Successful Post Graduates

Completed Masters Students, Graduated in 2016:

Johan Jordaan, 2016, **The Design, Management and Testing of a Solar Vehicle's Energy Strategy**, (MEng Mechatronics, Supervisor)
Alexander Macfarlane, 2016, **Modular Electric Automatic Guided Vehicle Suspension-Drive Unit**, (MEng Mechatronics, Supervisor)
Stuart Church, 2016, **Energy Management System for the Diagnosis and Control of an Automatic Guided Vehicle** (MEng Mechatronics, Supervisor)

MEng Mechatronics graduates from left - Johan Jordaan; Alex Macfarlane (Cum Laude), Stuart Church (Cum Laude) and Prof Theo van Niekerk (Supervisor for all three students)

Community Based Projects

1. DESIGNING AND BUILDING A ROBOTIC ARM FOR WHEELCHAIRS

The overall aim is to enable disabled people in a wheelchair to pick up different objects like smartphones, wallets, etc. from the ground. The robotic arm should be mounted on the back of an electric wheelchair and be controlled with the joystick, which is already used for the driving. To focus things with the robotic arm, two axes are necessary. One is for the forward and backwards moving. This movement can get released by driving with the wheelchair. For the left and right moving another axis is necessary. After focusing the object and grapping it, an upward movement into an ergonomic position for the user should be possible. From this position, the user should be able to take this object easily with his hands. This requires another axis. For grapping the objects on the floor a gripper is needed. This gripper should grip as many parts as possible, but especially the typical objects and devices we need in our daily life like smartphones or wallets.

Eric Adam, Falko Tutsch, Tobias Moehrle and Prof Theo van Niekerk with the Robotic arm