

WARS 2010

Workshop on Applications of Radio Science
An initiative of the National Committee for Radio Science

WARS 2010

11-12 February 2010
The Shine Dome
Canberra

PROGRAM

Thursday 11 February 2010

Time	Location	Activity
11.30 am – 12.30 pm	Shine Dome Foyer	Registration Coffee and tea will be available on arrival (in Jaeger Room)
12.30 – 1.50 pm	Jaeger Room	Networking Lunch
1.50 – 2.15 pm	Ian Wark Theatre	Welcome and Conference Opening Professor Andrew Parfitt, Chair, National Committee for Radio Science
2.15 – 3.15 pm		1st Keynote Speaker Dr David Skellern, Chief Executive Officer, NICTA
3.15 – 3.30 pm	Jaeger Room	Afternoon tea/coffee break
3.30 – 5.15 pm		1st Poster Session Posters allocated to this session – information provided alphabetically by Presenting Author, Authors, Poster Title , Affiliation: Sayed Ali Albahrani, Sayed Ali Albahrani, Anthony Edward Parker <u>Characterization of Surface and Bulk traps in GaN HEMTs</u> Department of Physics and Engineering, Macquarie University
		King Yuk (Eric) Chan, King Yuk Chan, Rodica Ramer <u>The enabling technology for the next generation wireless communications: RF MEMS</u> School of Electrical Engineering and Telecommunications, UNSW
		Robert Scott Gardiner-Garden, Robert Scott Gardiner-Garden <u>Observing and modelling ionospheric variability over northern and western Australia</u> Defence, Science and Technology Organisation
		Richard M Hawkes, Richard M Hawkes <u>The reciprocity principle and the parabolic equation model</u> Defence, Science and Technology Organisation, Electronic Warfare and Radar Division
		K. Jeganathan, K. Jeganathan, R. Gough, S. Mackay, M. Brothers, R. Chekkala <u>Superheterodyne Receiver System for the Australian SKA Pathfinder</u> CSIRO Australia Telescope National Facility
	Ghaffer Kiani, Ghaffer I. Kiani, Trevor S. Bird <u>ASK Modulator based on Switchable FSS for the THz Applications</u> CSIRO ICT Centre	

		<p>Jean-Michel Le Floch, <i>Jean-Michel Le Floch, Georges Humbert, David Mouneyrac, Denis Ferachou, Gemma Hamilton, Michel Aubourg, Michael E. Tobar, John Hartnett, Dominique Cros, Jean-Marc Blondy, Jerzy Krupka</i> <u>From micro to millimetre waves low phase noise and filtering devices design</u> School of Physics, University of Western Australia, XLIM, UMR CNRS Universite de Limoges, France, Institute of Microelectronics and Optoelectronics, Warsaw University of Technology, Poland</p> <p>Yue Li, <i>Yue Li, Dan Popescu and Andrew Hellicar</i> <u>De-convolution of reflection terahertz images</u> CSIRO ICT Centre</p> <p>Jacky Liu, <i>Jianjun Liu, Karu Esselle, Shunshi Zhong</i> <u>An Ultra-Wideband Antenna on Liquid Crystal Polymer Substrate, with A Band-Notched Response</u> Centre for Microwave and Wireless Applications, Electronic Engineering, Macquarie University; School of Communication and Information Engineering, Shanghai University</p> <p>David J Netherway, <i>David J Netherway</i> <u>Comparison of Power Measurements on Oblique Incidence Paths with Power Derived from an Ionospheric model</u> Defence Science and Technology Organisation</p> <p>Mikael Persson, <i>Mikael Persson, Markus Johansson and Hoi-Shun Lui</i> <u>Modeling Complex Sources Using Measured Phaseless Near-Field Data</u> Chalmers University of Technology, Sweden</p> <p>Md Masud Rana, <i>Md. Masud Rana and Ananda S. Mohan</i> <u>Propagation Modelling in Complex Tunnel environments using FDTD Method</u> Faculty of Engineering & Information Technology, University of Technology Sydney</p> <p>Oya Sevimli, <i>Oya Sevimli, Anthony E. Parker, Anthony P. Fattorini, James T. Harvey, and Simon J. Mahon</i> <u>Transistor Low Frequency Noise Modelling for Oscillator Phase Noise Simulation</u> Macquarie University, Mimix Broadband</p> <p>M.M. Sharma, <i>M.M. Sharma, Y. Ranga, and R.P. Yadav</i> <u>A compact wide band ellipse shape patch antenna for wide band applications</u> Department of ECE, Malaviya National Institute of Technology, Jaipur, India</p> <p>Darshan Thakkar, <i>D. Campbell-Wilson, D. Thakkar, L de Souza, A. Blake, M. Kesteven, J. Bunton, R. Hunstead, A. Green</i> <u>SKAMP: re-engineering the Molonglo radio telescope</u> School of Physics, Uni of Sydney; Australian Telescope National Facility, CSIRO, Information and Communication Technologies Centre, CSIRO</p>
5.15 – 6.15 pm	Jaeger Room and outdoor area, Shine Dome	Networking drinks
7.00 pm	The Common Room, Australian National University	WARS 2010 Dinner

