2020

* A. P. Erasmus, “Stabilization of a Rotary Wing Unmanned Aerial Vehicle with an Unknown Suspended Payload,” Master Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/107832)
* D. Mphogo, “Cooperative Collision Avoidance for Unmanned Aerial Vehicles,” Master Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/108293)
* J. Rademeyer, “Vision-based Flight Control for a Quadrotor UAV”, Master Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/108083)
* J. N. Lochner, “Motion Planning for a Rotary-wing UAV in Dynamic Environments,” Master Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/108002)
* B. Maseko, “Optimised Path Planning and Path Tracking for Autonomous Vehicles with Constrained Kinematics in ROS”, Master Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/108119)
* A. K. Naude, “Development of an Autonomous Deorbiting Device for a CubeSat”, Master Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/108065)
* F. Lombard, “Remote Vessel Detection using an Optical Imager and AIS Receiver Combination for a CubeSat Constellation”, Master Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/107946)
* C. L. Von Wielligh, “Fast Star Tracker Hardware Implementation and Algorithm optimisations on a System-on-a-Chip device,” Master Thesis, 2019.[[View]](http://scholar.sun.ac.za/handle/10019.1/101241)
* C. D. Lombard, “Stochastic Triangular Mesh Mapping,” PhD Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/107853)
* C. C. Taylor, “Robust Control of a Quadrotor with a Suspended Payload,” PhD Thesis, 2020.[[View]](http://hdl.handle.net/10019.1/107858)

2019

* A. W. D. Steele, “Development of a Close Quarters Collision-Protected Aerial Drone,” Master Thesis, 2019.[[View]](http://scholar.sun.ac.za/handle/10019.1/101241)
* C. L. Von Wielligh, “Fast Star Tracker Hardware Implementation and Algorithm optimisations on a System-on-a-Chip device,” Master Thesis, 2019.[[View]](http://scholar.sun.ac.za/handle/10019.1/101241)

Barnard

* E. J. Thesnaar, “Development of a radiation resistant communication node for satellite sub-systems,” Master Thesis, 2014.[[View]](http://scholar.sun.ac.za/handle/10019.1/86510)
* S. Mkhaliphi, “An FPGA-based adaptive forward error correction protocol for cubesats,” Master Thesis, 2017.[[View]](http://scholar.sun.ac.za/handle/10019.1/101102)
* A. J. Merts, “Satellite network simulator - design and verification using AODV and anthocnet,” Master Thesis, 2017.[[View]](http://scholar.sun.ac.za/handle/10019.1/101241)

Engelbrecht

* I. Van Zyl, “Extremum-seeking control for constrained optimal formation flight of commercial airliners,” Master Thesis, 2018.[[View]](http://scholar.sun.ac.za/handle/10019.1/103603)
* P. D. S. Moller, “Automated landing of a quadrotor unmanned aerial vehicle on a translating platform,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/98014)
* G. J. Goosen, “Automatic upset recovery for small fixed-wing UAVs,” Master Thesis, 2018.[[View]](http://scholar.sun.ac.za/handle/10019.1/103668)
* C. T. Le Roux, “Autonomous landing of a fixed-wing unmanned aerial vehicle onto a moving platform,” Master Thesis, 2016.[[View]](http://scholar.sun.ac.za/handle/10019.1/100337)
* R. L. Maggot, “Fault-tolerant flight control for a fixed-wing unmanned aerial vehicle with partial horizontal and vertical stabiliser losses,” Master Thesis, 2016.[[View]](http://scholar.sun.ac.za/handle/10019.1/100136)
* J. J. K. Engelbrecht, “Optimal attitude and flight vector recovery for large transport aircraft,” Master Thesis, 2017.[[View]](http://scholar.sun.ac.za/handle/10019.1/102934)
* E. F. Trollip, “Ride comfort in commercial aircraft during formation flight using conventional flight control,” Master Thesis, 2016.[[View]](http://scholar.sun.ac.za/handle/10019.1/98733)
* T. Botha, “Smart material actuator for trailing edge thickening,” Master Thesis, 2016.[[View]](http://scholar.sun.ac.za/handle/10019.1/98757)
* P. J. Malan, “Upset detection for passenger airliners using classification of anemometric and inertial sensor data,” Master Thesis, 2016.[[View]](http://scholar.sun.ac.za/handle/10019.1/100173)
* D. Buchner, “Automatic control of commercial airliners in formation flight,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/96963)
* W. Beeton, “Fault tolerant flight control of a UAV with asymmetric damage to its primary lifting surface,” Master Thesis, 2013.[[View]](http://scholar.sun.ac.za/handle/10019.1/85625)
* W. Van Den Aardweg, “Robust sampling-based conflict resolution for commercial aircraft in airport environments,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/96795)

Jones

* D. V. Smith, “Biologically inspired flight : The autonomous control of a quadcopter using spiking neural networks,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/97914)
* J. R. Botha, “Design of an RF ion thruster,” Master Thesis, 2014.[[View]](http://scholar.sun.ac.za/handle/10019.1/86267)
* F. G. Van Wyk, “Optimal control for minimum thrust demand in extended formation flight,” Master Thesis, 2016.[[View]](http://scholar.sun.ac.za/handle/10019.1/98519)
* H. Berhens, “Specification, design and implementation of a flight control unit for an unmanned aerial vehicle,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/98031)
* A. De Bruin, “Accurate autonomous landing of a fixed-wing unmanned aircraft under crosswind conditions,” Master Thesis, 2017.[[View]](http://scholar.sun.ac.za/handle/10019.1/101195)
* C. K. Fourie, “The autonomous landing of an unmanned helicopter on a moving platform,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/98000)
* P. Bellstedt, “The design, implementation of a moving platform landing algorithm for an unmanned autonomous helicopter,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/96780)
* S. S. N. Mamela, “Fault detection, isolation and reconfiguration for autonomous aircraft,” Master Thesis, 2016.[[View]](http://scholar.sun.ac.za/handle/10019.1/100033)
* L. J. Pienaar, “Probabilistic conflict detection for commercial aircraft near airports,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/97033)

Steyn

* J. H. Wessels, “Infrared horizon sensor for cubesat implementation,” Master Thesis, 2018.[[View]](http://scholar.sun.ac.za/handle/10019.1/103564)
* J. Gerber, “A 3-axis attitude control system hardware design for a cubesat,” Master Thesis, 2014.[[View]](http://scholar.sun.ac.za/handle/10019.1/96134)
* C. J. Groenewald, “Attitude determination and control system for eyassat for hardware in the loop application,” Master Thesis, 2014.[[View]](http://scholar.sun.ac.za/handle/10019.1/86653)
* N. Calitz, “The design and implementation of a stellar gyroscope for accurate angular rate estimation on cubesats,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/98059)
* G. H. Janse Van Vuuren, “The design and simulation analysis of an attitude determination and control system for a small earth observation satellite,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/96979)
* M. Junaid, “The development of a hardware-in-the-loop platform for the attitude determination and control testing of a small satellite,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/97881)
* A. O. Erlank, “Development of cubestar : A cubesat-compatible star tracker,” Master Thesis, 2013.[[View]](http://scholar.sun.ac.za/handle/10019.1/85746)
* N. C. Rossouw, “A GPS-based on-board orbit propagator for low earth-orbiting cubesats,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/97908)
* M. A. Afful, “Orbital lifetime predictions of low earth orbit satellites and the effect of a deorbitsail,” Master Thesis, 2013.[[View]](http://scholar.sun.ac.za/handle/10019.1/85862)
* D. Steyn, “Variable speed scissored pair dual gimbal control moment gyro for nano-satellites,” Master Thesis, 2015.[[View]](http://scholar.sun.ac.za/handle/10019.1/98062)
* A. Buysse, “Development of a flight control system for the subsonicwing deployment of a reusable rocket booster,” Master Thesis, 2018.[[View]](http://scholar.sun.ac.za/handle/10019.1/103501)
* A. E. Heunis, “Design and implementation of generic flight software for a cubesat,” Master Thesis, 2014.[[View]](http://scholar.sun.ac.za/handle/10019.1/95911)

Treurnicht

* R. M. Du Pisani, “Design of an underwater object detection and location system using wide-beam sonar,” Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/86236)
* P. G. Ioppo, “The design, modelling and control of an autonomous tethered multirotor UAV,” Master Thesis, 2017.[[View]](http://hdl.handle.net/10019.1/101095)

