



Four Points by Sheraton, Washington DC

Day 1 ~ Monday, 30 Apr 2012

Time	Topic	Speaker
0800-0900	Registration	
INTRODUCTIONS		
0900-0905	Welcome/Introduction	Sofi Bin-Salamon International Program Manager, AFOSR
0905-0920	Opening Remarks	Dr. E. William Colglazier S&T Adviser to the Secretary of State
0920-0935	Opening Remarks	The Hon Kim Beazley, AC Ambassador of Australia to the US
0935-0950	Opening Remarks	Dr. Robin Staffin Director for Basic Research, DoD
0950-1005	Opening Remarks	Dr. Thomas W. Hussey Chief Scientist, AFOSR
1005-1020	Opening Remarks	Prof. Mary O’Kane Chief Scientist & Engineer, New South Wales
1020-1035	US Army Research Laboratory	Dr. Stephen J. Lee Chief Scientist, ARL
1035-1050	BREAK	
1050-1105	US Naval Research Laboratory	Dr. Richard Colton Chem. Division Superintendent, NRL
1105-1120	Nanotechnology R&D at NASA: Current Efforts and Future Directions and Opportunities	Dr. Michael Meador Manager, Nanotechnology Project Office of the Chief Technologist, NASA
1120-1135	Overview of the Australian National Fabrication Facility	Mrs. Rosie Hicks Chief Executive Officer, ANFF
1135-1300	LUNCH	
HIGHLIGHTS IN SENSORS		
1300-1330	Sensing and Controlling Single Spins in Silicon	Prof. Andrew Dzurak University of New South Wales
1330-1400	Microsystems for Army Applications	Dr. Paul Amirtharaj Chief, Electronics and RF Division, Sensors & Electron Devices, ARL
1400-1430	Optical MEMS Technologies for Multi-Spectral Infrared Sensors and Imaging Arrays	Prof. Laurie Faraone University of Western Australia
1430-1500	New Horizons in High-Power in Electromagnetics for Sensing	Dr. John Luginsland Program Manager, AFOSR
1500-1530	Deciphering Microenvironmental Control of Cell Fate Choices using Integrated Diagnostic Microfluidic Platforms	Prof. Justin Cooper-White University of Queensland

1530-1600	BREAK	
KEYNOTE LECTURE SERIES		
1600-1630	International Engagement Strategy for Australian Universities	Prof. Jim Piper Deputy Vice-Chancellor (Research), Macquarie University
1630-1645	Basic Science International Collaborations with the Air Force Office of Scientific Research	Dr. Mark S. Maurice Director, International Office, AFOSR
1645-1700	US Air Force Basic Science Engagement in Asia and Pacific Rim	Dr. Misoon Mah Director, Asian Office of Aerospace Research & Development
1700	MEETING ADJOURNED FOR THE DAY	
1800	RECEPTION AT THE AUSTRALIAN EMBASSY	
Reception at the Australian Embassy 1601 Massachusetts Ave, NW Washington, DC 20036		



Four Points by Sheraton, Washington DC

Day 2 ~ Tuesday, 1 May 2012

Session 1: NANOELECTRONICS

Time	Topic	Speaker
0730-0830	Registration	
TECHNICAL PRESENTATIONS		
0830-0900	Towards Atomically Precise Silicon Qubit Devices in all Three Dimensions	Prof. Michelle Simmons University of New South Wales
0900-0930	Micro Autonomous Systems and Technology	Dr. Brett Piekarski ARL
0930-1000	Antimonide-Based Compound Semiconductors for Low-Power Electronics	Dr. Brian Bennett NRL
1000-1030	BREAK	
1030-1100	Hybrid Quantum Systems as Nanoscale Sensors	Prof. David Reilly University of Sydney
1100-1130	A Convergence of Physical Sciences & Nanotechnology to Bridge Biomedical Applications in Cancer	Dr. Larry Nagahara NIH
1130-1200	Understanding the Mechanism of Action of Chemotherapy Drugs: Potential for Targeted Cancer Treatments	Prof. Suzanne Cutts LaTrobe University
1200-1330	LUNCH	
1330-1400	Electronic Properties of Group-IV and III-V Compound Semiconductor Device Architectures	Dr Laurens Willems van Beveren University of Melbourne
1400-1430	III-V Semiconductor Nanowires for Optoelectronics	Prof. Hoe Tan Australian National University
1430-1500	Organic Electronics: Sensors and Devices	Prof. Paul Dastoor University of Newcastle
1500-1530	Nanoelectronics and Organic Electronics Programs in the Engineering Directorate at NSF	Dr. Anupama B. Kaul NSF
1530-1600	BREAK	
KEYNOTE LECTURE SERIES		
1600-1630	Melbourne Centre for Nanofabrication – An Overview	Dr. Dwayne Kirk Managing Director, MCN
1630-1700	Nanoscience Research at Naval Research Laboratory	Dr. Eric Snow Director, Nanoscience Institute, NRL
1700-1730	The Commonwealth Scientific & Industrial Research Organisation	Dr. Cathy Foley Chief, Materials & Engineering, CSIRO
1730	MEETING ADJOURNED FOR THE DAY	



