



ICRA 2018

21-25 May 2018

Brisbane Convention & Exhibition Centre

www.ICRA2018.org



IEEE International Conference on Robotics and Automation 2018

Fast Facts:

Program/Project Value: \$3.9 million

Program/Project Location(s): Brisbane Convention & Exhibition Centre

Program/Project Duration: Contracted from 2015 to 2018

Client/Donor: The Institute of Electrical and Electronics Engineers Incorporated

Year Completed: 21- 25 May 2018

Highlights

The International Conference on Robotics and Automation (ICRA) is the IEEE Robotics and Automation Society's flagship Conference and is a premier international forum for robotics researchers to present their work. Leading robotics and automation researchers, engineers and designers converged on Brisbane to share their ground-breaking research and their vision on what our lives will look like in 20 years with robotics and artificial intelligence the next big technical compass. The Organising Committee was determined to make ICRA 2018 the best ICRA ever. To this end the committee pioneered an exciting set of innovations.

Robots ruled - in the foyers and exhibition halls of the Centre – robots that protect the Great Barrier Reef, fruit picking robots, giant automated diggers, robotic portrait artists and then there was Pepper, the companion robot who can interpret emotions, have a chat, run errands and even provide counselling!

This was the first time in the 35-year history of the flagship international conference that it had been held south of the equator and Brisbane, as an international research hub for robotics, attracted the international Who's Who in the very fast paced robotics space, exceeding expectations on all fronts with more than 80% of delegates from overseas.

The pinnacle of the goals was for ICRA 2018 to be a ground-breaking and innovative event that would influence and educate global thinking on robotics and automation. To achieve this ambitious outcome, a comprehensive and inspiring communication campaign was developed to engage a diverse attendance whether, in person or via the latest technology to do so virtually.



Bots and Beams

Beam Telepresence allowed delegates to visit ICRA from any internet connected device anywhere in the world. Attendees could “Beam In” to hear and see sessions, visit the exhibition, move around and speak to other attendees via their own robotic avatar as if they were at the Conference in person. In two cases presenters who were unable to travel at the last-minute were able to deliver their presentations using the telerobots.



Knowledge Sharing and Outreach

Each presenter had to submit a paper and a spotlight video which were then grouped into poster sessions and those videos would then play on a loop in a session room so that people could then view the presentation in action that they had just heard about from the presenter. The presentations were all available on YouTube prior to the Conference also.

One major complexity with this event was the world-first creation of interactive scientific pods to deliver over 1,000 presentations. A significant part of the ICRA 2018 exhibition build were these interactive pods that were conceptualised by the Client and built and implemented by the

ICMSA team. ICRA 2018 used 22 multi-modal interactive presentation pod and format for all papers: they were built for presenters to be able to display two posters, including a whiteboard for demonstration and a shelf for display of laptops for videos. Prototypes were built six months ahead of the Conference and placed in-situ at the University of Queensland for testing.

Rather than having 16 concurrent sessions in breakout rooms wherein speakers present their abstracts for 10 minutes – all who submitted an abstract presented their posters for a three-hour block in the exhibition hall. This was the first time this model has been used for this ICRA 2018 and indeed a first for a conference of this size and complexity.

The ICRA program was anchored by three plenary talks and eighteen keynote presentations from leaders in the field, topics representing the latest in robotics and automation research. Discussion forums addressing pressing needs of the robotics community were organised covering industry, government, education, humanitarian and social challenges. The program addressed many of the issues around the technological advancement of robots and drones innovation, which are creating new opportunities for supporting disaster resilience and risk reduction. Over 80 student volunteers were managed for the delivery of ICRA 2018 by ICMS Australasia.



Custom Wi-Fi Infrastructure Customised

The conference used a dedicated 10 Gbps back-haul connection to the internet with a dense grid of high-speed wireless hotspots that allowed for 10,000 simultaneous connections. This allowed delegates to use Apps to electronically access the spot-light videos, the conference program and inform delegates with useful local information.

There was not a single complaint about the WiFi – a record that had never been achieved at an ICRA conference before. The proceedings for the event was around 28GB as each presenter not only had to submit multi page papers but also videos as part of the conditions of their acceptance into the program. Delegates could access this through an app and the Wifi supported all of that content being accessed in a speedy manner.

ICMSA co-ordinated all parties involved for over 18 months in the lead up to ICRA 2018 to ensure smooth delivery onsite. It was a resounding success with the WiFi connections supporting over 12,000 devices (up to four per delegate), the exhibition requirements and competition showcases. There was not a single complaint about the WiFi – a record that had never been achieved at an ICRA conference before.



MEA 2018 National Award Winners - Events of the Year

Events of the Year category, sponsored by Destination NSW

ASSOCIATION EVENT OF THE YEAR:

ICMS Australasia for IEEE 2018 International Conference on Robotics and Automation (ICRA 2018)

"ICMS Australasia is our name and we are very proud winners of the Association Event of the Year for the International Congress on Robotics and Automation. Well, this event was a fantastic achievement for Brisbane but also Australia, first time held in the Southern Hemisphere, a high-profile; huge event on robotics and automation which is certainly a sunrise industry in this country and we had some fantastic partners both in supplier terms but also with the Client out of QUT (the Queensland University Technology)."





Robots and the Art

Since the time of da Vinci, artists incorporate robots, machines, software and other emerging technologies into installations and performances to challenge conventional wisdom and to explore new means of creative expression. “Three Robots Named Paul” by Patrick Tresset that sketched portraits of delegates and members of the public was highlight in the exhibition.

Results

ICRA 2018 exceeded expectations on all measurable fronts including the financial surplus, increased delegate attendance and increased sponsorship and exhibition revenue. ICRA 2018 also delivered the establishment of the first Defence Cooperative Research Centre (CRC) for Trusted Autonomous Systems for Australia, estimated to add over \$300 million to the Australian economy over the next decade.

The Numbers

2,586 scientific papers submitted which represented a 47% increase from 2017

1,052 presented with a 40% acceptance rate of submissions

3,067 delegates – 165 % increase in anticipated attendance

80% of attendees were from overseas, delivering economic impact goals to 240% of targets

57 countries represented

885 delegates were from the Asia-Pacific, a specific budget KPI exceeded by 190%

35 Additional Sponsor Partners secured representing an increase of 320% on previous year

58 Exhibitors secured representing an increase of 193% on previous year

The original budget target was AUD\$345,440 and the final result was total revenue of Sponsorship & Exhibition of AUD\$758,300 representing a 219.5% target achievement

