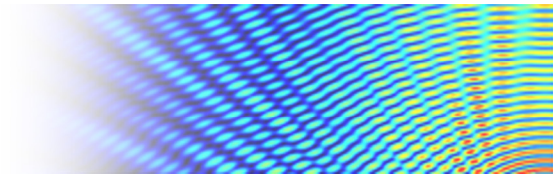


AMS2018 – Program at a Glance

Conference Location:
Advanced Engineering Building (AEB), Level 3
The University of Queensland, St Lucia

Tuesday 6 February 2018		
9:00 am	**Registration** Registration location: AEB, Level 3, foyer	
10:00 am	**Opening Session** Room: AEB, L3, room 200	
10:20 am	● **T1A: Flexible and Conformal Antennas** Room: 313-A	● **T1B: Resonators and Filters** Room: 301
12:00 pm	**Lunch** Location: foyer	
1:30 pm	**Poster Session 1 & Exhibition** Location: foyer	
2:30 pm	● **T2A: Antennas and Components** Room: 313-A	● **T2B: Biomedical Imaging & Tomography** Room: 301
3:50 pm	**Tea Break & Exhibition** Location: foyer	
4:20 pm	● **T3A: Small and Miniaturised Antennas** Room: 313-A	● **T3B: Satellite Communications** Room: 301
6:00 pm	**Conference Dinner** Location: Sir Llew Edwards Building (14) - Level 6 - Terrace Room (613)	

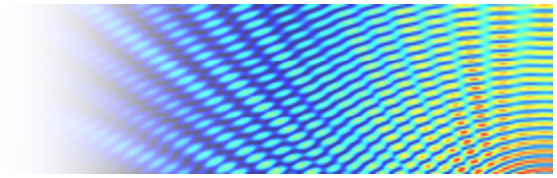
Wednesday 7 February 2018		
9:00 am	● **W1A: Reconfigurable and Multi-Function Antennas** Room: 313-A	● **W1B: Imaging and Backscattering** Room: 301
10:20 pm	**Tea Break & Exhibition** Location: foyer	
10:50 pm	● **W2A: Millimetre- and Terahertz Waves** Room: 313-A	● **W2B: Communications** Room: 301
12:10 pm	**Lunch** Location: foyer	
1:30 pm	**Poster Session 2& Exhibition** Location: foyer	
2:30 pm	● **W3A: Antenna Feeds** Room: 313-A	● **W3B: Material Characterisation** Room: 301
4:10 pm	**Tea Break** Location: foyer	
4:30 pm	**Awards Ceremony / Closing Session** Room: AEB, L3, room 200	

