

UMICTA 2014 Programme

[UMICTA 2014 \(http://mtn.sun.ac.za/conference2014/\)](http://mtn.sun.ac.za/conference2014/)

Programme (issued 24/11/2014)

[Taking place at STIAS \(-33.935208, 18.874021\)](#)

			Wed 10 December (Intelligent transport)
07:30	Coffee		Coffee
08:00	Welcome (Organisers and Christoff Pauw)		Welcome (Organisers)
08:30	Keynote (Thomas Magedanz - FOKUS, Germany)		Keynote (Bart van Arem - TU Delft, Netherlands)
09:00	Academic:		Academic: Intelligent Transport systems
09:30	Human and crop disease management		
10:00			
10:30	Coffee		Coffee
11:00	Academic:		Academic: Intelligent Transport systems
11:30	Home automation and smart metering and M2M		
12:00			
12:30	Lunch		Lunch
13:00			
13:30	Keynote (Eben Albertyn - MTN)		Keynote by (Arnold van Zyl - Chemnitz, Germany)
14:00	Industry open session - challenges and needs MTN, Trintel, Eskom		Industry open session - challenges and needs
14:30			(MiX Telematics, TomTom, ITS-SA, iSAHA, WC DoT,
15:10	Presentation JA Quinn: UN telecoms data analysis		Radarvision, Discovery - TBC)
15:30	Coffee		Coffee
16:00	Academic: Machine learning, e-health and gaming		Academic: ITS poster session (not peer-reviewed):
16:30			Four final year projects.

18:30 [Social function at Longridge Wine Estate \(-34.017024, 18.832990\)](#)

Detailed programme on next page

M2M, smart metering, disease management, machine learning, and gaming - 9 December 2014

From	To	Authors	Title	Page
09:00	09:20	Godliver Owomugisha, John A Quinn and Ernest Mwebaze	Automated Vision-Based Diagnosis of Banana Bacterial Wilt Disease and Black Sig-atoka Disease	1
09:20	09:40	Joviah Tuhaise, John A Quinn and Ernest Mwebaze	Pixel Based Classification Methods in Cassava Brown Streak Disease (CBSD) for Automatic Symptom Measurement	6
09:40	10:00	Haji Ali, Hussein Suleman and Ulrike Rivett	Developing Mobile Graphic Reminders for Reinforcing Compliance in Tuberculosis Treatment in Africa: User Evaluations	11
10:00	10:20	Martin Mubangizi, Ricardo Andrade-Pacheco, Micheal Smith, John A Quinn and Neil Lawrence	Malaria surveillance with multiple data sources using Gaussian process models	16
11:00	11:20	Douw Du Plessis and Peter Jan Randewijk	Smart Home Energy - Management System for Demand Side Management	21
11:20	11:40	Guy Sawyer and Marthinus Booysen	Presentation of a Home Automation Solution with Seamless Integration and Vast Expansion Potential	28
11:40	12:00	Ronald Steinke, Asma Elmangosh, Thomas Magedanz, Joyce Mwangama, Neco Ventura and Andreea Ancuta Corici	An OpenMTC platform based interconnected European – South African M2M Test-bed for Smart City Services	35
12:00	12:20	Philip J C Nel, Marthinus Booysen and Brink van der Merwe	ICT-enabled solutions for smart management of water supply in Africa	40
16:00	16:20	Harry Mafukidze and Riaan Wolhuter	Design and Development of a Satellite Based Water Resources Monitoring System	45
16:20	16:40	Dirk Brand and Brink van der Merwe	Comment Classification in a South African Language Domain	50
16:40	17:00	Maurich van Greunen and Herman Engelbrecht	A comparison of Quad-tree and Voronoi-based spatial partitioning for dynamic load balancing	57

Intelligent Transport Systems - 10 December 2014

From	To	Authors	Title	Page
09:00	09:20	Dominique Ter Huurne and Johann Andersen	A Quantitative Measure of Congestion in Stellenbosch using Probe Data	62
09:20	09:40	Rose Nakibuule and John Quinn	Evaluation of low cost vision-based Traffic flow monitoring in crowded cities	68
09:40	10:00	Innocent Ndiabaya and Marthinus Booysen	Modelling of inter-stop minibus taxi movements: Using machine learning and network theory	74
10:00	10:20	Nelson Ebot Eno Akpa, Marthinus Booysen and Marion Sinclair	The impact of average speed over distance (ASOD) systems on speeding patterns along the R61	78
11:00	11:20	Marianne Vanderschuren and Nothando Khumalo	Visibility improvement through Information Provision regarding Sun Glare: A Case Study in Cape Town	83
11:20	11:40	Jarrett Engelbrecht, Marthinus Booysen and Gert-Jan van Rooyen	Recognition of driving manoeuvres using smartphone-based inertial and GPS measurement	88
11:40	12:00	Cornelius T. Le Roux and Jacobus Engelbrecht	Automated Landing of an Intelligent Unmanned Aerial Vehicle in Crosswind Conditions using Total Energy Control	93
12:00	12:20	Claudia Struwig and Johann Andersen	Performance Measurement Trends in the implementation of Intelligent Transport Systems (ITS) within the South African (Public) Transportation Environment	98