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## **RoboCup 2019: ICMS Australasia Testimonial**

RoboCup is something like the Olympics for Robotics. It is a set of competitions intended to encourage research in Robotics and Artificial Intelligence. It includes robots soccer, rescue robots, and robots for the home and industry. An accompanying Junior competition aims to promote STEM education in schools. The first official RoboCup was held in Nagoya, in 1997, and since then it has been held in many cities around the world. The competition is governed by the international RoboCup Federation (RCF). The RCF Trustees determine which city is awarded the event and oversee the overall operation.

RoboCup is an enormously complicated event and it could not have been staged without the extraordinary efforts of ICMS Australasia.

A robotics competition is much more than a regular scientific conference. We have to build about 20 indoor soccer fields, mockups of three one bedroom apartments for the domestic robots, a factory floor for the industrial robots, and a simulated disaster site for the rescue robots. These are, in addition, the soccer and rescue fields for the junior competition and a stage for mixed human-robot performances. All the fields require complex power and networking setups and the technical support to help and manage teams from all over the world.

With the assistance of Business Events Sydney, the RoboCup 21019 Organising Committee undertook a tender process to find a professional conference organiser that was capable, not only of handling an event of such a large scale, but which also understood the highly technical nature of mounting all the competitions. Following written submissions and interviews, ICMSA was the clear winner.

Several things distinguished ICMSA. The other tenders assumed that RoboCup was similar to other events they had done in the past. ICMSA was the only PCO that really understood the uniqueness of the event. Led by Managing Director Emma Bowyer, the team was able to answer our questions about building arenas, network management, logistics, accommodation, security and many other details. Furthermore, the whole ICMSA team was clearly enthusiastic about tackling such an ambitious project. One of their stated missions is to support scientific and educational events, and this gave us confidence that they would not only do their job, but would be our partners in delivering an outstanding event.

Particularly important in the lead up to RoboCup 2019, ICMSA sent a team, including Emma and Event Manager, Fallon Beatty, to the 2018 competitions in Montreal. They learned, first hand, all the complexities of running the event, seeing the things that worked and those that did not. They interviewed organisers and teams to understand the requirements of each league and developed their plans from there.

RoboCup has several different robot soccer leagues, as well as leagues for rescue, @home, and industrial. The junior competition also has soccer, rescue and onstage leagues. Each of these is governed by a technical committee. ICMSA assigned team members to each league to get their specifications for competition fields, networking, power, logistics, etc. They liaised with the technical committees to ensure that their requirements were met.

As event manager, Fallon Beatty was responsible for the overall organisation, the budget and she also managed the soccer leagues. One of the difficulties of mounting RoboCup is that the technical specifications change each year, trying to make the competitions more challenging. However, this makes planning very difficult. The team had to be flexible and able to adapt quickly to changes. Keeping a tight rein on the budget was especially important. RoboCup is an expensive event to run, with a huge number of budget items, so Fallon's strict control was crucial to delivering an outstanding event, while containing costs. Despite the challenges, Fallon's team worked through all the problems calmly and efficiently, which is a testament to her management skills, as well as their competence.

Emma Mogus was responsible for the rescue, industrial and @home (domestic robot) leagues. The rescue competition arena simulates a disaster site and was the most complex arena in the event. She worked tirelessly with the technical committees to deliver everything that the leagues needed, while again managing the costs. Emma also managed the logistics for all of RoboCup 2019. There were over 2100 participants in hundreds of teams from about 40 countries. Each team brought robots that had to be shipped to Sydney, as well as computers and masses of other electrical equipment. Remarkably, all the shipping went smoothly. Emma worked with ICC Sydney to ensure the equipment was tested to meet Australian standards, that the equipment was safe and secure, and the teams were able to setup and getting running without fuss.

The many RoboCup fields create a complex networking environment, as it is necessary to prevent robots on one field interfering with those on another. We were ably supported by excellent network suppliers, but again, we needed to have a good liaison with them to ensure each league's requirements were met. Andrea O'Sullivan did an excellent job in managing this relationship. She was also handled exhibitions and sponsorship, and also was the media contact person. This was an important role as RoboCup attracted substantial TV, radio and newspaper coverage, with local and international.

Elsewhere, we've commented on Shelley Turner's contribution to the RoboCupJunior competition. This is an important part of RoboCup, as a major aim is to encourage young people to learn about robotics and AI. Her enthusiasm and competence were central to the success of Junior.

One of the most important events in RoboCup is the awards ceremony and prize giving at the conclusion of the competition. In previous years, this has often been chaotic, but

not this time, thanks to the efforts of Kayla Burbidge, who worked with the RoboCup trustees to make sure that all the trophies were present and correct and the ceremony ran smoothly. Kayla also managed the organising committee's contacts with ICMSA and generally filled in wherever was needed, which was quite a lot!

There were many other people at ICMSA who contributed to the success of RoboCup 2019. They organised accommodation, assisted with visa applications, staffed the registration desks, handled ticketing for the public, fielded media questions, etc. One clear sign of the efficiency of the organisation is that there were no queues at the registration desk. Arriving at all previous RoboCup competitions, we would stand in long lines desperate to get in so we could start setting up our robots. This time, the teams arrived, were inducted immediately, and got straight to work. We received many complements that this was the best organised RoboCup that the participants had attended.

It was always a pleasure working with ICMSA throughout the long and complex preparations for RoboCup 2019. As I mentioned earlier, the two key attributes of the team are competence and enthusiasm. Event manager, Fallon Beatty, worked far beyond the call of duty to ensure that RoboCup 2019 was a great success, as did all her team. As Managing Director, Emma Bowyer has created a work environment where everyone obviously enjoys what they do, and takes pride in doing it well.

If it is not already clear, I wholeheartedly recommend ICMS Australia for any future event.

Sincerely,



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