis shall be eligible. Both individual student entries and student team entries are eligible for the award.

**Prize:**
The winner receives $2000 and a framed certificate.
Entries:
Entries for the 2015 Automation, Control and Instrumentation Thesis Prize will close 11\textsuperscript{th} January 2016.

For further information please visit the ACI website page:

Or contact
Karen Barletta, Team Leader Secretariat Services
KBarletta@engineersaustralia.org.au (07) 3226 3034

### Australian Control Conference – AUCC Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Chair</th>
<th>Papers printed</th>
<th>Submitted (incl. abstracts)</th>
<th>Delegates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Melbourne (University of Melbourne)</td>
<td>Dragan Nesic</td>
<td>88</td>
<td>134 (incl. 1 abstract)</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Sydney (UNSW)</td>
<td>Ian Petersen</td>
<td>81</td>
<td>106</td>
<td>114</td>
</tr>
<tr>
<td>2013</td>
<td>Perth (Freemantle)</td>
<td>Victor Sreeram</td>
<td>83</td>
<td>123 (incl. 2 abstracts)</td>
<td>95</td>
</tr>
<tr>
<td>2014</td>
<td>Canberra (ANU)</td>
<td>Robert Mahony</td>
<td>52</td>
<td>72</td>
<td>76</td>
</tr>
<tr>
<td>2015</td>
<td>Gold Coast (Griffith University)</td>
<td>Ljubo Vlacic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>Newcastle</td>
<td>Minyue Fu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>Gold Coast in conjunction with Asian Control Conference (ACC)</td>
<td>Ljubo Vlacic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>TBA</td>
<td>TBA</td>
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### Upcoming Conference – Australian Control Conference – AUCC 2015 Gold Coast

The 2015 Australian Conference on Control will be held on 5\textsuperscript{th} – 6\textsuperscript{th} November 2015 in the city of the Gold Coast at Griffith University Gold Coast Campus. Since 2011, AUCC has brought together researchers, students and control engineers from industry and Government organisations in the field of control and systems theory providing a forum to present a breadth of research activities and industry practice to a dynamic and varied audience.
Call for Papers

The 2015 Australian Control Conference (AUCC 2015) will be held on 05-06 November 2015 in the City of Gold Coast at Griffith University Gold Coast campus. The Australian Control Conference is a conference series that is organised by Engineers Australia through its National Committee for Automation, Control and Instrumentation, NCACI.

AUCC 2015 will provide a forum for Australian researchers, students and control engineers from universities, industry and government organisations to exchange ideas and recent results, as well as discuss current problems arising in control engineering research and industrial practice. International contributions are encouraged and will be solicited for.

Two types of contributions are sought:

- Regular papers:
  - Initial submission: up to 6 pages
  - Final submission: 3 pages (recommended); up to 6 pages (permitted)

- Practitioner papers:
  - Initial submission: an abstract
  - Final submission: 2 pages (recommended); up to 6 pages (permitted)

The proceedings will be available from the Engineers Australia Online Library as well as from IEEE Xplore.

Technical sponsorship is being sought from the IEEE Control Systems Society, IFAC and the Asian Control Association.

Important Dates:
- Submission of draft papers: 01 June 2015
- Invited Session proposals: 01 June 2015
- Workshop & Tutorial proposals: 01 June 2015
- Author notification: 31 August 2015
- Final papers & Early registration: 14 September 2015
- PhD Student Workshop: 04 November 2015
- Workshops & Tutorials: 04 November 2015
- Conference: 05-06 November 2015
The AUCC 2015 PhD/MPhil Student Workshop  
04 November 2015, Gold Coast, Australia  


Sponsored by the IEEE – CSS Outreach Fund  

Background:  

The AUCC 2015 PhD/MPhil Student Workshop will be held on the 4th of November 2015 and organised in conjunction with the 2015 Australian Control Conference. However, it is an event in its own right.  

PhD/MPhil students from the Asia-Pacific region are encouraged to attend.  