Tuesday 6 February 2018

9:00 am – 10:00 am	**Registration** Location: AEB-L3 foyer

10:00 am – 10:15 am	**Opening Session** Room: AEB, L3, room 200

10:20 am – 12:00 pm	● **T1A: Flexible and Conformal Antennas** Session Chair: Nghia Nguyen-Trong Room: 313-A	● **T1B: Resonators and Filters** Session Chair: Yang Yang Room: 301
10:20 am	**Conformal Array-based Directional Antenna System for Biomedical Applications** Giulia Mansutti[1], Ahmed Toaha Mobashsher[2], and Amin M. Abbosh[2] [1]University of Padova, Italy; [2]The University of Queensland, Australia	**Efficient Sensitivity Analysis for Microwave Circuits using Automatic Differentiation** Andrew C. M. Austin and Michael J. Neve The University of Auckland, New Zealand
10:40 am	**Highly Efficient Graphite Antennas for Conformal Applications** Shengjian Jammy Chen and Christophe Fumeaux The University of Adelaide, Australia	**Modal Analysis of Transmission Lines Periodically Loaded with Semi-Lumped Resonators** Amir Ebrahimi, James Scott, and Kamran Ghorbani RMIT University, Australia
11: 00 am	**Flexible Quasi-Yagi Antenna Arrays for Wearable Electromagnetic Head Imaging Based on Polymer Technology** Abdulrahman S. M. Alqadami, Konstanty Bialkowski, and Amin Abbosh The University of Queensland, Australia	**Study on diamond-SAW resonators fabricated by Minimal-Fab** Satoshi Fujii[1], Masay Negawa[1], Sommawan Khumpuang[2], Shiro Hara[2], Toonoe Haruki[3], and Yasunori Shiba[3] [1]Okinawa College, Japan; [2]Minimal System Group, AIST, Japan; [3]Yokogawa Solution Service Corporation, Japan
11:20 am	**Bandwidth Enhanced Dual-Band Half-Mode Substrate-Integrated Cavity** Sree Pinapati, Damith Ranasinghe, and Christophe Fumeaux The University of Adelaide, Australia	**Design of Voltage-Controlled Oscillator with Compact Size and Wide Tuning Range** Ting Zhang[1,3], Jingyu Lin[2,3], Jingfu Bao[1], Zongqi Cai[1,3], and Yang Yang[3] [1]University of Electronic Science and Technology of China; [2]South China University of Technology, China; [3]University of Technology Sydney, Australia
11:40 am	**Pregtronics – Active Pre-Impregnated Aerospace Composite Structural Electronics** Kelvin Nicholson[1],Thomas Baum[1], Richard Ziolkowski[2] and Kamran Ghorbani[3] [1]DST Group, Melbourne, Australia; [2]University of Technology Sydney, Australia; [3]RMIT University, Australia	**Broadband On-Chip Bandpass Filter using Ring Resonator with Capacitive Loading** Mengze Li[1], Yi Xin Cai[2], Meriam Gay Bautista[3], Yang Yang[3] and Xi Zhu[3] [1]Xiamen University, China; [2]Agricultural University, China; [3]University of Technology Sydney, Australia



12:00 pm – 1:30 pm	**Lunch** Location: AEB-L3 foyer

1:30 pm –2:30 pm **Poster Session 1 & Exhibition**

Location: AEB-L3 foyer

A Cavity Triple-Mode Filter with Excitation of L-shape Model
Jing-Yu Lin[1], MengZe Li[2], Sai-Wai Wong[3], Yang Yang[4], and Xi Zhu[4]
[1]South China University of Technology, China; [2]Xiamen University, China; [3]Shenzhen University, China; [4]University of Technology Sydney, Australia

A 94 GHz Scalable Phased Array Transmitter Project utilising SiGe and GaAs Technologies
Leigh E. Milner[1], Shyam G. Mehta[1], Sudipta Chakraborty[2], Leonard T. Hall[1], Michael C. Heimlich[2], and Michael E. Parker[1]
[1]DST Group, Edinburgh, Australia; [2]Macquarie University, Australia

Accurate Permittivity Measurement of PTFE
Stefan Burger[1], Wolfgang Taute[2], and Michael Hoeft[2]
[1]Delta Gamma RF-Expert, Melbourne, Australia; [2]Kiel University, Kiel, Germany

Base Station Antenna Element with Simple Structure but Excellent Performance
Haihan Sun[1], Can Ding[1], Trevor S. Bird[1,2] and Y. Jay Guo[1]
[1]University of Technology Sydney, Australia; [2]Antengenuity, Australia

Orthogonal Coaxial to Suspended Substrate Transition for K Band Operation
Yifan Wang[1], Erin Oliver[1], John Ness[2], and Amin Abbosh[1]
[1]The University of Queensland, Australia; [2]EM Solutions Pty Ltd., Australia

Waveguide Aperture Mounted Frequency Selective Surface
Asif Ahmed, Thomas Baum and Wayne S. T. Rowe
RMIT University, Australia