Van Daalen

* A. J. Bester, “Motion planning for an autonomous terrestrial vehicle in static environments,” Master Thesis, 2018.[[View]](http://hdl.handle.net/10019.1/103539)
* J. Blom, “Accurate localisation of a multi-rotor using monocular vision,” Master Thesis, 2018.[[View]](http://hdl.handle.net/10019.1/103810)
* G. Hull, “Real-time occupancy grid mapping using LSD-SLAM,” Master Thesis, 2017.[[View]](http://hdl.handle.net/10019.1/102780)
* F. Botha, “Data fusion of radar and stereo vision for detection and tracking of moving objects,” Master Thesis, 2017.[[View]](http://hdl.handle.net/10019.1/101291)
* A. Chiu, “Probabilistic outlier removal for stereo visual odometry,” Master Thesis, 2017.[[View]](http://hdl.handle.net/10019.1/100964)
* C. E. Roelofse, “Detection and tracking of moving objects using stereo vision cameras,” Master Thesis, 2018.[[View]](http://hdl.handle.net/10019.1/103434)
* A. J. Burger, “Occupancy grid mapping using stereo vision,” Master Thesis, 2015.[[View]](http://hdl.handle.net/10019.1/96925)

Masters

2014

* S. G. Irwin, “Optimal estimation and sensor selection for autonomous landing of a helicopter on a ship deck”, Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/95894)
* J. H. Le Roux, “Development of a satellite network simulator tool and simulation of AX.25, FX.25 and a hybrid protocol for nano-satellite communications”, Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/96114)
* R. M. Du Pisani, “Design of an underwater object detection and location system using wide-beam sonar,” Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/86236)
* E. J. Thesnaar, “Development of a radiation resistant communication node for satellite sub-systems,” Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/86510)
* J. R. Botha, “Design of an RF ion thruster,” Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/86267)
* J. Gerber, “A 3-axis attitude control system hardware design for a cubesat,” Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/96134)
* C. J. Groenewald, “Attitude determination and control system for eyassat for hardware in the loop application,” Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/86653)
* A. E. Heunis, “Design and implementation of generic flight software for a cubesat,” Master Thesis, 2014.[[View]](http://hdl.handle.net/10019.1/95911)

2013

* A. D. Swart, “Monocular vision assisted autonomous landing of a helicopter on a moving deck,” Master Thesis, 2013.[[View]](http://dx.doi.org/10019.1/80134)
* C. J. Beyers, “Motion planning algorithms for autonomous navigation for a rotary-wing UAV,” Master Thesis, 2013. [[View]](http://dx.doi.org/10019.1/80231)
* J. Appel, “Online system identification for fault tolerant control of unmanned aerial vehicles,” Master Thesis, 2013. [[View]](http://dx.doi.org/10019.1/80125)
* M. Kearney, “An attitude control system for the deployment and stabilisation of a tethered dual CubeSat mission,” Master Thesis, 2013.[[View]](http://dx.doi.org/10019.1/80205)
* E. H. Claase, “Robust multi-H2 output-feedback approach to aerial refuelling automation of large aircraft via linear matrix inequalities,” Master Thesis, 2013. [[View]](http://dx.doi.org/10019.1/80195)
* E. G. Cowley, “Kinodynamic planning for a fixed-wing aircraft in dynamic, cluttered environments : a local planning method using implicitly-defined motion primitives,” Master Thesis, 2013. [[View]](http://dx.doi.org/10019.1/80077)
* S. J. A. Smit, “Autonomous landing of a fixed-wing unmanned aerial vehicle using differential GPS,” Master Thesis, 2013. [[View]](http://dx.doi.org/10019.1/80122)
* A. L. Haasbroek, “Advanced control with semi-empirical and data based modelling for falling film evaporators,” Master Thesis, 2013.[[View]](http://dx.doi.org/10019.1/80196)
* W. Beeton, “Fault tolerant flight control of a UAV with asymmetric damage to its primary lifting surface,” Master Thesis, 2013.[[View]](http://hdl.handle.net/10019.1/85625)
* A. O. Erlank, “Development of cubestar : A cubesat-compatible star tracker,” Master Thesis, 2013.[[View]](http://hdl.handle.net/10019.1/85746)
* M. A. Afful, “Orbital lifetime predictions of low earth orbit satellites and the effect of a deorbitsail,” Master Thesis, 2013.[[View]](http://hdl.handle.net/10019.1/85862)

2012

* W. Brink, “Stereo vision for simultaneous localization and mapping,” Master Thesis, 2012.  [[View]](http://dx.doi.org/10019.1/71593)
* K. J. Friedrich, “Development of an active SONAR platform for AUV applications in a closed environment,” Master Thesis, 2012. [[View]](http://dx.doi.org/10019.1/20026)
* W. Visser, “Automation and navigation of a terrestrial vehicle,” Master Thesis, 2012. [[View]](http://dx.doi.org/10019.1/20263)
* H. M. Odendaal, “An analysis and comparison of two methods for UAV actuator fault detection and isolation,” Master Thesis, 2012. [[View]](http://dx.doi.org/10019.1/71780)
* F. N. Alberts, “Accurate autonomous landing of a fixed-wing unmanned aerial vehicle,” Master Thesis, 2012. [[View]](http://dx.doi.org/10019.1/71672)
* J. M. Venter, “Autonomous air-to-air refueling : a comparison of control strategies,” Master Thesis, 2012. [[View]](http://dx.doi.org/10019.1/20239)
* R. F. Ehlers, “Feedback control of a shape memory alloy actuator for control surface deflection,” Master Thesis, 2012. [[View]](http://dx.doi.org/10019.1/19977)

2011

* P. H. Mey, “Development of attitude controllers and actuators for a solar sail cubesat,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6862)
* H. E. Loubser, “The development of Sun and Nadir sensors for a solar sail CubeSat,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6748)
* P. J. Botma, “The design and development of an ADCS OBC for a CubeSat,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/18040)
* S. Alalait, “The design and implementation of a video compression development board,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6547)
* G. Heath, “Dynamic reconfigurable platform for swarm robotics,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6814)
* R. Van Wyk, “Development of an integrated avionics hardware system for unmanned aerial vehicle research purposes,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6485)
* L. Basson, “Control allocation as part of a fault-tolerant control architecture for UAVs,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6722)
* A. J. Runhaar, “Autonomous airborne refueling : relative state estimation,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/17852)
* A. P. Meredith, “An unmanned aircraft system for maritime search and rescue,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6720)
* F. J. Rupert, “Control of surfaces in confined spaces : Tab-aileron control system development,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6605)
* M. G. Burke, “Visual servo control for a human-following robot,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6813)
* W. A. Basson, “Fault tolerant adaptive control of an unmanned aerial vehicle,” Master Thesis, 2011 [[View]](http://dx.doi.org/10019.1/17898)
* A. M. de Jager, “The design and implementation of vision-based autonomous rotorcraft landing,” Master Thesis, 2011. [[View]](http://dx.doi.org/10019.1/6523)

2010

* I. C. Kruger, “An aircraft based emulation platform and control model for LEO satellite antenna beam steering.,” Master Thesis, 2010.
* J. S. Gilmore, “Software for Onboard Computer.,” Master Thesis, 2010.
* S. Booysen, “The design of a high speed topology for a QPSK demodulator with emphasis on the synchronization.,” Master Thesis, 2010.
* G. C. Avenant, “Autonomous Flight Control System for an Airship.,” Master Thesis, 2010.

2009

* F. J. Olivier, “An LDPC Error Control Strategy for Low Earth Orbit Satellite Communication Link Applications.,” Master Thesis, 2009.
* S. S. Mthembu, “An eCos based flight software for a nanosatellite,” Master Thesis, 2009.
* D. Mienie, “Autonomous Docking for a Satellite Pair Using Monocular Vision.,” Master Thesis, 2009.
* W. Kriegler, “A Fixed-Point DSP Architecture for Software-Defined Radio,” Master Thesis, 2009.
* D. A. Fourie, “The Dynamic Modelling and Control System of a Tethered Aerostat for Remote Sensing Applications.,” Master Thesis, 2009.