Friday 12 February 2010		
Time	Location	Activity
8.30 – 8.50 am	Jaeger Room	Arrival – coffee and tea available
8.50 – 9.00 am	Ian Wark Theatre	Welcome to Day 2 Professor Andrew Parfitt, Chair, National Committee for Radio Science
9.00 – 10.00 am		2nd Keynote Speaker Dr Brian Boyle, CSIRO SKA Director
10.15 – 10.30 am	Jaeger Room	Morning Tea/Coffee break
10.30 am – 12.15 pm		2nd Poster Session Posters allocated to this session – information provided alphabetically by Presenting Author, Authors, Poster Title , Affiliation:
		Gerard Borg, G.G. Borg <u>A Novel, Distributed MIMO Based Wireless Network Architecture with Scalable Net Capacity and Improved Range and Coverage</u> Australian National University
		Christophe Granet, C. Granet, I.M. Davis, J.S. Kot, G. Pope, K.Verran, T. Mellor <u>Dual-band Feed-system Research and Development at BAE Systems Australia</u> BAE Systems Australia Ltd
		Venkata Gutta, Venkata Gutta, Anthony Fattorini and Anthony E. Parker <u>Analysis of Diode Mismatch in Anti-Parallel-Diode-Pair Circuits used for Millimeter-wave Frequency Conversion</u> Department of Physics and Engineering, Macquarie University
		Douglas Hayman, Douglas B. Hayman, Trevor S Bird, Karu P. Esselle, and Peter J. Hall <u>Focal plane array evaluation on a prototype radiotelescope</u> CSIRO ATNF, CSIRO ICT Centre, Dept Electronic Engineering, Macquarie University, Dept Electrical and Computer Engineering, Curtin University of Technology
		Andrew Hellicar, Andrew Hellicar, Stephen Hanham, Dan Popescu, Yue Li <u>Terahertz Radar</u> CSIRO ICT Centre
		Suzy Jackson, S.A. Jackson, Y. Moghe, R.G. Gough, and C.A. Jackson <u>Highly integrated Silicon on Sapphire receiver for next-generation radio telescopes</u> CSIRO Astronomy and Space Science, Sapphicon Semiconductor
		Rebecca McFadden, R. McFadden, R. Ekers <u>A New Method to Calibrate Ionospheric Pulse Dispersion using Polarised Emission from the Moon</u> University of Melbourne, CSIRO Australia Telescope National Facility
		Dave Neudegg, D. Neudegg, M. Layoun, S.T. Hutchinson <u>Short period variations in available HF radio frequencies due to atmospheric effects on the ionosphere</u> Ionospheric Prediction Service, Bureau of Meteorology
	Yogesh Ranga, Y. Ranga, Karu P. Esselle and A.R. Weily <u>Gain Enhancement Techniques for UWB Antennas</u> Centre of Wireless and Microwave Applications, Macquarie University; CSIRO ICT Centre	