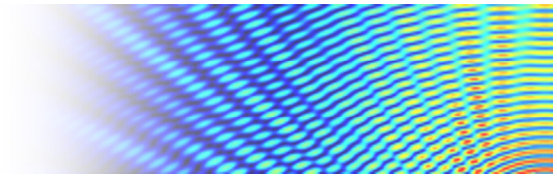
Analysis of Low-Frequency Noise Characterisation Set-up for Electronic Devices
Jason T. Hodges, Michael Heimlich, and Sourabh Khandelwal
Macquarie University, Australia

Development of 4th Order Optimized Debye Model for the Human Head Tissues at the Sub-1GHz
Mohamed Manoufali, S.A.R Naqvi, and Amin Abbosh
The University of Queensland, Australia

Wireless Sensing the Electrical Properties of Concrete Using Cylindrical Dielectric Resonator Antennas
Sumyea Sabrin, Robert Salama, and Ranjith Liyanapathirana
Western Sydney University, Penrith, Australia

Compact Stepped Slot Antenna with Unidirectional Radiation for Animal Head Imaging System
B.J. Mohammed, K.S. Bialkowski, and A. M. Abbosh
The University of Queensland, Australia

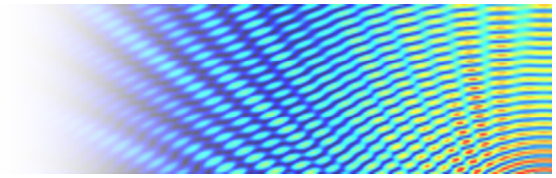
Millimetre-Wave Cancelling Loop for Full Duplex Repeater
R. Antiohos[1], A. Catlin[2], M. Faulkner[1]
[1]Victoria University, Melbourne; [2]ST-Microelectronics, Grenoble, France



2:30 pm – 3:50 pm	● T2A: Antennas and Components Session Chair: Wayne Rowe Room: 313-A	● T2B: Biomedical Imaging & Tomography Session Chair: Adnan Trakic Room: 301
2:30 pm	**Generation of Quasi-OAM carrying Microwaves by Quasi-Circular Antenna Arrays** Reham M. Fouda[1], Thomas C. Baum[1,2], and Kamran Ghorbani[1] [1]RMIT University, Australia; [2]DST Group, Melbourne, Australia	**Effects of the Imaging Antenna on the Design and Performance of Electromagnetic Torso Scanners** Sasan Ahdi Rezaeieh and Amin M. Abbosh The University of Queensland, Australia
2:50 pm	**A Wideband Base Station Antenna with Stable Radiation Pattern** Haihan Sun, Can Ding, Tianyu Yang, Y. Jay Guo, and Peiyuan Qin University of Technology Sydney, Sydney, Australia	**Fast Onsite Electromagnetic Imaging Method for Medical Applications** Arman Afsari, and Amin Abbosh The University of Queensland, Australia
3:10 pm	**Wideband Directional Coupler with High Isolation Using Cascaded Coupled-line Structure** He Zhu[1], and A. M. Abbosh[2] [1]University of Technology Sydney, Australia; [2]The University of Queensland, Australia	**The Effects of Frequency Variation on The Induced Fields of Transcranial Magnetic Stimulation Systems** Rawan Abu Yosef, Ahmed Toaha Mobashsher, and Amin Abbosh The University of Queensland, Australia
3:30 pm	**Gold-compensated High Resistivity Silicon as Low-loss Microwave Substrate** Nur Z. Hashim[1], and Cornelius H. de Groot[2] [1]Universiti Sains Malaysia, Malaysia; [2]University of Southampton, United Kingdom	**Phase Error Compensation Algorithms for SAR Tomographic Evaluation** Brent Crawley[1], Thomas Baum[2], Kelvin Nicholson[2] and Kamran Ghorbani[1] [1]RMIT University, Australia; [2]DST Group, Melbourne, Australia