2008

* H. Venter, “Developing a generic request-processor for systems with limited request processing resources.,” Master Thesis, 2008.
* J. F. Van Wyk, “Reusable Software Defined Radio Platform for Micro-Satellites.,” Master Thesis, 2008.
* H. M. van Rensburg, “Horizon Sensor for a micro satellite.,” Master Thesis, 2008.
* S. Khumalo, “A CAN Based Distributed Telemetry and Telecommand Network for a Nanosatellite.,” Master Thesis, 2008.

2007

* L. Visagie, “A Ground Surface Motion Sensor for Satellite Attitude Control.,” Master Thesis, 2007.
* J. G. Van der Horst, “Radiation tolerant implementation of a soft-core processor for space applications.,” Master Thesis, 2007.
* P. S. Seabe, “Evaluation of Microcontroller Based Packet Radio Modems.,” Master Thesis, 2007.
* J. Schoonwinkel, “Attitude Determination and Control System of a Nanosatellite.,” Master Thesis, 2007.
* K. F. Mathapo, “A Software-Defined Radio Implementation of Maritime AIS.,” Master Thesis, 2007.
* S. J. Marais, “The Quadrifilar Helix Antenna and its Application to Wide Angle Phase-Steered Arrays,” Master Thesis, 2007.
* H. G. Marais, “Development of Dynamically Reconfigurable Groundstation Software.,” Master Thesis, 2007.
* A. G. Cooke, “Rural E-mail System for the Sumbandila Satellite.,” Master Thesis, 2007.
* A. F. L. Bredenkamp, “Development and Control of a 3-axis Stabilised Platform.,” Master Thesis, 2007.
* C. J. P. Brand, “The Development of an ARM-based OBC for a Nanosatellite.,” Master Thesis, 2007.
* R. Brady, “A Cross Platform Framework for Software Defined Radio.,” Master Thesis, 2007.

2006

* J. J. Vosloo, “A Mass Memory System for Satellites using Field Programmable Gate Arrays and Synchronous DRAM.,” Master Thesis, 2006.
* C. E. Van Daalen, “Strategies for the Control of a Satellite with Thruster Misalignment.,” Master Thesis, 2006.
* G. A. Thopil, “An Attitude and Orbit Determination and Control System for a Small Geostationary Satellite.,” Master Thesis, 2006.
* D. Smith, “Satellite Data Transmission by means of a Multi-Channel System.,” Master Thesis, 2006.
* A. D. Cawood, “Adaptation, Optimisation and Simulation of the CSMA/CA Protocol for a Low Earth Orbit Satellite UHF Link.,” Master Thesis, 2006.
* J. Bijker, “Development of an Attitude Heading Reference System for an Airship.,” Master Thesis, 2006.
* E. A. Baker, “Design of a CMOS Sensor Camera System for a Nanosatellite.,” Master Thesis, 2006.

PhD

C. E. van Daalen, “Conflict detection and resolution for autonomous vehicles,” PhD Thesis, 2010. [[View]](http://dx.doi.org/10019.1/3994)

I. Z. van Marais, “On-board Image Quality Assessment for a Satellite.,” PhD Thesis, 2009.

F. Smith, “Total ionizing dose mitigation by means of reconfigurable FPGA computing.,” PhD Thesis, 2007

T. Jones, “Real-Time Probabilistic Collision Avoidance for Autonomous Vehicles, Using Order Reductive Conflict Metrics,” PhD Thesis, 2003.

Book Chapters

2020

* W. H. Steyn, “Stability, Pointing, and Orientation”, Book Chapter in: Handbook of Small Satellites, Springer, ISBN:978-3-030-36308-6, pp 145-187.
* W. H. Steyn and V. J. Lappas, “Attitude Control and Determination”, Book Chapter in: Nanosatellites: Space and Ground Technologies, Operations and Economics, Wiley, ISBN:9781119042044, pp 61-84.

2017

* J. Lüdemann, J. H. Wessels, A. Buysse, A. J. Merts, A. Barnard and H. W. Jordaan, “Graphene Foam Deorbit Sail with Failsafe Release Mechanism”, Book Chapter in: Innovative Ideas on Micro/Nano-Satellite Missions and Systems Report on Deorbit Device Competition (DDC) and Mission Idea Contest (MIC4), IAA Book Series, Vol.1 No.7, 2017, ISBN/EAN IAA: 978-2-917761-55-7, pp.63-76.

2015

* J. H. le Roux, A. Heunis, G. Janse van Vuuren, A. Barnard, H. W. Jordaan, D. Steyn, N. Rossouw, M. Bin Othman, N. Calitz, M. Junaid and C. Groenewald, “A Nano-Satellite Constellation for Tracking and Monitoring Endangered Wildlife in Developing Countries”, Book Chapter in: Inventive Ideas for Micro/Nano-Satellites The MIC3 Report, IAA Book Series, Vol.1 No.5, 2015, ISBN/EAN IAA: 978-2-917761-38-0, pp.37-49.

2014

* H. W. Jordaan and W. H. Steyn, “The Attitude Control of a Tri-Spin Solar Sail Satellite”, Book Chapter in: Advances in Solar Sailing, Publisher Springer Praxis Books 2014, pp.755-769, ISBN: 978-3-642-34907-2.

2013

* M-A. Kearney, P. J. Botma, H. W. Jordaan, J. Gerber, E. Thesnaar, F. Nolte, A. Erlank, C. Groenewald and A. Barnard, “The OuterNet: A novel satellite communication relay constellation”, Book Chapter in: Innovative Ideas for Micro/Nano-Satellite Missions, IAA Book Series,Vol.1, No.3, 2013, ISBN/EAN IAA: 978-2-917761-28-1.

2012

* J. Auret, P. J. Botma, E. Chiyika, D. J. de Villiers, E. Louw, F. Sagouo Minko, G. A. Mutch, M. Roman, R. Siebrits, S. Smit and I. Tadadjeu Sokeng, “Medium/Large Vehicle Tracking System”, Book Chapter in: Novel Ideas for Nanosatellite Constellation Missions, IAA Book Series, Vol.1 No.1, 2012, ISBN/EAN IAA: 978-2-917761-18-2.

Conference

2016

* F. J. Botha, C. E. van Daalen and J. Treurnicht, “Data fusion of radar and stereo vision for detection and tracking of moving objects,” in Pattern Recognition Association of South Africa and Robotics and Mechatronics International Conference (PRASA-RobMech), Stellenbosch South Africa, 2016.
* A. Chiu, T. Jones and C. E.van Daalen, “A comparison of linearisation and the unscented transform for computer vision applications,” in Pattern Recognition Association of South Africa and Robotics and Mechatronics International Conference (PRASA-RobMech), Stellenbosch South Africa, 2016.
* C. D. Lombard and C. E.van Daalen, “Extrinsic calibration of a push-broom lidar and camera using 3-D multi-planar association,” in Pattern Recognition Association of South Africa and Robotics and Mechatronics International Conference (PRASA-RobMech), Stellenbosch South Africa, 2016.
* J. J. K. Engelbrecht and J. A. A. Engelbrecht, “Optimal Attitude and Flight Vector Recovery for Large Transport Aircraft using Sequential Quadratic Programming,” in Pattern Recognition Association of South Africa and Robotics and Mechatronics International Conference (PRASA-RobMech), Stellenbosch South Africa, 2016.
* G. L. Hugo and J. A. A. Engelbrecht, “Autonomous Landing of a Fixed-Wing Aircraft with Partial Horizontal Stabiliser Loss,” in Pattern Recognition Association of South Africa and Robotics and Mechatronics International Conference (PRASA-RobMech), Stellenbosch South Africa, 2016.
* J. T. Mfiri, J. Treurnicht and J. A. A. Engelbrecht, “Automated Landing of a Tethered Quad-Rotor UAV with Constant Winching Force,” in Pattern Recognition Association of South Africa and Robotics and Mechatronics International Conference (PRASA-RobMech), Stellenbosch South Africa, 2016.
* C. C. Taylor and J. A. A. Engelbrecht, “Acceleration-Based Control of a Quadrotor with a Swinging Payload,” in Pattern Recognition Association of South Africa and Robotics and Mechatronics International Conference (PRASA-RobMech), Stellenbosch South Africa, 2016.
* E. F. Trollip and J. A. A. Engelbrecht, “Ride Comfort in Commercial Aircraft during Formation Flight Using Conventional Flight Control,” in IEEE Aerospace Conference 2016*,* Big Sky Montana U.S.A., 2016.
* P. J. Malan, J. A. A. Engelbrecht, H. A. Engelbrecht and J. Boada-Bauxell, “Angle of Attack Upset Detection for Passenger Airliners using Classification of Anemometric and Inertial Sensor Data,” in AIAA Atmospheric Flight Mechanics Conference 2016, Washington D.C. U.S.A., 2016.
* J. L. Forshaw, et.al. and WH Steyn, “Review of Final Payload test Results for the RemoveDebris Active Debris Removal Mission,” in 67th International Astronautical Congress, Guadalajara Mexico, 2016.