		<p>Galyna Safonova, <i>Galyna Safonova, Elena Vinogradova</i> <u>Transmission line of arbitrary cross-section: rigorous approach</u> Department of Mathematics, Macquarie University</p>
		<p>Anton Shafalyuk, <i>Anton Shafalyuk, Elena Vinogradova</i> <u>Potential problem for two surfaces of revolution of arbitrary profile</u> Macquarie University</p>
		<p>Olena Shafalyuk, <i>Olena Shafalyuk, Paul Smith</i> <u>Rigorous simulation of resonant wave scattering by axially-symmetrical open structures</u> Macquarie University</p>
		<p>Jabra Tarazi, <i>Jabra Tarazi, Anthony E. Parker, Peter Vun and Simon J. Mahon</i> <u>Statistical Analysis of DC and Small Signal-model Parameters in GaAs HEMT</u> Department of Physics and Electronics, Macquarie University and Mimix Broadband</p>
		<p>Phil Wilkinson, <i>Phil Wilkinson</i> <u>What will solar cycle 24 be like?</u> IPS Radio and Space Services, Bureau of Meteorology</p>
12.15 – 1.15 pm	Jaeger Room	Lunch
1.15 pm – 2.00 pm	Ian Wark Theatre	<p>3rd Keynote Speaker – 2010 Young Radio Scientist Dr Jean-Michel Le Floch, University of Western Australia</p>
2.00 – 3.30 pm	Jaeger Room	<p>3rd Poster Session Tea and coffee will be available during this session</p> <p>Posters allocated to this session – information provided alphabetically by Presenting Author, <i>Authors</i>, Poster Title, Affiliation:</p> <p>Mark Bowen, <i>M. Bowen, P. Doherty, A. Dunning, H. Kanoniuk, G. Moorey, L. Reilly, P. Sykes</i> <u>A Cryogenically Cooled 16-26GHz Receiver System for the Parkes Radio Telescope</u> Australian Telescope National Facility, CSIRO Astronomy and Space Science</p> <p>Iver Cairns, <i>Iver Cairns and the Steering Committee for the Decadal Plan</i> <u>Academy of Science endorses the Decadal Plan for Australian Space Science</u> University of Sydney</p> <p>Shital Desai, <i>Shital Desai, Dr Graham Brooker</i> <u>Multi-dimensional radar networks for urban terrain imaging</u> Australian Centre for Field Robotics, University of Sydney</p> <p>Christophe Granet, <i>S.G. Hay, C. Granet, J.S. Kot, D. DeBoer</i> <u>On the Use of Phased-Array Feeds at the Prime-Focus of offset Dual-Reflector Antennas for the SKA</u> CSIRO ICT Centre, BAE Systems Australia Ltd., CSIRO Australia Telescope National Facility</p> <p>Stephen Hanham, <i>Stephen Hanham, Trevor Bird, Andrew Hellicar and Robert Minasian</i> <u>Optimised Dielectric Rod Antennas</u> University of Sydney and CSIRO ICT Centre</p>

		<p>Murray Parkinson, V.V. Kumar, M.L. Parkinson, P.L. Dyson, S. Prendergast, G.B. Burns <u>On the Effects of Postive and Negative Cloud to Ground nad Intra-Cloud Lightning on the F-region Ionosphere</u> Department of Physics, LaTrobe University, Bureau of Meteorology IPS, Kattron Lightning Detection Network, Australian Antarctic Division</p>
		<p>Nasiha Nikolic, Nasiha Nikolic, Graeme James, Kieran Greene, Andrew Weily, Steve Barker and Y. Jay Guo. <u>Low Profile Lens Antenna for SOTM Application</u> CSIRO ICT Centre</p>
		<p>Stevan Preradovic, Stevan Preradovic and Nemai Karmakar <u>Chipless RFID Tag for Banknote Tagging Applications</u> Monash University</p>
		<p>Mikael Persson, Mikael Persson, Andreas Fhager, Hana Dobsicek Trefná, Xuezhong Zeng <u>Broadband microwave based diagnostics and treatment</u> Chalmers University of Technology, Sweden</p>
		<p>Reuben Shar, Reuben Shar, Paul Axon <u>Near and Far Field HF antenna modelling for Naval applications</u> Thales Australia</p>
		<p>Paul Smith, Paul D. Smith, <u>Wideband responses of highly resonant scatterers: regularisation methods</u> Macquarie University</p>
		<p>Elena Vinogradova, E.D. Vinogradova, A.V. Brovenko, P.N. Melejik, A.E. Poedinchuk, A.S. Troshilo <u>Resonant Response of Strip Grating on Ferromagnetic Half-Space</u> Department of Mathematics, Macquarie University, Radiophysics & Electronics Institute of National Academy of Science, Ukraine</p>
3.30 - 4.00 pm	Ian Wark Theatre	<p>WARS 2010 Conclusion and Prize Presentation Professor Andrew Parfitt, Chair, National Committee for Radio Science</p>
4.00 pm approx		Close