3:50 pm – 4:20 pm	**Tea Break & Exhibition** Location: AEB-L3 foyer

4:20 pm – 5:40 pm	● T3A: Small and Miniaturised Antennas Session Chair: Shengjian Jammy Chen Room: 313-A	● T3B: Satellite Communications Session Chair: Shaun Hamilton Room: 301
4:20 pm	**Low-profile Monopole Antenna with Via-less Shorting** Ken Paramayudha, Shengjian Jammy Chen, Withawat Withayachumnankul, and Christophe Fumeaux The University of Adelaide	**Challenges in the Design of Compact SATCOM-on-the-Move Antennas** Christophe Granet[1], John Ness[2], John Kot[3], and Glen Callaghan[2] [1]Lyrebird Antenna Research, Sydney; [2]EM Solutions, Brisbane; [3]YK Engineering Research, Sydney, Australia
4:40 pm	**Electrically-Small Huygens Rectenna for Wireless Power Transfer Applications** Wei Lin and Richard W. Ziolkowski University of Technology Sydney, Australia	**A High Gain Radial Line Slot Array Antenna For Satellite Reception** Mst. Nishat Yasmin Koli[1], Muhammad U. Afzal[1], Karu Esselle[1] and Md Zahidul Islam[2] [1]Macquarie University, Australia; [2]Robi Axiata Ltd, Dhaka, Bangladesh

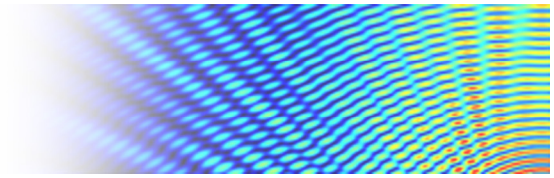


5:00 pm	**Miniaturized Antenna in Close Proximity to a Human Head** M. Rokunuzzaman, Thomas Baum, and Wayne S. T. Rowe RMIT University, Australia	**EMC Challenges for Satellite Communications On-The-Move Terminals** Vesa Waris, Garth Niethe, Marshall Lewis and Ryan Flux EM Solutions, Brisbane Australia
5:20 pm	**Vertically Directed Microwave Radiation from a Floating Hemispherical Antenna** Zia M. Loni, Hugo G. Espinosa, and David V. Thiel Griffith School of Engineering, Australia	**Electronic Polarisers for Parabolic Antennas** John Ness and Marshall Lewis EM Solutions, Brisbane, Australia

6:00 pm – 9:00 pm	**Conference Dinner** Location: Sir Llew Edwards Building (14) - Level 6 - Terrace Room (613)

Wednesday 7 February 2018

9:00 am – 10:20 am	● **W1A: Reconfigurable and Multi-Function Antennas** Session Chair: Hugo Espinosa Room: 313-A	● **W1B: Imaging and Backscattering** Session Chair: Andrew Austin Room: 301
9:00 am	**Reconfigurable Shorted Patch Antenna with# Polarization and Pattern Diversity** Nghia Nguyen-Trong, Ahmed Toaha Mobashsher and Amin M. Abbosh The University of Queensland, Australia	**Detection Error Rate Analysis using Coloured noise for the Movement of Chipless RFID Tag** Meriam A. Bibile and Nemai A. Karmakar Monash University, Australia
9:20 am	**A Reconfigurable Antenna with Three Radiation Patterns for Portable Multi-slice Electromagnetic Imaging Systems** Ahmed Toaha Mobashsher, and Amin Abbosh The University of Queensland, Australia	**SAR for Grape Bunch Detection in Vineyards** Kimberley W. Eccleston, Ian G. Platt, and Adrian E.-C. Tan Lincoln Agritech Ltd, Lincoln, Canterbury, New Zealand
9:40 am	**WiPlaVe: Wideband Planar Vehicular Antenna with Integrated Diplexer** Brendan D. Pell[1], Wayne S.T. Rowe[2], and Kamran Ghorbani[2] [1]DST Group, Victoria, Australia; [2]RMIT University, Australia	**Surface Curvature Correction in Microwave Tomography** Sameer Patil[1], Thomas Baum[2], Chow Yin Lai[1] and Kelvin J. Nicholson[2] [1]RMIT University, Australia; [2]DST Group, Victoria, Australia
10:00 am	**Wideband Circularly Polarized Reconfigurable Crossed Dipole Antenna** Nghia Nguyen-Trong[1], Huy Hung Tran[2], Huyn Chang Park[2], and Amin M. Abbosh[1] [1]The University of Queensland, Australia; [2]Dongguk University, Seoul, Korea	**Microwave Measurements in Cured Concrete – Experiment and Modelling** Artyom A. Emelyanenko, Jeung-Hwan Doh, Hugo G. Espinosa, and David V. Thiel Griffith University, Australia



