



**ABOVE**  
Dr Greg Heins adjusts the electronics in the Desert Rose High Performance Electric Vehicle.

## Research sparks a quiet revolution

**The whining of industrial equipment, air-conditioners and other devices relying on electric motors could be dramatically quietened, thanks to research by one of CDU's newest PhDs.**

Dr Greg Heins was awarded a PhD at CDU's mid-year graduation ceremony for his research into controlling the current flow into electric motors, providing similar levels of power with greater efficiency and less noise.

Dr Heins identified the imperfections of common electric motors by measuring their operational noises, then applied various methods which included modifying the structure of electric signals that fed the motor, effectively cutting noise by one-third.

"Combining various approaches is a clever way to compensate for noisy motors," he said. He chose the research topic after his involvement

in the CDU co-developed Desert Rose solar car and the Desert Rose High Performance Electric Vehicle.

His research offers enormous potential for equipment that uses electric motors from large building cooling systems through to robotics. Of great interest to Dr Heins is the ability to apply his research to many new technologies.

"This is foundation research that can be applied to a raft of areas including the latest steer-by-wire technologies that give drivers of future cars real-life feedback through the steering wheel even though it's not physically connected to the wheels," he said.

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## Aboriginal ambassadors take the lead in the NT

**Thirteen of CDU's top Indigenous students are being employed by the university to champion the benefits of study to their peers.**

The program began on the Casuarina campus earlier this year and recently expanded to the Alice Springs campus.

Alice Springs-based Bachelor of Education student Jessica Laruffa signed up to the program and also works part-time for the NT Government. She said she looked forward to telling others about her educational journey and the support offered to Indigenous students.

"It's about giving something back to the local community and showing students the many channels of resources and help available through CDU and the NT Department of Education and Training," she said.

Fellow ambassador Jessica Procak, 19, is in her final year of a Bachelor of Commerce and is keen to tell her story to other young students.

"All my mates in Year 10 wanted to complete apprenticeships, but I wanted to do more so I set my sights on university," she said.

"I'm really keen to show other young people that university is achievable and there are many people and programs at CDU that can help Indigenous people get into university," she said.

"No one told me to go to university. I made that decision myself, but I am very keen to tell my story to other young people who think they can't do it," Jessica said.

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**ABOVE**  
Alice Springs based students (from left) Jessica Laruffa, Brooke Wheeler and Jessica Procak prepare to spread the word on higher education.