2015

* W. van den Aardweg, J. A. A. Engelbrecht and C. E. van Daalen, “Sampling-based Collision Avoidance for Commercial Airliners with Intruder Aircraft and Terrain,” in IEEE Aerospace Conference, Big Sky Montana U.S.A., 2015.
* W. H. Steyn and L. Visagie, “Hints on how to Design a Robust and Reliable ADCS for QB50 CubeSats,” in 7th European CubeSat Symposium, Liege Belgium, 2015.
* D. G. Steyn and W. H. Steyn, “Development of a Dual Gimbal Control Moment Gyro for Nano-Satellites,” in 66th International Astronautical Congress, Jerusalem Israel, 2015.
* W. H. Steyn and H. W. Jordaan, “An Active Attitude Control System for a Drag Sail Satellite,” in 66th International Astronautical Congress, Jerusalem Israel, 2015.
* J. L. Forshaw, et.al. and WH Steyn, “RemoveDebris: An EU Low Cost Demonstration Mission to Test ADR Technologies,” in 66th International Astronautical Congress, Jerusalem Israel, 2015.

2014

* L. Visagie, J. Forshaw, T. E. Frame, V. J. Lappas and WH Steyn, “A Minituarised Attitude Control and Determination System for the QB50 and SME-SAT Missions,” in 9th International ESA Conference on Guidance, Navigation & Control Systems, Oporto Portugal, 2014.
* M-A Kearney and W. H. Steyn, “An Attitude Control System for the Deployment and Stabilisation of a Tethered Dual CubeSat Mission,” in 19th IFAC World Congress, Cape Town South Africa, 2014.
* W. H. Steyn and M-A Kearney, “An Attitude Control System for ZA-AeroSat subject to significant Aerodynamic Disturbances,” in 19th IFAC World Congress, Cape Town South Africa, 2014.
* A. Erlank and W. H. Steyn, “Arcminute Attitude Estimation for CubeSats with a Novel Nano Star Tracker,” in 19th IFAC World Congress, Cape Town South Africa, 2014.
* M-A Kearney and W. H. Steyn, “ZA-AeroSat: A QB50 CubeSat Demonstrator for Multidisciplinary Technology and Scientific Research,” in 6th European CubeSat Symposium, Estavayer-le-Lac Switzerland, 2014.
* L. Visagie, V. Lappas and W. H. Steyn, “QB50 Precursor ADCS Flight Results,” in 6th European CubeSat Symposium, Estavayer-le-Lac Switzerland, 2014.
* M. Jacobs, S. Mostert, H. Burger, W. H. Steyn, R. Merton, “Hyperspectral Imaging with Nanosats,” in 65th International Astronautical Congress, Toronto Canada, 2014.

2013

* M. J. Booysen, J. A. A. Engelbrecht, and A. Molinaro, “Proof of concept: Large-scale monitor and control of household water heating in near real-time,” in International Conference of Applied Energy: ICAE 2013, 2013.
* M. J. Booysen, S. Zeadally, and G. -J. van Rooyen, “Impact of Neighbor Awareness at the MAC Layer in a Vehicular Ad-hoc NETwork (VANET),” in the 5th International Symposium on Wireless Vehicular Communications: WIVEC2013, 2013.
* J. M. Schietekat and M. J. Booysen, “Detection of reckless driving in the Sub-Saharan informal public transportation system using acceleration-sensing telematics,” in Eurocon 2013, 2013.
* M. J. Booysen and G. -J. van Rooyen, “Performance Evaluation of Neighbor-Awareness at the Media Access Control (MAC) Layer for Vehicular Ad-Hoc Networks (VANETs),” in 2013 IEEE Intelligent Vehicles Symposium, 2013.
* O. Briante, C. Campolo, A. Iera, A. Molinaro, S. Y. Paratore, G. Ruggeri, and M. J. Booysen, “ItsPhone: an Integrated Platform for Participatory ITS Data Collection and Opportunistic Transfer,” in 32nd IEEE International Conference on Computer Communications: InfoCOM2013, 2013.
* B. M. J. L.S. Mojela, “On the use of WiMAX and Wi-Fi in a VANET to provide in-vehicle connectivity and media distribution,” in IEEE ICIT 2013, 2013.
* A. S. Zeeman, M. J. Booysen, G. Ruggeri, and B. Lagana, “Capacitive seat sensors for multiple occupancy detection using a low-cost setup,” in IEEE ICIT 2013, 2013.

2012

* D. C. E. van Brink L.J. and W. H. Brink, “Probabilistic Outlier Removal for Robust Land-mark Identification in Stereo Vision Based SLAM,” in IEEE/RSJ International Conference on Intelligent Robots and Systems, Vilamoura, Portugal, 2012.
* D. C. E. van Brink L.J. and W. H. Brink, “FastSLAM with Stereo Vision,” in 23rd Annual Symposium of the Pattern Recognition Association of South Africa, Pretoria, South Africa, 2012.
* W. Beeton and J. A. A. Engelbrecht, “Robust Flight Control of a UAV with Asymmetric Damage to its Primary Lifting Surface,” in International Aerospace Symposium of South Africa, 2012.
* T. Jones and J. A. A. Engelbrecht, “Autonomous Take-off and Landing of the SLADe II Quad-rotor Vehicle,” in International Aerospace Symposium of South Africa, 2012.
* J. A. A. Engelbrecht and S. J. Pauck, “A Multi-Mode Upset Recovery Flight Control System for Large Transport Aircraft,” in International Aerospace Symposium of South Africa, 2012.
* J. A. A. Engelbrecht, S. J. Pauck, and I. K. Peddle, “Bifurcation Analysis and Simulation of Stall and Spin Recovery for Large Transport Aircraft,” in AIAA Atmospheric Flight Mechanics Conference, 2012.
* S. J. Pauck and J. A. A. Engelbrecht, “Bifurcation Analysis of the Generic Transport Model with a view to Upset Recovery,” in AIAA Atmospheric Flight Mechanics Conference, 2012.
* M. J. Booysen, “Research on Intelligent Transportation Systems (ITS) and vehicular networking,” in ITS-SA members meeting,
* M. J. Booysen, “Relevance of Intelligent Transportation Systems (ITS) in Sub-Saharan Africa,” in Geneva International Motor show, 2012.
* E. Sephton, N. Treurnicht, M. Blanckenberg, and J. van der Westhuizen, “Investigation of the Automation of Abalone Production Control,” in 42nd International Conference on Computers and Industrial Engineering, 2012.
* N. Treurnicht, N. Verwey, and M. Blanckenberg, “New Developments in Grape Punnet Packaging,” in 42nd International Conference on Computers and Industrial Engineering, 2012.
* C. Scheffer, M. Blanckenberg, B. Garth-Davis, and M. Eisenberg, “Biomedical Engineering Education through Global Engineering Teams,” in 34th Annual International Conference of the IEEE EMBS, 2012.
* H. M. Zaeim, C. Scheffer, and M. Blanckenberg, “Evaluation of time delay estimation in the detection of pleural effusion in a phantom model of the lungs,” in 19th Iranian Conference on Biomedical Engineering, 2012.
* H. Jordaan and W. Steyn, “Spinning Solar Sail in an Earth-Centred Orbit,” in 5th UN/Japan Nanosatellite Symposium, 2012.
* PJ Botma WH Steyn and A. Barnard, “Implementation and Evaluation of Low Cost Fault Tolerant Techniques for Nano/Pico- Satellite Applications,” in 5th UN/Japan Nanosatellite Symposium, Nagoya Japan, 2012.
* W. H. Steyn, “A Multi-Mode Attitude Determination and Control System for SUNSAT,” in 3rd International Symposium on Small Satellites Systems and Services, 2012.
* W. H. Steyn, “Full Satellite State Determination from Vector Observations,” in 13th IFAC Symposium on Automatic Control in Aerospace, Palo Alto California USA, 2012.