10:20 am – 10:50 am	**Tea Break & Exhibition** Location: AEB-L3 foyer

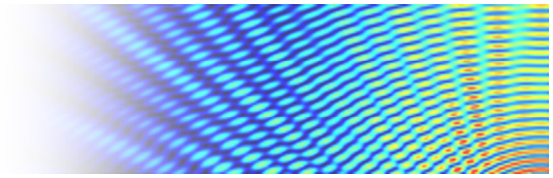
10:50 am – 11:50 am	● **W2A: Millimetre- and Terahertz Waves** Session Chair: Amir Ebrahimi Room: 313-A	● **W2B: Communications** Session Chair: Yifan Wang Room: 301
10:50 am	**Photonics-Enabled Innovations in RF Engineering** Leimeng Zhuang, Yiwei Xie, and Arthur J. Lowery Monash University, Australia	**Microwave Measurements as a Precursor to CSIRO's Wireless WLAN Patent** Trevor Bird Antengenuity, Australia; University of Technology Sydney, Australia
11:10 am	**A Balanced 28 to 47 GHz GaAs Pre-Amplifier** Leigh E. Milner[1], Michael E. Parker[1], and Michael C. Heimlich[2] [1]DST Group, Edinburgh, Australia; [2]Macquarie University, Australia	**A Novel Connected PIFA Array with MIMO Configuration for 5G Mobile Applications** Muhammad Ikram[1], Yifan Wang[1], Mohammad S. Sharawi[2], and Amin Abbosh[1] [1]The University of Queensland, Australia; [2]King Fahd University of Petroleum and Minerals, Saudi Arabia
11:30 am	**Transformer Balun design in Gallium Arsenide and Silicon Germanium processes** Sudipta Chakraborty[1], Leigh E. Milner[2,1], Anthony Parker[1], and Michael Heimlich[1] [1]Macquarie University, Australia; [2]DST Group, Edinburgh	**Improving MIMO Multiplexing for mmWave Static Links** I. S. Zainal Abidin[1] and T. W.C. Brown[2] [1]Universiti Sains Malaysia, Pulau Pinang, Malaysia; [2]University of Surrey, Guildford, UK
11:50 am	**Metallic and Dielectric Resonators in Broadband Half-Wave Mirrors for Terahertz Frequencies** Wendy S. L. Lee[1], Madhu Bhaskaran[2], Sharath Sriram[2], Christophe Fumeaux[1], and Withawat Withayachumnankul[1] [1]The University of Adelaide, Australia; [2]RMIT University, Australia	**Interference analysis of Multiple In-Road Readers** Lu Zhang[1], Konstanty S. Bialkowski[1], Albertus J. Pretorius[2,3], and Amin M. Abbosh[1] [1]The University of Queensland, Australia; [2]North-West University, South Africa; [3]Licensys (Pty.) Ltd. Brisbane, Australia

12:10 pm – 1:30 pm	**Lunch** Location: AEB-L3 foyer

1:30 pm –2:30 pm	**Poster Session 2 & Exhibition** Location: AEB-L3 foyer

Wideband Tunable Reflection-type Phase Shifter Using High-Directivity Directional Coupler
He Zhu[1], and A. M. Abbosh[2]
[1]University of Technology Sydney, Australia; [2]The University of Queensland, Australia

