

**Programme of the South African IEEE Joint AP/MTT/EMC Chapter Conference 2016, July 28–29, Stias
Conference Centre, Stellenbosch, South Africa**

Time	Activity	Chair / Presenter	Title
28-Jul	Day 1 of 2		
07:45	Registration + Coffee		
08:45	Opening	Tinus Stander , University of Pretoria	Opening by South African IEEE Joint AP/MTT/EMC Chapter Chairman
08:55	Opening	Matthys M. Botha , Stellenbosch University	Welcome message from the Conference Chair
09:00	Plenary	Karl Warnick , Brigham Young University, UT, USA	Ultra-high efficiency phased arrays for astronomy, remote sensing, and satellite communications
09:30	Session	Robert Lehmensiek	The Square Kilometre Array project
09:30	Presentation	David B. Davidson , Stellenbosch University	The Square Kilometre Array – Phase 1 and beyond
09:50	Presentation	Robert Lehmensiek , Isak Theron, EMSS Antennas	Optimising the SKA-mid optics performance
10:10	Presentation	Robert P. Millenaar , Carel van der Merwe, SKA SA	The SKA and interference: Preserving pristine conditions for science
10:30	Coffee		
11:10	Session	J. Pieter Jacobs	Computational electromagnetics and modeling
11:10	Presentation	Matthys M. Botha , Dao P. Xiang, Stellenbosch University	Developments in mesh-based physical optics for scattering analysis
11:30	Presentation	Johann van Tonder , Ulrich Jakobus, Altair Development SA	The Multilevel Fast Multipole Method in the commercial code FEKO
11:50	Presentation	J. Pieter Jacobs , University of Pretoria and Dirk I.L. de Villiers, Stellenbosch University	Covariance function construction for Gaussian process modeling of antenna radiation properties
12:10	Sponsor slot	Cornell van Niekerk , GEW Technologies	An introduction to GEW Technologies system solutions
12:25	Lunch		
14:00	Session	Christopher A. W. Vale	Antennas
14:00	Presentation	Johan du Toit , Bennie Jacobs, Saab Grintek Defence	Sinusoidal antennas for modern EW systems
14:20	Presentation	Dirk I.L. de Villiers , Ngoy Mutonkole, Stellenbosch University	Modelling of antenna radiation patterns
14:40	Presentation	Christopher A. W. Vale , Alaris Antennas	Wide band dual polarised patch topology with high port-to-port isolation and its implementation in an easily manufacturable planar array
15:00	Presentation	C.A. Nel , D.A. Botes, H. Coetzee, GEW Technologies	Challenges in the development of wideband DF antenna elements
15:20	Sponsor slot	Ulrich Jakobus , Altair Engineering S.A.	Future vision of electromagnetic simulation at Altair
15:35	Coffee		
16:10	Session	Riana H. Geschke	Microwave and millimeter wave devices
16:10	Presentation	Neil Kruger , Eddie C. Grobelaar, Pieter Rossouw, Iedrus Jacobs, Denel Dynamics	GNSS antenna design for harsh environments
16:30	Presentation	Petrie Meyer , Elmine Botes, Shamim Nassar, Satyam Sharma, Stellenbosch University	Multilayer and tunable microwave filters
16:50	Presentation	Riana H. Geschke , University of Cape Town	V-band calibration and measurement for planar circuits
17:10	Presentation	Tinus Stander , University of Pretoria	Challenges in mm-wave microelectronics and packaging for 5G and space
17:30	Banquet		A reception starts at 17:30 at the manor house, please join in immediately or during 17:30–18:30; dinner follows later.

29-Jul	Day 2 of 2		
08:30	Session	Johann W. Odendaal	Microwave and millimeter wave systems and measurements
08:30	Presentation	Louis Botha , Kevin Kloke, Johan Smit, Celma Kitching, CSIR	Recent antenna and microwave systems designed at CSIR, DPSS for radar systems
08:50	Presentation	Ciara Pienaar, Monique Pienaar, Johann W. Odendaal , Johan Joubert, University of Pretoria	RCS measurements and simulations
09:10	Presentation	Gordon Mayhew-Ridgers , Paul A. van Jaarsveld, Vodacom	Considerations for cylindrical near-field measurements on cellular base-station antennas
09:30	Presentation	Marnus J. van Wyk , Frans J.C. Meyer, EMSS Consulting	Dosimetry work in South Africa over the past 25 years
09:50	Sponsor slot	Arnab Bhattacharya , Computer Simulation Technology	System-level antenna simulation
10:05	Coffee		
10:40	Plenary	Peter de Maagt , European Space Agency, the Netherlands	Manufacturing and testing antennas and quasi-optics for space terahertz instrumentation
11:10	Session	D. W. O'Hagan	Radar systems
11:10	Presentation	W. Steyn , Reutech Radar Systems	Development of a bullet-proof radome for an X-band radar
11:30	Presentation	D. W. O'Hagan , University of Cape Town	Overview of passive radar
11:50	Presentation	Nolan van Heerden , Garmin Southern Africa	Taking RADAR to the consumer market
12:10	Presentation	Johan Colyn , Henri Johnson, Flightscope	Radar vs. camera technology in sport
12:30	Sponsor slot	Darren Nicholls , Concilium Technologies (Pty) Ltd	The evolution of test and measurement tools in aerospace and defence research
12:45	Lunch		
14:20	Session	Arnold De Beer	Electromagnetic compatibility and interference
14:20	Presentation	Arnold De Beer , University of Johannesburg	On differential to common mode conversion in electrical circuits
14:40	Presentation	P. Gideon Wiid , Stanley O. Kuja, Temwani J. Phiri, M. de Beer, Joely A. Andriambeloson, Stellenbosch University	MeerKAT telescope coupling investigations
15:00	Presentation	Paul S. van der Merwe , Braam Otto, MESA Solutions	EMC complexities of renewable energy and the Square Kilometre Array
15:20	Presentation	Robert R. van Zyl, Robert Lehmensiek, Susan Maas , Cape Peninsula University of Technology, Samuel Booyesen, Etse Electronics	Microwave and EMC research activities in the CPUT nano-satellite programme
15:40	Coffee		
16:10	Session	Thomas J. Afullo	Propagation, field theory and spectrum management
16:10	Presentation	Thomas J. Afullo , University of KwaZulu-Natal	Current status of radio-climatological modelling in Southern Africa
16:30	Presentation	Alireza Baghai-Wadji , University of Cape Town	Near-fields: Gems shrouded in infinities
16:50	Presentation	Albert A. Lysko , CSIR	CSIR work in television white spaces (TVWS) and dynamic spectrum and a bit on antennas
17:10	Closing	Matthys M. Botha , Stellenbosch University	
17:15	End		