2011

* D. C. E. van Brink L.J. and W. H. Brink, “Stereo Vision as a Sensor for EKF SLAM,” in 22nd Annual Symposium of the Pattern Recognition Association of South Africa, Johannesburg, South Africa, 2011.
* E. H. Claase and J. A. A. Engelbrecht, “A Robust Variance-Constrained Control Approach to Autonomous Airborne Refuelling via Linear Matrix Inequality Optimisation,” in International Aerospace Symposium of South Africa, 2011
* S. J. Pauck and J. A. A. Engelbrecht, “Bifurcation Analysis of the Generic Transport Model to Aid Automatic Recovery of Flight from Upset Conditions,” in International Aerospace Symposium of South Africa, 2011.
* J. M. Venter and J. A. A. Engelbrecht, “Automatic Aerial Refueling of a Large Aircraft: a Comparative Study,” in International Aerospace Symposium of South Africa, 2011.
* S. J. A. Smit and J. A. A. Engelbrecht, “Precision Landing of a Fixed-Wing Unmanned Aerial Vehicle in Windy Conditions,” in International Aerospace Symposium of South Africa, 2011.
* S. C. Kriel and J. A. A. Engelbrecht, “Receptacle Control for Autonomous Aerial Refuelling of a Large Receiver Aircraft,” in International Aerospace Symposium of South Africa, 2011.
* R. Smit, N. F. Treurnicht, and M. M. Blanckenberg, “Economic requirements analysis for table grape check weighing,” in International Conference on Industrial Engineering, Systems Engineering and Engineering Management for Sustainable Global Development, 2011.
* B. Garth-Davis, D. S. Holtzhausen, C. Wurtz, T. Bunn, and M. M. Blanckenberg, “Design and development of a mobile phone based spirometer,” in 2nd SA Telemedicine and eHealth conference, 2011.
* M. Blanckenberg, C. Worst, and C. Scheffer, “Development of a Mobile Phone Based Ophthalmoscope for Telemedicine,” in 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2011.
* C. Jacobs, C. Bollig, and T. Jones, “Laser Pulse Energy Control using a High Speed Digital Feedback Controller,” in European Conference on Lasers and Electro-Optics and the 12th European Quantum Electronics Conference, 2011.
* W. H. Steyn, “Modular Simulation and Visualisation Application for Satellite Attitude Control,” in 62nd International Astronautical Congress, 2011.
* W. H. Steyn, “Design of an Aerodynamic Attitude Control System for a CubeSat,” in 62nd International Astronautical Congress, 2011.
* W. H. Steyn, “Attitude Control Actuators, Sensors and Algorithms for a Solar Sail Cubesat,” in 62nd International Astronautical Congress, 2011.
* C. Jacobs, C. Bollig, and T. Jones, “Digital control of a pulsed Ho:YLF ring laser,” in 56st Annual InProceedings of the South African Institute of Physics, 2011.

2010

* S. J. Pauck and J. A. A. Engelbrecht, “Towards Automatic Upset Recovery for Commercial Aircraft,” in International Aerospace Symposium of South Africa, 2010.
* W. A. Basson and J. A. A. Engelbrecht, “Adaptive Control of a Variable Stability UAV,” in International Aerospace Symposium of South Africa, 2010.
* V. L. Dyk, M. Treurnicht, J. Fortuin, and M. M. Blanckenberg, “A decision support system for needs-driven telemedicine technology development,” in 13th International Congress on Medical Informatics, 2010.
* L. V. et.al and W. Steyn, “Cubesat Solar Sail Attitude Determination and Control System Hardware Design and Orbital Analysis,” in 2010 AIAA Guidance, Navigation, and Control InProceedings, 2010.
* W. H. Steyn, “In-Orbit AODCS Performance of SumbandilaSAT an Earth Observation Satellite for South Africa,” in 61st International Astronautical Congress, 2010.
* F. Smith and A. Barnard, “Double Modular Redundancy for Single Event Upset Mitigation.,” in 11th European InProceedings on Radiation and its Effects on Components and Systems, 2010, pp. 1-4.
* I. C. Kruger and R. Wolhuter, “An Aircraft Based Emulation Platform for LEO Satellite Antenna Beam Steering.,” in The Fifth International InProceedings on Systems and Networks Communications, 2010.

2009

* F. J. Rupert and J. A. A. Engelbrecht, “Control Surfaces in Confined Spaces: Trailing Edge Control Surface Optimisation and Control,” in International Aerospace Symposium of South Africa, 200
* J. M. Venter and J. A. A. Engelbrecht, “Automatic Aerial Refueling of Large Aircraft: a Comparative Study,” in International Aerospace Symposium of South Africa, 2009.
* S. C. Kriel and J. A. A. Engelbrecht, “Investigation of Control Strategies for Autonomous Aerial Refuelling,” in International Aerospace Symposium of South Africa, 2009.
* C. D. Jaquet and J. A. A. Engelbrecht, “Optimisation of Trailing Edge Tabs to Reduce Control Surface Hinge Moments,” in International Aerospace Symposium of South Africa, 2009.
* R. F. Ehlers and J. A. A. Engelbrecht, “Macroscopic Phenomenological Model-Based Control of a Shape Memory Alloy Actuator for a Control Surface,” in International Aerospace Symposium of South Africa, 2009.
* A. Rademeyer, M. M. Blanckenberg, and C. Scheffer, “Wireless Physiological Monitoring System for Psychiatric Patients,” in 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2009
* I. Marais and W. Steyn, “Noise Estimation Algorithms for Onboard Image Quality Assessment,” in International InProceedings on Space Technology, 2009.
* F. J. Olivier and R. Wolhuter, “Evaluation of LDPC FEC Schemes for Satellite Systems.,” in Southern African Telecommunications Networks and Applications InProceedings, 2009.
* J. S. Gilmore and R. Wolhuter, “Predicting Low Earth Orbit Satellite Communications Quality and Visibility over Time.,” in Southern African Telecommunications Networks and Applications InProceedings, 2009.
* I. V. Z. Marais, W. Steyn, and D. J. A. Preez, “On-board Image Quality Assesment for a Satellite,” in 7th IAA Symposium on Small Satellites for earth Observation, 2009, p. 8.

2008

* C. D. Jaquet and J. A. A. Engelbrecht, “Alternative Actuation – A Study of Effectiveness of Servo Tabs,” in Technical Aerospace and Unmanned Systems Conference, 2008.
* S. C. Kriel, J. M. Venter, and J. A. A. Engelbrecht, “Automatic In-Air Refuelling of an Airbus A330,” in Technical Aerospace and Unmanned Systems Conference, 2008.
* W. S. IvZ Marais and J. du Preez, “Construction of an Image Quality Assesment Model for use On Board an LEO Satellite,” in IEEE International Geoscience & Remote Sensing Symposium Proceedings (IGARSS), 2008
* T. Jones, “The NTDA and Slade Projects at Stellenbosch University,” in TAUSC 2008, 2008.
* F. Olivier and R. Wolhuter, “A Modem Link Strategy for Optimization of LEO Satellite Throughput.,” in Southern African Telecommunication Networks and Applications InProceedings, 2008.
* E. Kriegler and G. J. van Rooyen, “A fixed-Point DSP architecture for Software-Defined Radio,” in Southern African Telecommunication Networks and Applications InProceedings, 2008, pp. 1-6.
* J. S. Gilmore and R. Wolhuter, “A Multichannel Satellite Scheduling Algorithm.,” in Southern African Telecommunication Networks and Applications InProceedings, 2008, pp. 1-6.
* C. Christelis and R. Wolhuter, “Optimal segment length for telecommand data link layer protocol.,” in Southern African Telecommunication Networks and Applications InProceedings, 2008, pp. 1-2.
* C. J. P. Brand and R. Wolhuter, “A Probalistic Prediction of Packets on a Diversified IP Network. ,” in Southern African Telecommunication Networks and Applications InProceedings, 2008, pp. 1-2.
* K. Botha, E. van der Westhuizen, and G. J. van Rooyen, “A Digital Modem Card for a Multi-Channel Satellite Communications Payload.,” in Southern African Telecommunication Networks and Applications InProceedings, 2008, pp. 1-6.
* W. H. Steyn, “An Attittude Control System for SumbandilaSAT an Earth Observation Satellite.,” in The 4S (Small Satellite Systems and Services) Symposium, 2008, pp. 1-12.