On-Chip Bandpass Filter Design using Defected-Ground Structure in CMOS Technology
Yi Xin Cai[1], Mengze Li[2], Yang Yang[3], and Xi Zhu[3]
[1]Agricultural University, China; [2]Xiamen University, China; [3]University of Technology Sydney, Australia



A Low Phase Noise VCO Employing Tunable Stubs Loaded Nested Split-Ring Resonator
Zongqi Cai[1,2], Jingyu Lin[2,3], Ting Zhang[1,2], Yang Yang[2], Yong Liu[1], and Xiaohong Tang[1]
[1]University of Electronic Science and Technology of China, China; [2]University of Technology Sydney, Australia; [3]South China University of Technology, China

Microwave Conductivity Measurements of a Graphene Monolayer over D-Band
Farhat Majeed[1], Thomas Fickenscher[2], Morteza Shahpari[1], and David V. Thiel[1]
[1]Griffith University, Australia; [2]Helmut Schmidt University, Germany

Simulation of S- and L-Band FSS Reflector Antenna
G. Catton, H. G. Espinosa, A. Dewani, and S. G. O'Keefe
Griffith University, Australia

Side-Lobe Reduction of Substrate Integrated Waveguide H-plane Horn Antenna
Liang Gong, Yunhao Fu, King Yuk Chan, and Rodica Ramer
The University of New South Wales, Sydney, Australia

Analysis on Electrical Breakdown in OFDM Systems
Chamnap Phok, Adrian Neild, Dieter Pelz, and Jean Armstrong
Monash University, Melbourne, Australia

Performance of a Septum Polarizer for Applications in Antenna Arrays
Nasiha Nikolic[1], Stephanie Smith[2], Andrew Weily[1], Ivan Kekic[1], and Ken Smart[1]
[1]Data61, CSIRO, Sydney, Australia; [2]CASS, CSIRO, Sydney, Australia

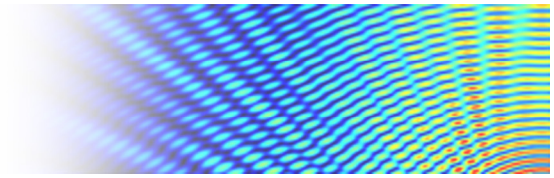
Design of Power Dividers with Chebyshev Filtering Response and Good Isolation
Ting-Yi Huang, Keng-Chih Chang, and Chih-Heng Lin
Feng Chia University, Taichung, Taiwan, ROC

Cross Entropy Method for Optimization of a Dielectrically Loaded Wideband Waveguide Polarizer
Khushboo Singh[1], Maria Kovaleva[1], Karu P. Esselle[1], and John Kot[2]
[1]Macquarie University, Australia; [2]YK Engineering Research, Australia

Antenna gain in a Millimetre-Wave Multipath Environment
Saurav Dahal, Shabbir Ahmed, Horace King, and Mike Faulkner
Victoria University, Melbourne, Australia

Open ended coaxial probe for electromagnetic characterization of soft soil during dewatering
Thierry Bore, Partha Narayan Mishra and Alexander Scheuermann
The University of Queensland, Australia

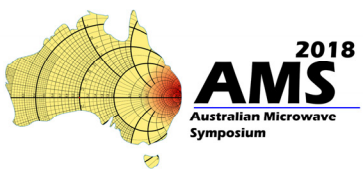
2:30 pm – 4:10 pm	● **W3A: Antenna Feeds** Session Chair: Christophe Granet Room: 313-A	● **W3B: Material Characterisation** Session Chair: Sasan Ahdi Rezaeieh Room: 301
2:30 pm	**Four-Port 5.0-5.3 GHz & 6.8-7.1 GHz Feed-System Design** John Kot[1] and Christophe Granet[2] [1]YK Engineering Research, Sydney, Australia; [2]Lyrebird Antenna Research, Sydney, Australia	**The Effect of Thin Insulating Layers on Surface Fields from a 433MHz Transmitter Inside the Human Body** Jaswinder Singh, Hugo G. Espinosa, and David V. Thiel Griffith University, Australia

