

Venue 1	NMMU North Campus Conference Centre Theatre
Venue 2	New Engineering Building Theatre

DAY 0: 25 NOVEMBER 2015		
17h00	Welcome and Registration Cocktail	Venue 2

DAY 1: 26 NOVEMBER 2015			
TIMES	ITEM	AUTHORS/SPEAKERS	VENUE
07h30 – 08h30	Registration and Coffee		Venue 1
08h30 – 09h00	Opening and Welcome	Prof Andrew Leitch (DVC: Research and Engagement – NMMU)	Venue 1
		Dr Benjamin Rosman (CSIR)	Chair
09h00 – 09h45	Keynote Address	Prof Chris Williams	Venue 1

10h00 – 11h00	<b>Session 1A: Machine Learning</b>		Venue 1
Session Chair: Michael Mitchley	High-level Rapid Prototyping of Graphical Models	Hendrik De Villiers, Lynette Van Zijl and Thomas Niesler	
	Autonomous Prediction of Performance-based Standards for Heavy Vehicles	Robert Berman, Richardt Benade and Benjamin Rosman	
	Semi-supervised Spectral Connectivity Projection Pursuit	David Hofmeyr and Nicos Pavlidis	
10h00 – 11h00	<b>Session 1B: Unmanned Aerial Vehicles</b>		Venue 2
Session Chair: Tracey Booysen	Prototyping during the requirements elicitation process in the development of an underground unmanned aerial system.	Jeremy Green, Annize Marnewick and Jan-Harm Pretorius	
	Review of Standard Rotor Configurations for a Micro Unmanned Aerial System	Angus Steele and Johann Treurnicht	
	Emotional Feedback for Service Robots using Hapto-Acoustic Interface	Christina Pahl and Karthik Mahesh Varadarajan	

11h00 – 11h20	Coffee Break	Session 1A	Venue 1
		Session 1B	Venue 2

11h20 – 13h00	<b>Session 2A: Speech</b>		Venue 1
Session Chair: Febe de Wet	Using generalized maxout networks and phoneme mapping for low resource ASR- a case study on Flemish-Afrikaans	Reza Sahraeian, Dirk Van Compernelle and Febe de Wet	
	Synthetic triphones from trajectory-based feature distributions	Jaco Badenhorst and Marelie Davel	
	Unsupervised acoustic model training: comparing South African English and isiZulu	Neil Kleynhans, Febe de Wet and Etienne Barnard	
	Predicting vowel substitution in code-switched speech	Thipe Modipa and Marelie Davel	
	HMM Adaptation for child speech synthesis using ASR data	Avashna Govender, Bakari Nouhou and Febe de Wet	
11h20 – 13h00	<b>Session 2B: Bio-inspired and Medical</b>		Venue 2
Session Chair: Riaan Stopforth	Design of a Virtual Simulator for Transesophageal Echocardiography Remote Control	Jose Zarate and Christina Pahl	
	Control Considerations of the Low Cost Prosthetic Touch Hand	Drew van der Riet, Riaan Stopforth, Glen Bright and Olaf Diegel	
	Self-Learning of Inverse Kinematics for Feedforward Control of Intracardiac Robotic Ablation Catheters	Ge Bain, Michael Lipowicz and Grant Kruger	
	Arachnid-inspired Kinesthesia for Legged Robots	Nicholas Harvey and Andre Nel	
	Gait adaptation of a six legged walker to enable gripping	Tracy Booysen and Florian Reiner	

13h00 – 13h50	Lunch Break	All sessions: NMMU North Campus Conference Centre Restaurant (Venue 1)	
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13h50 – 15h10	<b>Session 3A: Vision 1</b>		Venue 1
Session Chair: Fred Nicolls	Single-labelled Music Genre Classification Using Content-Based Features	Ritesh Ajoodha, Richard Klein, and Benjamin Rosman	
	Face and Iris biometrics person identification using hybrid fusion at feature and score-level	Valentine Azom, Aderemi Adewumi and Jule-Raymond Tapamo	
	Using a Classifier to Track the Edge of a Conveyor Belt	Ra'Eesah Mangera, Garry Morrison and Anthon Voigt	
	Contrasting Classifiers for Software-based OMR Responses	Bertram Haskins	
13h50 – 15h10	<b>Session 3B: Manufacturing</b>		Venue 2
Session Chair: Igor Goriach	Integration of an Electrical Discharge Machining Module onto a Reconfigurable Machine Tool	Bryndan Roberts, Igor Goriach and Theo van Niekerk	
	Validating a Reconfigurable Assembly System Utilizing Virtual Commissioning	HJ Vermaak and JA Niemann	
	Rapid Prototyping of Small Wind Turbine Blades Using Additive Manufacturing	Sean Poole and Russell Phillips	
	An Intelligent Locator Inventory to Accommodate Mass Customization in an Automated Flexible Fixture System	Andrew Illidge, Anthony Walker and Glen Bright	

