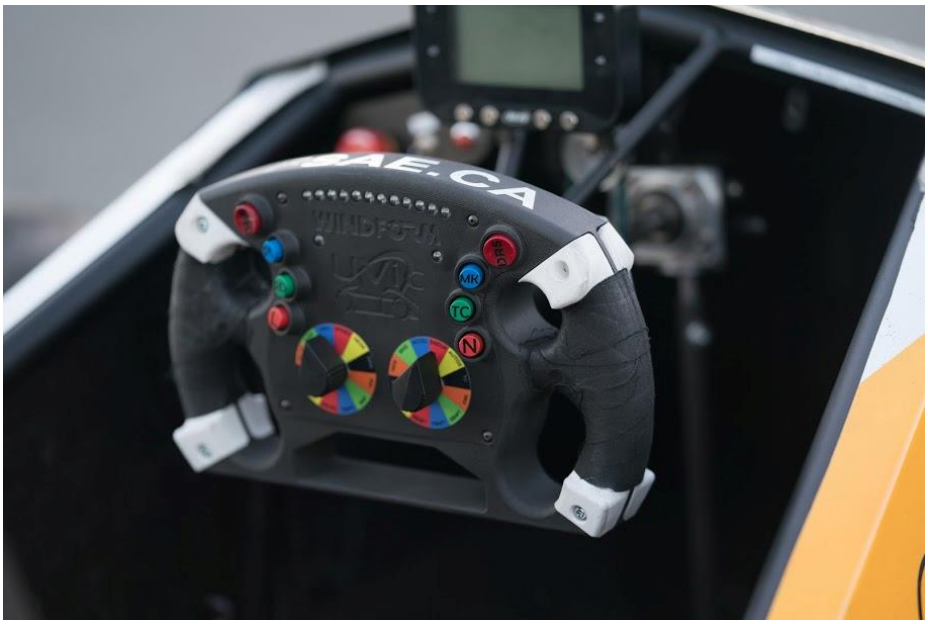
CRP Technology awaits you at CRP and Windform booth B31 Hall 11.1

CRP and Windform on the road to Automotive Success



Formula SAE is the largest international collegiate design competition in the world, it focuses on innovation and the development of upcoming industry leaders. The premise of the competition is the development of a small Formula-style race car that is intended for weekend autoX racing.

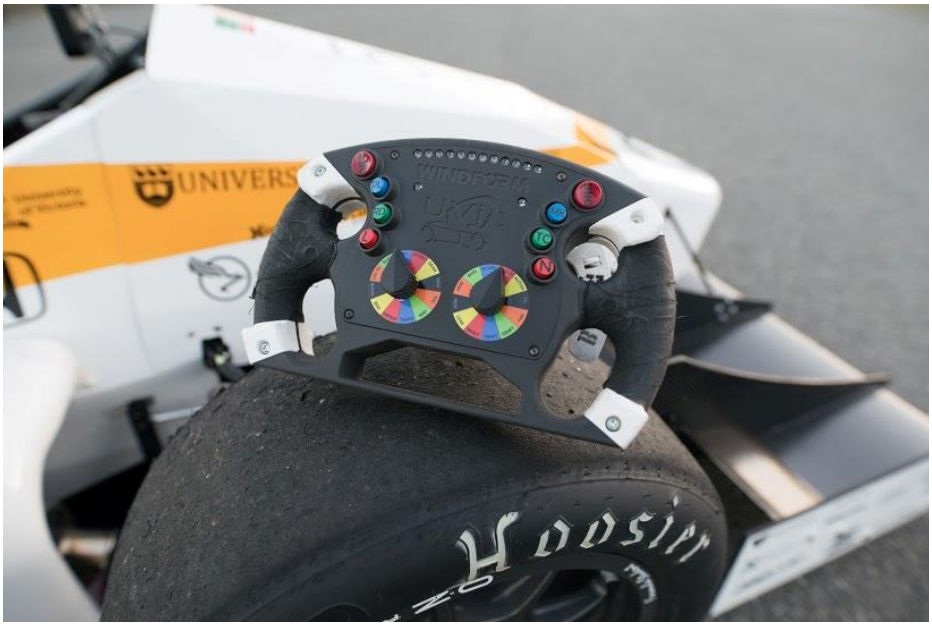
Each team of engineering students designs, builds, and tests a fully functional prototype around competition rules to score the most points in each event. The competition consists of a static portion and a dynamic portion. The static events consist of an evaluation by industry experts of student designs, cost breakdown and a business case. The dynamics events focus on vehicle and driver performance, with five on track events ending with a 22km endurance race.

At the 2017 Formula SAE Michigan event, UVic placed 16th out of 120 attending teams and was the top placing Canadian team. They currently sit 12th in North America and 34th in the world rankings out of 550 schools. 2017 was the most successful year they've had since the program began in 2001.