2007

* A. Barnard and W. Steyn, “Low cost TID testing of COTS components,” in Proceedings of the 9th European InProceedings on Radiation and its Effects on Components and Systems (RADECS), 2007.
* C. Jacobs, C. Bollig, and T. Jones, “Frequency-stabilisation of single-frequency solid-state lasers,” in Institute of Physics 52nd annual InProceedings, 2007.
* J. Taylor, H. T. du Mouton, and T. Jones, “Integrated, FPGA Based NMR Teslameter and Power Supply for Accelerator Magnets,” in 38th IEEE Power Electronics Specialists InProceedings (PESC) ’07, 2007.
* J. Taylor, T. H. du Mouton, and T. Jones, “NMR-Controlled Analysing Magnet Power Supply,” in IEEE Africon 2007, 2007.
* T. Jones, “Advances in Aerospace Technology,” in South African International Aerospace Symposium, 2007.
* T. Jones, “The SLADe and NTDA Projects at Stellenbosch University,” in Technical Aerospace and Unmanned Systems InProceedings (TAUSC) 2007, 2007.
* L. A. Ingham, T. Jones, and A. Maneschijn, “Certification and Testing of UAVs in South African Airspace,” in 18th SFTE (EC) Symposium, 2007.
* G. A. Thopil and W. H. Steyn, “A control system analysis for a potential small geostationary satellite for South Africa.,” in AFRICON 2007, 2007, pp. 1-7. [[View]](http://dx.doi.org/10.1109/AFRCON.2007.4401553)

2006

* D. J. P. Vos and M. M. Blanckenberg, “Utilising Decision Support Systems in developing countries – an example,” in 27th African Health Sciences Congress, 2006.
* C. Jacobs, S. Kriel, C. Bollig, and T. Jones, “Pulse Energy Control Thru Dual Loop Electronic Feedback,” in 51st Annual InProceedings of the South African Institute of Physics, 2006.
* J. Taylor, T. H. du Mouton, and T. Jones, “NMR-Controlled Analysing Magnet Power Supply,” in SAUPEC, 2006.
* R. Heise, T. Jones, I. Peddle, and G. Milne, “SLADe: Development of a UAV Decoy,” in 32nd European Rotorcraft Forum, 2006.
* W. H. Steyn, “An Attitude Control System for ZA-002 South Africa’s Second Earth Observation Satellite.,” in SACAC Control InProceedings, 2006, pp. 98-109.
* D. J. J. Witt and G. J. van Rooyen, “Novel IQ imbalance and offset compensation techniques for quadrature mixing radio transceivers.,” in Southern African Telecommunication Networks Applications InProceedings, 2006, p. 6.
* W. K. Soh, N. Hamzah, and W. H. Steyn, “Attitude Determination and Control Subsystem Hardware in the Loop Test on Air bearing Trolley.,” in Guidance, Navigation and Control InProceedings, 2006, pp. 1-11.
* P. Coppin and A. Schoonwinkel, “Hyperspectral/multispectral imager for microsatellites with insitu data collection for plant production and modelling.,” in Small Satellites, Systems and Services Symposium, Chia Laguna, Sardinia, Italy, 2006, pp. 207-216.
* K. F. Mathapo and V. G. J. Rooyen, “A Software Defined Radio AIS for the ZA-002 Satellite.,” in 20th Annual AIAA/USU InProceedings on Small Satellites, 2006, pp. 1-10.

2005

* N. F. Treurnicht, C. J. Fourie, and M. M. Blanckenberg, “Development of a Reduced Cognitive Workload Display for Environmentally friendly Fruit Packaging,” in International CIRP Seminar on Life Cycle Engineering, 2005.
* D. Malan and W. Steyn, “Remote Satellite Position & Pose Estimation Estimation using Monocular Vision,” in Small Satellite for Earth Observation 5th International Symposium for IAA, 2005.
* C. Jacobs, C. Bollig, T. Jones, and D. M. J. Esser, “Numerical Simulation of Laser Dynamics for Electronic Feedback Design,” in 50th Annual InProceedings of the South African Institute of Physics, 2005.
* T. Jones, “Experimental Vehicle Flight and Automation at the University of Stellenbosch,” in 1st Annual Workshop on LEDGER University Projects, 2005.
* T. Jones, “Surveillance Platform Control Technology,” in , CSIR/Armscor LEDGER InProceedings, 2005.
* T. Jones, “An Overview of the ESL UAV Programs,” in 2nd Annual Workshop on Maritime Surveillance, 2005.
* T. Jones, G. Milne, and L. Ingham, “Addressing Certification, Research and Development of UAVs,” in Unmanned Vehicles Africa 2005, 2005.

2004

* J. Engelbrecht and W. Steyn, “In-Orbit Identification of Unmodelled Disturbance Torques Acting on a Spacecraft Body,” in IEEE Africon 2004, 2004.
* W. H. Steyn, “Platform Control for Space-Based Imaging: The Topsat Mission,” in The 4S (Small Satellite Systems and Services) Symposium, 2004.
* W. H. Steyn, “A View-finder Control System for an Earth Observation Satellite,” in The 4S (Small Satellite Systems and Services) Symposium, 2004.
* C. Bollig, C. Jacobs, D. Esser, J. P. Burger, and T. J. Nolan M. Rumble Hubertus M. von Bergmann, “Power-Scaling of Diode-End-Pumped Solid-State Lasers,” in 49th Annual InProceedings of the South African Institute of Physics, 2004.
* C. Bollig, C. Jacobs, and T. Jones, “A Simple Laser Rate-Equation Formalism based on Macroscopic Parameters,” in European Physical Society QEOD Europhoton InProceedings, 2004.
* C. Jacobs, C. Bollig, and T. Jones, “Electronic feedback stabilization of diode-pumped solid-state lasers,” in 49th Annual InProceedings of the South African Institute of Physics, 2004.
* T. Jones, “Capabilities within the Electronic Systems Laboratory,” in 1st Annual Workshop on Maritime Surveillance, 2004.

2003

* J. Treurnicht and W. Steyn, “A Robust Attitude Measuring System for Agile Satellites,” in 1st African Control InProceedings AFCON 2003, 2003.
* C. U. VJ Lappas and W. Steyn, “Experimental Testing of a CMG Cluster for Agile Microsatellites,” in 54th International Astronautical Congress of the IAF, 2003.
* T. J. et al., “The Parent and Child Unmanned Aerial Vehicle System,” in AUVSI, 2003.
* T. Jones and S. Park, “The PCUAV System,” in MIT LIDS InProceedings, 2003.

2002

* W. H. Steyn, “Minisatellites for Affordable Space Science,” in 53rd International Astronautical Federation InProceedings, 2002
* D. Dungate and W. Steyn, “Topsat Imaging Mode ADCS Design,” in 5th International ESA InProceedings on Guidance Navigation and Control Systems, 2002.
* S-F. Wu, W. Steyn, P. Palmer, and L. Guilicci, “In-Orbit Calibration of the Cold-Gas Thrusters Onboard UoSAT-12,” in 5th International ESA InProceedings on Guidance Navigation and Control Systems, 2002.
* VJ Lappas WH Steyn and C. Underwood, “Laboratory experiments of a control moment gyroscope cluster for agile small satellites,” in 5th International ESA InProceedings on Guidance Navigation and Control Systems, 2002.
* VJ Lappas WH Steyn and C. Underwood, “Practical Results on the Development of a Control Moment Gyro based Attitude Control System for Agile Small Satellites,” in 16th AIAA/USU Small Satellite InProceedings, 2002.
* B. C. Williams, M. Hofbaur, and T. Jones, “Estimation of Probabilistic Hybrid Systems,” in MIT AIL, 2002.