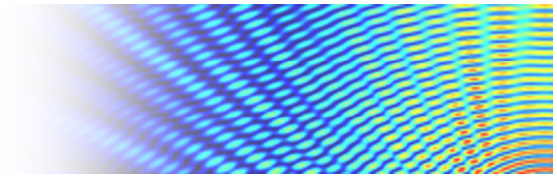


2:50 pm	**Compact Feeding Structure for Standard Waveguide and Substrate Integrated Waveguide Arrays** Soumya Sheel and Jacob C. Coetzee Queensland University of Technology	**Changes in Epidermal Dielectric Properties Due to Skin Cancer Across the Band 1 to 50 GHz** B.J. Mohammed, S.A.R. Naqvi, M. Manoufali, K. Bialkowski1, and A. M. Abbosh The University of Queensland, Australia
3:10 pm	**High Power Circular Waveguide UHF Balanced Combiner Design** Emra Md Amin, Jonathan Chi, Lewis Steer and Dieter Pelz Radio Frequency Systems (RFS), Australia	**Millimeter-wave Substrate Integrated Waveguide Probe for Near-Field Skin Cancer Detection** Giulia Mansutti[1], Ahmed Toaha Mobashsher[2], and Amin M. Abbosh[2] [1]University of Padova, Italy; [2]The University of Queensland, Australia
3:30 pm	**3D Printed Electromechanically Twistable Waveguide Sections with Roller-caged Feed Horns for Polarization Reconfigurability** Budhaditya Majumdar Independent Scholar	**An estimating equation without using a short termination for dielectric measurement in liquids via the open-ended cut-off waveguide reflection method** Kouji Shibata Hachinohe Institute of Technology, Japan
3:50 pm	**Measurement of the Axial Ratio of a Septum Polarizer** Ken Smart[1], Stephanie Smith[2], Nasiha Nikolic[1], Ivan Kekic[1], and Andrew Weily[1] [1]Data61, CSIRO, Sydney, Australia; [2]CASS, CSIRO, Sydney, Australia	**Microwave split-ring resonator array for imaging of near-surface material defects** Adnan Trakic[1], Yifan Wang[1], Darren Foster[2], and Amin Abbosh[1] [1]The University of Queensland, Australia; [2]Whitsunday Moorings and Marine Construction Pty Ltd, Australia

4:10 pm – 4:30 pm	**Tea Break** Location: AEB-L3 foyer

4:30 pm – 4:45 pm	**Awards Ceremony / Closing Session** Room: AEB, L3, room 200





AMS 2018 Chairs

Amin Abbosh	University of Queensland
Kamran Ghorbani	RMIT University

Website, Publication and Publicity

Thomas Baum	DST Group

Local Arrangements & Secretary

Maissoun Abu Hamra	University of Queensland

AMS 2018 Technical Program Committee Chairs

Withawat Withayachumnankul	University of Adelaide
Konstanty Bialkowski	University of Queensland
Christophe Fumeaux	University of Adelaide

AMS 2018 Technical Program Committee Members

Amin Abbosh	University of Queensland
Andrew Austin	University of Auckland
Thomas Baum	DSTG
Shengjian Jammy Chen	University of Adelaide
Can Ding	University of Technology Sydney
Amir Ebrahimi	RMIT University
Kimberley W. Eccleston	Lincoln Agritech Ltd
Hugo Espinosa	Griffith University
Kamran Ghorbani	RMIT University
Wei Lin	University of Technology Sydney
Ahmed Toaha Mobashsher	University of Queensland
Phong Nguyen	University of Queensland
Nghia Nguyen-Trong	University of Queensland
Peiyuan Qin	University of Technology Sydney
Sasan Ahdi Rezaeieh	University of Queensland
Yifan Wang	University of Queensland