

Monash dominates 2013 Formula SAE-Australia competition

Advanced aerodynamics, new suspensions and a turbo-charged engine powered the Monash University team to a fifth consecutive victory in the Formula SAE-Australasia competition in December.

Monash used a sophisticated points simulator program to benchmark its car's performance against the competition during the design and engineering phase. This reinforced an already confident team as it continued its winning streak.

With 937.5 points out of a possible 1000, Monash was a clear winner, beating its own 2012 tally of 899.4 points. The remaining podium places were closely fought, with Curtin University second on 754.2 points and University of Melbourne in third place with 685.8 points. The remaining top ten positions were hotly contested with the best placed overseas team, University of Waikato, taking sixth place from University of Queensland in seventh and University of Sydney in eighth. Hosted annually by the Society of Automotive Engineers – Australasia (SAE-A), 350 competitors in 23 teams were welcomed to the 2013 Formula SAE-A competition, which ran from 12 to 16 December at the Victoria University Werribee campus near Melbourne. The event features cars using 98RON and E85 fuels, with a separate division for electric cars.

Formula SAE-Australasia is a competition for university students to design, build, test and then compete in a single seat autocross race car during the academic year. The competition extends classroom learning by creating a real-world engineering and business environment where students develop teamwork, learn hands on fabrication skills, and face the time and cost pressures of managing a complex major project.

Aerodynamic innovations

Society President Adrian Feeney said the creative juices flowed freely in the 2013 Formula SAE-Australasia contest.

"Many innovative design concepts brought to the competition by teams from across Australia, and from Japan, New Zealand and the United Kingdom, were proven in this year's competition," said Feeney. "More cars appeared with advanced aerodynamics, including the second place Curtin University car. Among their goals was to qualify for entry to international Formula competitions and that was readily achieved."

Fourth-placed University of Adelaide, 13th-placed University of Auckland and 19th-placed University of Wollongong also entered cars with large wings front and rear. A different aerodynamic approach was taken by fifth place University of Western Australia with the team producing a second iteration of the 'aerobeam' chassis concept introduced in 2012. This design features a carbon composite under tray fitted below the suspension. "The rapidly developing electric car category was won by the pioneering RMIT University team, with Swinburne University of Technology second and University of Western Australia third," added Feeney.



RMIT University was the first team home in the electric car division of the 2013 Formula SAE-Australasia student design and engineering event



The Monash University team powered to first place in the 2013 Formula SAE-Australasia engineering education competition, held in December at Victoria University near Melbourne.

Formula alumni in demand

Launched by the SAE-A in 2000, the Formula SAE-Australasia competition has become an established fixture on the international Formula SAE and Formula Student calendars in Asia, Europe and the USA. Executive Director Natalie Roberts said Formula SAE-Australasia is renowned for producing top engineering graduates that are in great demand in the aerospace, automotive, transport, motorsport, mining and manufacturing industries.

"With Formula SAE-Australasia on their CV, graduates have scored engineering positions locally and internationally with major manufacturers," said Roberts. "While some pursue careers in mainstream transport working with cars, trucks, trains and planes, other are attracted to the highly competitive world of racing at V8 Supercar and Formula 1 levels.

"These industries benefit greatly from the job-ready skills that Formula alumni bring to employment. To keep this regional event delivering such important outcomes in the future, we need continuing investment in the program from sponsors."

On behalf of the SAE-A and all competitors, Roberts thanked the sponsors of the 2013 event, including Robert Bosch Australia, Ford Motor Company Australia, GM Holden, Mitsubishi Motors Australia, Toyota Technical Centre Australia, Toyota Australia, and the Confederation of Australian Motorsport.

"We offer a special thank you to Victoria University for providing an excellent competition venue for many years. We look forward to new on-track challenges at Calder Park Raceway in 2014," added Roberts. "And most importantly, we thank the 100-plus people who volunteer their time and skills to make Formula SAE-Australasia happen year after year. Working with this team is awe inspiring – people just jump in and make it happen." www.saea.com.au



Scoring seventh place was the hard-driving University of Queensland, pictured here taking a two-wheeled turn.