2001

* VJ Lappas WH Steyn and C. Underwood, “Attitude Control Systems for Agile Small Satellites using Control Moment Gyros,” in International Astronautical Federation InProceedings, 2001.
* VJ Lappas WH Steyn and C. Underwood, “Advanced Micro/Nanosatellite Attitude Control Systems,” in University of Toronto/CASI 1st Workshop on Low-cost Spaceflight, 2001.
* VJ Lappas WH Steyn and C. Underwood, “Control Moment Gyro Gimbal Angle Compensation using Magnetic Control during External Disturbances,” in AIAA Guidance, Navigation, and Control InProceedings, 2001.
* S-F. Wu and W. Steyn, “In-Orbit Modelling and Calibration of the Sun Sensors on UoSAT-12 and Tsinghua-1 Satellites,” in 15th Annual AIAA/USU InProceedings on Small Satellites, Utah State University, 2001.
* W. Steyn and Y. Hashida, “In-Orbit Attitude Performance of the 3-Axis Stabilised SNAP-1 Nanosatellite,” in 15th Annual AIAA/USU InProceedings on Small Satellites, 2001.
* VJ Lappas WH Steyn and C. Underwood, “Advanced Attitude Control Systems for Agile Small Satellites,” in CASI/UTIAS Workshop on Low-Cost Space Systems, 2001.

2000

* X-J Chen WH Steyn and Y. Hashida, “Ground Target Tracking Control of Earth Pointing Satellites,” in AIAA Guidance, Navigation and Control InProceedings, 2000.
* RE Bordany WH Steyn and S. Wu, “In-orbit Estimation of the Inertia Matrix and Thruster Parameters of UoSAT-12,” in 14th Annual AIAA/USU Conf on Small Sats, 2000.
* W. Steyn and Y. Hashida, “An Attitude Control System and Commissioning Results of the SNAP Nanosatellite,” in 14th Annual AIAA/USU InProceedings on Small Satellites, 2000.

1999

* M Aorpimai PL Palmer and W. Steyn, “Dynamic Ground-Track Chasing Constellation Using Atmospheric Drag,” in 4th ESA International InProceedings on Spacacraft Guidance, Navigation and Control Systems, 1999.
* W. Steyn and Y. Hashida, “In-orbit Attitude and Orbit Control Commissioning of UoSAT-12,” in 4th ESA International InProceedings on Spacecraft Guidance, Navigation and Control Systems, 1999.
* G. Milne, A. Schoonwinkel, J. du Plessis, S. Mostert, and W. Steyn, “Sunsat – Launch and First Six Months Orbital Performance,” in 13th Annual AIAA/USU InProceedings on Small Satellites, Utah State University, 1999.
* W. Steyn and Y. Hashida, “An Attitude Control System for a Low-Cost Earth Observation Satellite with Orbit Maintenance Capability”,” in 13th Annual AIAA/USU InProceedings on Small Satellites, 1999.
* X-J. Chen and W. Steyn, “Robust Combined Eigenaxis Slew Manoeuvre,” in AIAA Guidance, Navigation and Control InProceedings, 1999.

1998

* X-J. Chen and W. Steyn, “Optimal Combined Reaction-Wheel Momentum Management for LEO Earth-Pointing Satellites,” in 12th Annual AIAA/USU InProceedings on Small Satellites, 1998.
* F. M. NM Gomes and W. Steyn, “Astrolabe – A Low Cost Autonomous Star Camera,” in 4th International Symposium on Small Satellites Systems and Services, 1998.
* W. H. Steyn, “Attitude Control recovery of the CERISE Microsatellite Following an In-Orbit Collision,” in 21st Annual AAS Guidance and Control InProceedings, 1998.

1997

* W. H. Steyn, “A High Performance Low Cost Star Sensor System for Full Attitude Determination of a Microsatellite,” in Workshop on Control of Small Spacecraft at the 1997 Annual AAS Guidance and Control InProceedings, 1997.
* W. H. Steyn, “Enhanced Low-Cost Attitude Control of Microsatellites,” in MS Hodgart, Y Hashida and WH Steyn, 1997.

1996

* A. Schoonwinkel, G. Milne, S. Mostert, and W. Steyn, “Pre-Flight Performance of SUNSAT, South Africa’s first Remote Sensing and Packet Communications Microsatellite,” in 10th AIAA/USU InProceedings on Small Satellites, 1996.
* D. du Toit, J. du Plessis, and W. Steyn, “Using Atmospheric Drag for Constellation Control of Low Earth Orbit Microsatellites,” in 10th AIAA/USU InProceedings on Small Satellites, 1996.

1995

* V. A. Zyl, J. Enslin, W. Steyn, and R. Spee, “A New Unified Approach to Power Quality Management,” in 26th IEEE Power Electronics Specialists InProceedings (PESC-95), 1995.
* W. Wessels, W. Steyn, and J. Moolman, “Automatic Microirrigation and Salt Injection System for Research and Commercial Applications,” in 5th ASAE International Microirrigation Congress, 1995.

1994

* W. H. Steyn, “Optimal Reaction Wheel Desaturation of a Nadir Pointing Satellite using Magneto-Torquers,” in IEEE/SAIEE Symposium on Small Satellites and Control Systems, University of Stellenbosch, 1994.
* W. H. Steyn, “The Attitude Control Hardware and Algorithms for Fine Pointing of SUNSAT during Imaging,” in 8th AIAA/USU InProceedings on Small Satellites, 1994.

Journal

2016

* JL Foreshaw, et.al. and WH Steyn, “RemoveDebris: An in-orbit active debris removal demonstration mission,” Acta Astronautica, 127 (2016), pp. 448-463, 2016.
* W. H. Steyn and H. W. Jordaan, “An active attitude control system for a drag sail satellite,” Acta Astronautica, 128 (2016), pp. 313-321, 2016.

2014

* J. Lun, R. T. Dobson and W. H. Steyn, “Performance Measurements of a Medium-Current Short-Pulsed Vacuum Arc Thruster,” Experimental Techniques, Society for Experimental Mechanics, Vol.38, Issue 3, pp.6-16, May/June 2014.
* N. Esterhuizen, S. Clusella-Trullas, C. E. van Daalen, R. E. Schoombie, L. Boardman and J. S. Terblanche, “Effects of within-generation thermal history on flight performance of  Ceratitis capitata: Colder is better,” Journal of Experimental Biology, Vol. 217 No. 19, pp. 3545-3556, 2014.

2013

S. C. Kriel, J. A. A. Engelbrecht, and T. Jones, “Receptacle Normal Position Control for Automated Aerial Refuelling,” Aerospace science and technology, 2013.

2012

* M. J. Booysen, “Intelligent Transportation Systems (ITS) in Sub-Saharan Africa,” Dbsa’s e-digest, 2012
* M.J. Booysen S Zeadally and G. -J. van Rooyen, “A Performance Comparison of Media Access Control Protocols for Vehicular Ad-hoc Networks (VANETs),” Iet networks, vol. 1, pp. 10-19, 2012.
* M. J. Booysen, J. S. Gilmore, S. Zeadally, and G. -J. van Rooyen, “Machine-to-machine (M2M) Communications in Vehicular Networks,” Ksii transactions on internet and information systems, vol. 6, pp. 529-546, 2012.
* R. Smit, N. Treurnicht, and M. Blanckenberg, “Table grape punnet packaging: the influence of check-weighing,” South african journal of industrial engineering, vol. 23, pp. 196-208, 2012.
* J. Lun, R. Dobson, and W. Steyn, “Performance Measurements of a Medium-Current Short-Pulsed Vacuum Arc Thruster,” Experimental techniques, pp. 1-11, 2012.