Workshop objectives  
The AUCC 2015 PhD/MPhil Student Workshop is aimed at assisting postgraduate control system students in addressing their research tasks, completing thesis and profiling their career pathway towards becoming control system scientists and practitioners. Students will be invited to present the focal point of their research problem (problem formulation, most recent results and outstanding issues), while the workshop participants (invited academics and participating students) will be asked to contribute to the discussion addressing outstanding issues.  

There will be no review of the submitted talk proposals and every proposed talk will be accepted for presentation by students. Each presentation will be followed by a discussion. Workshop presentations will not be included in the AUCC 2015 Proceedings.  

A topic presented at the Workshop must address the student’s specific concern/research challenge the student is looking into, and cannot be identical to the one that the student will be presenting at AUCC 2015.  

Depending on the number of submissions, parallel workshop sessions will be arranged. Each workshop session will be conducted by a Workshop Convenor (academic/research staff).  

Workshop Attendance  
Postgraduate (MPhil and PhD) students from the Asia-Pacific Region are encouraged to present their research problems at the Workshop. Seats are strictly limited to 50 students only. The attendance at the Workshop is free-of-charge, thanks to the sponsorship obtained from the IEEE – CSS Outreach Fund. Attendance at the Workshop is not linked to the attendance at AUCC 2015.  

To register for the Workshop, please contact the Workshop Chair, Dr Jahangir Hossain, Griffith University, Australia, via j.hossain@griffith.edu.au by/before 14 September 2015.  

Failure to attend the Workshop without timely cancelation of the registered attendance will Incure compulsory payment of the Workshop full fee - $145. Cancellations of the registered attendees are accepted up until 12 October 2015.

http://21stcenturywiener.org/

The second conference celebrating Norbert Wiener’s contributions to systems engineering and cybernetics is going to be held in Melbourne Australia, 13-15 July, 2016. The conference is interested in exploring one of the main ideas behind much of Norbert’s work: thinking machines. During his life time, Norbert collaborated with colleagues from mathematics, computer science and psychology to unravel the organisational principles behind “thinking”, “modelling” or “learning” and “decision making”.

At present, 50 years later, science has access to an unparalleled collection of data on brain structure and function, from the gene expression sequences, to the cells involved, and the organ’s interconnectivity. Some laboratories now have an ability to recreate, in 3D printing fashion, brain-like organelles. Moreover, we now have computers that rival the human brain in complexity terms, and new synaptic bio-inspired chips enter the market. Despite all of this, we still do not understand the concepts that enthused Norbert and his colleagues.

This conference seeks to explore the world of “thinking machines” from a variety of angles: control engineering, cybernetics, computer science and the social sciences.

Keynote speakers are Prof Brian Anderson, Prof John Hughes, Prof Tom Kailath, Prof Mathukumalli Vidyasagar. A special keynote will be presented by IBM on the topic of “deep learning” and the ideas that have made “Watson” the most “thinking like” machine.

For more details, and how to participate please visit http://21stcenturywiener.org/

Contributed by Prof Iven Mareels, Chair of the IPC

Upcoming Control Conferences 2017 - 2018 Australia

SAVE THE DATE

IEEE – Conference on Decision and Control (CDC), 12 – 15 December 2017, Melbourne
Asian Control Conference, 17 – 20 December 2017, Gold Coast
The Australian Control Conference 17 – 20 December 2017, Gold Coast
IEEE International Conference on Robotics and Automation (ICRA) May 2018, Brisbane

For further details, please stay in contact with NCACI.

Table 2 The ASCC series schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Date</th>
<th>Chair</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Malaysia (Kota Kinabalu)</td>
<td>31 May 2015</td>
<td>Rubiyah Yusof</td>
</tr>
<tr>
<td>2017</td>
<td>Australia (Gold Coast)</td>
<td>17 Dec 2017</td>
<td>Ljubo Vlacic</td>
</tr>
<tr>
<td>2019</td>
<td>TBA</td>
<td>TBA</td>
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