Progress in Radar Research (PIRR) 2014
University of Adelaide

Day 1, Wednesday 24th September, 2014

0830 Registration and coffee
0900 Opening Announcements – Bevan Bates, Workshop Chair and Manager
0910 Opening Address – Prof. Robert Saint, Pro Vice-Chancellor (Research Strategy), University of Adelaide
0930 Keynote paper 1 - Greg Hellbourg, “Spatial interference mitigation for radio astronomy”

SESSION 1 – Radar Measurements 1 Chair: Robert Young
0955 David Johnson, “Ground-slope parameter estimation using a 2-D mmw scanning radar”
1020 Deane Prescott, “The implications of aspect on ground to air RCS measurements”
1045 BREAK (30 mins)

SESSION 2 – Weather Radar Chair: Stuart Anderson
1115 Bronwyn Dolman, Iain Reid, Tom Kane and Alison Cook, “The Australian wind profiler network”
1140 Waddah A. Al-Ashwal, Marian Viola and Douglas Gray, “Development of an experimental X-band weather radar”
1205 Si Tran Nguyen Nguyen, Doug Gray and Peter May, “A time-domain estimation based approach for clutter mitigation for weather radar”
1230 LUNCH (1 hour)

SESSION 3 – Radar System Developments Chair: Linda Davis
1330 James Palmer, “Progress and research directions of DSTO's Passive Radar research programme”
1355 Robert Young, “Initial results from the DSTO experimental phased array radar” (TBC)
1420 SESSION 4 - Poster presenters’ summaries – Part 1 Chair: Doug Gray
25 mins for 7 posters – 3 minutes/1 slide each
1445 BREAK AND SESSION 5 - POSTER PAPERS (60 minutes)

SESSION 6 – Imaging Radar Chair: Garry Newsam
1545 David Ear, “Performance assessment of DSTO's Radarsat SAR ship detection system implemented in the ADSS”
1610 Yunhan Dong, “Using a MIMO radar system to improve cross-range resolution and measure both Speed and Direction of Moving Targets”
1635 David Crisp, “Coastline extraction from SAR imagery for ship detection purposes”
1700 CONCLUDE DAY 1 – COCKTAIL RECEPTION
Day 2, Thursday 25th September, 2014

0830 Coffee


**SESSION 7 – RADAR SIGNAL PROCESSING   CHAIR: MARK PREISS**

0925 P. Pincus, D.A. Gray and M. Preiss, “3D SAR beamforming: Potential collection strategies and associated processing techniques”

0950 Ruiting Yang, Douglas Gray, and Waddah Al-Ashwal, “Beam Space Algorithm for Scanning Transmit/Receive Phased Array Radars”

1015 Stephen Searle, James Palmer, and Linda Davis, “The potential for passive bistatic radar with a single omnidirectional receiver”

1040 **BREAK (30 mins)**

**SESSION 8 – HF Radar Applications    Chair: James Palmer**

1110 G. J. Frazer and C. G. Williams, “A regular over-dense sparse receiving array for OTH radar”

1135 David Holdsworth, Michael Turley, Andrew Heitmann and Robert Gardiner-Garden, “Wide-area land-sea mapping using high-frequency sky-wave radar”

1200 Lucy Wyatt, “Recent results from ACORN”

1225 Stuart Anderson, “HF radar observables in the marine environment”

1250 **LUNCH (1 hour)**

**SESSION 9 – Radar Measurements 2   Chair: Waddah Al-Ashwal**

1350 V.A. Drake, “ENRAM, and an unexpected asymmetry in D-POL observations of insect echo”

1415 Greg Hislop, “Ground permittivity measurement using coupling of commercial ground penetrating radars”

1440 **SESSION 10 - Poster presenters’ summaries – Part 2   Chair: Doug Gray**

20 mins for 6 posters – 3 mins/1 slide each

1500 **BREAK AND SESSION 11 - POSTER PAPERS (45 minutes)**

**SESSION 12 – Antennas and Interference   Chair: Leigh Powis**

1545 R. Shar, I. Rawlings, M. McKellar, and C. Chen, “Simulation of interference between co-sited radar systems”

1610 Giuseppina (Pina) Dall’Armi-Stoks, “An estimation of the mutual antenna coupling of flush-mounted phased array antennas on an electrically large structure in the near-field (or Fresnel) region”

1635 Kin Shing Bobby Yau, “Development of a planar multi-layer passive retrodirective Van Atta array reflector at X-band”

1700 **CONCLUDE WORKSHOP**
Poster presentations – Part 1

Day 1, Wednesday 24th September
Summaries from 1420, Poster session from 1445-1545

G.N. Newsam, “A comparison of the information provided by range data with that provided by bearing data with application to surveillance of space”

Tri-Tan Van Cao, “Weibull mixture identification using gradient search”

Si Tran Nguyen Nguyen, Doug Gray and Mark Preiss, “Investigation on the effects of deviations from the aircraft’s nominal flight track and its angles of rotation on SAR image processing for PLIS operations”

Krishna Venkataraman, “Radar detection of biological targets - An overview”

Graham Brooker, “Ultra low radar cross section doppler calibration target for the indoor RASS”

Chow Yii Pui, Matthew Trinkle, and Brian Ng, “Progress in passive bistatic radar using GPS as the illuminator of opportunity”

Simon Palumbo, “An Overview of Recent RF Hardware Changes in DSTO’s Passive Radar Test-Bed”

Poster presentations – Part 2

Day 2, Thursday 25th September
Summaries from 1440, poster session from 1500-1545

Steve J. Salamon, Hedley J. Hansen, and Derek Abbott, “Generalising the transform space filtered parabolic equation method”

Lenard Pederick and Manuel Cervera, “The SPINE directional noise model”

H.J. Hansen, A.S. Kulessa, Manik Atygalle, Warren Marwood, and G. Knight, “Results from the TAPS2013 (Tropical Atmospheric Propagation Studies) multi channel millimetric wave propagation experiment”

Riley Bruce-Doust, George Stamatescu and Lang White, “Discrete state target tracking models incorporating destination-awareness”

Daniel Gregory and Robert Young, “Integration of radar software and simulator”

Ben Jamali, “Impedance analysis of pin-fed microstrip patch antenna”