2011

* A. Barnard and C. Nwosa, “COTS Based On-Board-Computer on South Africa’s Sumbandilasat: A Radiation and In-Orbit Performance Analysis,” Radiation effects data workshop (redw), pp. 1-4, 2011.
* M. J. Booysen, S. Zeadally, and G. -J. van Rooyen, “Survey of media access control protocols for vehicular ad hoc networks,” Iet communications, vol. 5, pp. 1619-1631, 2011.
* N. F. Treurnicht, M. M. Blanckenberg, and H. G. van Niekerk, “Using Poka-Yoke methods to improve employment potential of Intellectually disabled workers,” South african journal of industrial engineering, vol. 22, pp. 213-224, 2011.
* I. Z. v Marais, J. du Preez, and W. Steyn, “An optimal image transform for threshold-based cloud detection using heteroscedastic discriminant analysis,” International journal of remote sensing, vol. 32, pp. 1713-1729, 2011.
* A. Maneschijn, T. Jones, and T. von Backstrom, “An operability framework for umanned aircraft systems,” The aeronautical journal, royal aeronautical society, vol. 115, pp. 361-376, 2011.
* W. H. Steyn and V. Lappas, “Cubesat Solar Sail 3-Axis Stabilization using Panel Translation and Magnetic Torquing,” Aerospace science and technology, vol. 15, iss. 6, pp. 476-485, 2011.
* V. Lappas, N. Adeli, L. Visagie, J. Fernandez, T. Theodorou, W. H. Steyn and M. Perren, “CubeSail: A low cost CubeSat based solar sail demonstration mission,” Advances in Space Research Journal, Vol.48, Issue 11, pp. 1890-1901, 2011.

2010

* J. Lun, R. Dobson, and W. Steyn, “Determining Vacuum Arc Thruster Performance using a Cathode Spot Model,” Aiaa journal of propulsion and power, vol. 26, pp. 663-672, 2010.

2009

* C. Jacobs, C. Bollig, T. Jones, S. Kriel, and D. Esser, “Electronic Stabilization of Continuous-Wave and Pulsed Lasers Based on Macroscopic Rate-Equation Modelling,” Ieee journal of quantum electronics, vol. 45, pp. 1221-1231, 2009.
* C. van Daalen and T. Jones, “Fast conflict detection using probability flow,” Elsevier ifac journal: automatica, vol. 45, p. 10, 2009.

2008

* J. Bijker and W. Steyn, “Kalman Filter Configurations for a Low-cost Loosely Integrated Inertial Navigation System on an Airship,” Control engineering practice journal, vol. 16, pp. 1509-1518, 2008.
* I. K. Peddle, T. Jones, and J. Treurnicht, “Practical near hover flight control of a ducted fan (SLADe),” Elsevier ifac journal: control engineering practice, vol. 17, pp. 48-58, 2008.
* S. Mostert, H. Steyn, H. Burger, and H. Bosman, “Sumbandilasat — An operational technology demonstrator,” Acta astronautica, vol. 63, iss. 1, pp. 1273-1282, 2008.
* W. H. Steyn, “A Dual-Wheel Multi-Mode Spacecraft Actuator for Near-Minimum-Time Large Angle Slew Maneuvers,” Aerospace science and technology, vol. 12, iss. 7, pp. 545-554, 2008.
* W. H. Steyn and J. Bijker, “Kalman Filter Configurations for a Low-cost Loosely Integrated Inertial Navigation System on an Airship,” Control engineering practice, vol. 16, iss. 12, pp. 1509-1518, 2008.

2007

* A. Barnard and W. H. Steyn, “Low cost TID testing of COTS components,” Radiation and its effects on components and systems, 2007.
* J. P. de Vos and M. M. Blanckenberg, “Automated Pediatric Cardiac Auscultation,” Ieee transactions on biomedical engineering, vol. 22, pp. 244-252, 2007.
* A. Maneschijn, T. Jones, T. von Backstrom, and L. Ingham, “A proposed reference framework for unmanned aerial vehicle and system airworthiness requirements,” The aeronautical journal, royal aeronautical society, vol. 111, p. 1120, 2007.
* F. Smith and S. Mostert, “Total Ionizing Dose Mitigation by Means of Recongfigurable FPGA Computing,” Ieee transactions on nuclear science, vol. 54, iss. 4, pp. 1343-1349, 2007.
* W. H. Steyn and I. Z. van Marais, “Robust defocus blur identification in the context of blind image quality assessment,” Signal processing-image communication, vol. 22, pp. 833-844, 2007.  [[View]](http://dx.doi.org/10.1016/j.image.2007.06.003)

2006

* T. Jones, “Tractable Conflict Risk Accumulation in Quadratic Space for Autonomous Vehicles,” Aiaa journal of guidance, navigation and control, vol. 21, iss. 1, pp. 39-48, 2006. [[View]](http://dx.doi.org/10.2514/1.10515)
* L. Ingham, T. Jones, and A. Maneschijn, “Considerations for UAV Design and Operation in South African Airspace,” Aeronautical journal, vol. 110, 2006.
* L. Ingham, T. Jones, and A. Maneschijn, “Certification of Unmanned Aerial Vehicles in South African Airspace,” R&d journal, vol. 22, pp. 21-27, 2006.
* W. H. Steyn, “A view finder control system for an earth observation satellite.,” Aerospace science and technology, pp. 248-255, 2006. [[View]](http://dx.doi.org/10.1016/j.ast.2005.11.008)

2005

* V. Lappas, W. Steyn, and C. Underwood, “Design and Testing of a Control Moment Gyroscope Cluster for Small Satellites,” Aiaa journal of spacecraft and rockets, vol. 42, pp. 729-739, 2005.

2004

* V. Lappas, W. Steyn, and C. Underwood, “Experimental testing of a CMG cluster for agile microsatellites,” Journal of the british interplanetary society, vol. 57, pp. 318-324, 2004.
* M. Sweeting, Y. Hashida, N. Bean, M. Hodgart, and H. Steyn, “Cerise microsatellite recovery from first detected collision in low earth orbit,” Acta astronautica, vol. 55, pp. 139-142, 2004.
* S-H. Wu, W. Steyn, and R. Bordany, “In-orbit Thruster Calibration Techniques and Experiment Results with UoSAT-12,” Control engineering practice, vol. 12, pp. 87-98, 2004.

2002

* S-F. Wu and W. Steyn, “Modelling and In-orbit Calibration Practice of a Miniature 2-Axis Analogue Sun Sensor,” Aerospace science and technology journal, elsevier & science direct, vol. 6, pp. 423-433, 2002.
* V. Lappas, W. Steyn, and C. Underwood, “Torque Amplification of Control Moment Gyros,” Electronic letters, vol. 38, pp. 837-839, 2002.
* V. Lappas, W. Steyn, and C. Underwood, “Attitude Control Systems for Small Satellites using Control Moment Gyros,” Acta astronautica, elsevier & sciencedirect, vol. 51, pp. 101-111, 2002.

2001

* J. Li, M. Xu, and W. Steyn, “Attitude Tracking Maneuvers of a Low Earth Orbit Spacecraft,” Qinghua daxue xuebao – journal of tsinghua university, vol. 41, pp. 102-104, 2001.
* V. Lappas, W. Steyn, and C. Underwood, “Control Moment Gyro (CMG) Gimbal Angle Compensation using Magnetic Control during External Disturbances,” Electronic letters, vol. 37, pp. 603-604, 2001.

1999

* X.Chen, W. Steyn, S. Hodgart, and Y. Hashida, “Optimal Combined Reaction-Wheel Momentum Management for Earth-Pointing Satellites,” Aiaa journal of guidance, control, and dynamics, vol. 22, pp. 543-550, 1999.

1998

* Y. Hashida, N. Bean, W. Steyn, and M. Hodgart, “Attitude control recovery of the CERISE microsatellite following an in-orbit collision,” Advances in the astronautical sciences, vol. 98, pp. 655-663, 1998.

1995

* W. Steyn, “Near Minimum-Time Eigenaxis Rotation Maneuvers using Reaction Wheels,” Aiaa journal of guidance, control, and dynamics, vol. 18, pp. 1184-1189, 1995.

1994

* W. Steyn, “Fuzzy Control for a Non-Linear MIMO Plant Subject to Control Constraints,” Ieee transactions on systems, man, and cybernetics, vol. 24, pp. 1565-1571, 1994.
* W. Steyn, “Comparison of Low-Earth Orbiting Satellite Attitude Controllers Submitted to Controllability Constraints,” Aiaa journal of guidance, control, and dynamics, vol. 17, pp. 795-804, 1994.

Books

I. K. Peddle and T. Jones, “Advances in flight Control Systems,” , A. Balint, Ed., Intech, 2011.[[View]](http://www.intechopen.com/books/advances-in-flight-control-systems)