15h10 – 15h30	Coffee Break	Session 3A	Venue 1
		Session 3B	Venue 2
15h30 – 16h30	Poster and Demo Session		Venue 1: Room 2
18h30 for 19h00	GALA DINNER	"WERK_", Baakens Valley, Alabaster Street, South End, Port Elizabeth, South Africa -33.968118, 25.620633	

DAY 2 – 27 NOVEMBER 2015			
TIMES	ITEM	AUTHORS/SPEAKERS	VENUE
07h45 – 08h15	Registration and Coffee		Venue 1

08h15 – 09h00	Keynote Address: Prof Jan Peters		Venue 1
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09h20 – 11h00 Session 4A: NLP & TTS			
Session Chair: Neil Kleynhans	Topic models for conference session assignment: Organising PRASA 2014(5)	Michael Burke and Deon Sabatta	Venue 1
	Extracting South African safety and security incident patterns from social media	Vukosi Marivate	
	Introducing XGL - a lexicalised probabilistic graphical lemmatiser for isiXhosa	Lulamile Mzamo, Albert Helberg and Sonja Bosch	
	A straightforward method for calculating the voicing cut-off frequency for streaming HNM TTS	JA Louw	
	Text-based Language Identification of Multilingual Names	Oluwapelumi Giwa and Marelle Davel	
09h20 – 11h00 Session 4B: Navigation and Vehicles			
Session Chair: Nicol Naidoo	A Local Planner for Ackermann-Driven Vehicles in ROS SBPL	Nicolas Limpert, Stefan Schiffer and Alexander Ferrein	Venue 2
	Navigation and locomotion of a low-cost Automated Guided Cart	Gareth Cawood and Igor Gorlach	
	Switching Cascade Controllers Combined with a Feedforward Regulation for an Aggregate Actuator in Automotive Applications	Paolo Mercorelli, Nils Werner, Theo van Niekerk, Leander Behre and Udo Becker	
	Off-Road Vehicle Active Suspension Using Fluidic Muscle. Phase One – Design and Characterisation	Trevor Stroud, Schalk Els and Hannalie Lombard	
	Optimizing Search and Rescue Missions through a Cooperative Mobile Robot Network	Nicol Naidoo, Glen Bright and Riaan Stopforth, ZF Zelasco, J. Donayo	

11h00 – 11h20	Coffee Break	Session 4A	Venue 1
		Session 4B	Venue 2

11h20 – 13h00 Session 5A: Vision 2			
Session Chair: Aderemi Adewumi	Using the Earth Mover's Distance for Perceptually Meaningful Visual Saliency	Logan Dunbar and Fred Nicolls	Venue 1
	A study on the effect of different image centres on stereo triangulation accuracy	Jason de Villiers, Robert Jermy and Fred Nicolls	
	The effectiveness of combining the likelihood maps of different filters in improving detection of calcification objects	Keith Chikamai, Serestina Viriri and Jules-Raymond Tapamo	
	Normal Distribution Transform Graph-based Point Cloud Segmentation	William Robert Green and Hans Grobler	
	Creating a distortion characterisation dataset for visual band cameras using fiducial markers.	Robert Jermy and Jason de Villiers	
11h20 – 13h00 Session 5B: Education, Electronics and Control			
Session Chair: Jeremy Green	Developing a Java based RFID application to automate student attendance monitoring	Rangith Kuriakose and Herman Vermaak	Venue 2
	BEETLE - A Modular Electronics Family for Robotics	John Dickens and Hein Swart	
	Development of an educational tool to teach primary school pupils multiplication tables	Suzanne Smith, Angus Steele, Johan Du Toit and Mariette Conning	
	Modelling of Boiler Fireside Control in Flownex Software Environment	Andre Kellerman and Igor Gorlach	
	Sliding Mode Control for Electromagnetic Levitation System Based on Feedback Linearization	Muhammad Aamir Akram, Ijlal Haider, Vali Uddin and Habib-Ur-Rehman Khalid	

13h00 – 13h50	Lunch Break		Venue 1
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14h00 – 15h00	Annual General Meeting and Closing		Venue 1
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