

Name: John Simon Dickens

Profession: Electronic Engineer

Position: Engineer

Name of Organisation: CSIR, South Africa, Mechatronics and Micro-Manufacturing Group

Date of Birth: 15 June 1986

Years with Organisation: 4

## **Contact Details:**

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## **Education:**

- BEngSc Biomedical Engineering, University of the Witwatersrand, Johannesburg, South Africa
- BSc Eng (Electrical), University of the Witwatersrand, Johannesburg, South Africa
- MSc Eng Electrical, University of the Witwatersrand, Johannesburg, South Africa

## **Key Experience:**

4+ Years experience in image processing, hardware and software integration and the research into the application of novel sensor systems for underground mine safety improvement.

## **Publications:**

- J. S. Dickens and M. Price, "The design of an automated 3D-thermal mine scanning tool", 5th Robotics and Mechatronics Conference of South Africa, Pretoria, South Africa, November 2012.
- M. Price, J. Green and J. Dickens, "Point-cloud Registration Using 3D Shape Contexts", 5th Robotics and Mechatronics Conference of South Africa, Pretoria, South Africa, November 2012.
- J. S. Dickens and J. J. Green, "Segmentation techniques for extracting humans from thermal images", 4th Robotics and Mechatronics Conference of South Africa, Pretoria, South Africa, November 2011.
- M. Price, J. Green and J. Dickens, "Creating Thermal Maps of Mines", 4th Robotics and Mechatronics Conference of South Africa, Pretoria, South Africa, November 2011.
- J. S. Dickens, J. J. Green and M. A. van Wyk, "Pedestrian detection for underground mine vehicles using thermal images", IEEE Africon, Livingston, Zambia, September 2011.
- J. S. Dickens, J. J. Green and M. A. van Wyk, "Human Detection for Underground Autonomous Mine Vehicles Using Thermal Imaging", 26th International Conference of CAD/CAM, Robotics and Factories of the Future, Kuala Lumpur, Malaysia, July 2011.
- J. Green, K. Hlophe, J. Dickens, R. Teleka and M. Price, "Mining Robotics Sensors: Perception Sensors on a Mine Safety Platform", International Conference on CAD/CAM, Robotics and Factories of the Future, Kuala Lumpur, July 2011.

## **Current Interests / Activities:**

- Robotics; Autonomous Vehicles, Mining Robotics
- Sensor systems, Image processing, Machine vision
- Proximity / pedestrian detection systems