Team members at UVic Formula Motorsport, working with CRP USA and Windform®, created a component that is fully functional in the racing industry. The result was a steering wheel designed and developed by UVic Formula Motorsport members utilizing 3D Printing technology with Windform® XT 2.0 for its construction, to be used and performed both through testing and competition.

“The 2017 steering wheel proved to be an excellent addition to the car”, said Peter de Schepper, Driver Controls Lead, University of Victoria Formula Motorsport (SAE). “New highly tactile magnetic paddle shifters were added to the wheel, giving the drivers more feedback when shifting”.

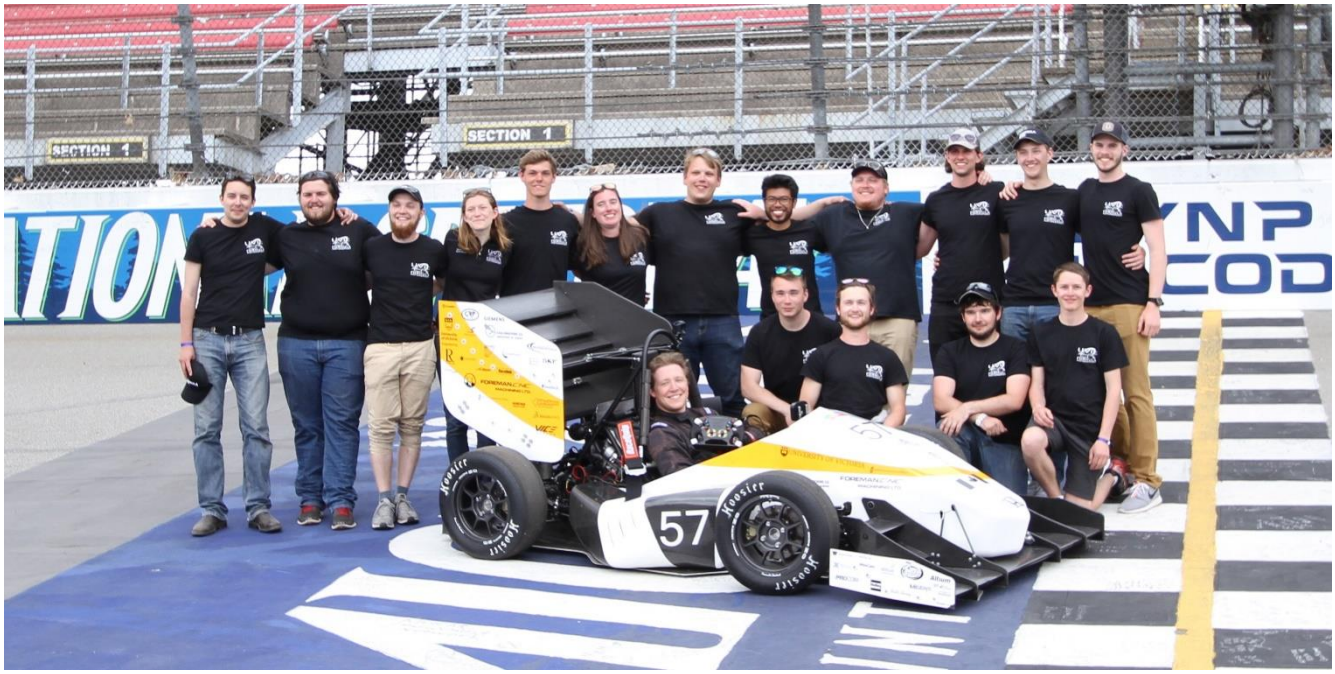
Windform® XT 2.0 was the material used for the manufacturing of parts as it represents the top-level material for its mechanical and thermal characteristics. The use of additive manufacturing along with Windform® materials was fundamental to shorten the timing of car construction. In this case, CRP USA worked with the technical staff of the UVic Formula Motorsport team to help them find the best solution: A completely customizable and lightweight steering wheel body, which has the potential for new handles, front panel, electronics and paddle shifters to be added or modified with ease.



“Drivers loved the additional controls available right at their fingertips along with the visibility of the new shift lights on the steering wheel. All buttons and rotary switches are wired to the internally

mounted custom designed PCB, and communication with the ECU is completed over CAN. Two push buttons were set up last minute before endurance to switch between emergency engine calibrations, which the drivers had to use as engine temperature increased throughout the race".

Peter de Schepper continued: "The steering wheel body itself has held up perfectly, through all testing and competition so far. No noticeable deformation has occurred despite significant use. When the drivers remove the steering wheel via the quick-disconnect on the back of the wheel, the base of their palm presses on and can bend the steering wheel front panel. No plastic deformation has occurred, though one PCB mounted on the back of the front panel had to be replaced as it stopped working. It is suspected that this may have been caused by excess flexing in the front panel".



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