Four Points by Sheraton, Washington DC

Day 2 ~ Tuesday, 1 May 2012

Session 1: ADVANCED MATERIALS AND POWER

Time	Topic	Speaker
0730-0830	Registration	
TECHNICAL PRESENTATIONS		
0830-0900	Aerospace Materials for High Temperature and Extreme Environments / Low Density Materials	Dr. Ali Sayir AFOSR
0900-0930	Technologies for Long Endurance Fuel Cell Unmanned Air Vehicles	Dr. Karen Swider-Lyons NRL
0930-1000	Characterization and Control of Nanostructure for Development of Advanced Materials	Prof. Nick Birbilis Monash University
1000-1030	BREAK	
1030-1100	Arrayed Plasmonics: Enabling Enhanced Optical Sensors, Emitters and Photodetectors	Dr. Joshua Caldwell NRL
1100-1130	Nanostructured Materials	Dr. Joycelyn Harrison AFOSR
1130-1200	Nanostructured Electromaterials for Energy and Bionic Application	Prof. David Officer University of Wollongong
1200-1330	LUNCH	
1330-1400	Mechanical Properties of Nanocrystalline CuTa Alloys	Dr. Kristopher Darling ARL
1400-1430	Growth and Characterization of Low-Dimensional Carbon Structures	Dr. John Boeckl AFRL
1430-1500	c-SiC on Si Technology: Applications and Perspectives	Prof. Francesca Lacopi Griffith University
1500-1530	Spectroscopy and Dynamics of Plasmonic Metal Nanorods	Dr. Jeffery Owrutsky NRL
1530-1600	BREAK	
KEYNOTE LECTURE SERIES		
1600-1630	Melbourne Centre for Nanofabrication – An Overview	Dr. Dwayne Kirk Managing Director, MCN
1630-1700	Nanoscience Research at Naval Research Laboratory	Dr. Eric Snow Director, Nanoscience Institute, NRL
1700-1730	The Commonwealth Scientific & Industrial Research Organisation	Dr. Cathy Foley Chief, Materials & Engineering, CSIRO
1730	MEETING ADJOURNED FOR THE DAY	



Four Points by Sheraton, Washington DC

Day 3 ~ Wednesday, 2 May 2012

Session 1: NANO-ELECTRONICS

Time	Topic	Speaker
0730-0830	Registration	
TECHNICAL PRESENTATIONS		
0830-0900	Surface modification and Characterisation of Biomolecules in Microfluidic Devices	Prof. Sally McArthur Swinburne University
0900-0930	Hydrodynamic Focusing for Sensing and Micro/Nano-Fabrication	Fran Ligler NRL
0930-1000	Microfluidics in Glass and Quartz: Cell Sorting, Water Treatment and Artificial Photosynthesis	Dr. Thomas Nann University of South Australia
1000-1030	BREAK	
1030-1100	Advanced Imaging: Overview of DARPA/MTO Imaging Research & Technology	Dr. Nibir Dhar DARPA
1100-1130	An Overview of Fiber & Glass Fabrication & Application to Mid Infrared Laser & Sensor Development	Prof. David Lancaster University of Adelaide
1130-1200	Microphotonics to Nanophotonics: Recent Developments in Integrated Quantum Photonics, Waveguide Lasers and Diamond Nanoscience at the MQ Photonics Research Centre	Prof. Mick Withford Macquarie University
1200-1330	LUNCH	
1330-1400	1121 nm Resonator Properties and Impact on the Design of a 50 W 1178 nm Sodium Guidestar Laser	Dr. Leanne Henry AFRL
1400-1430	Pulsed Laser Deposition for Thin film capacitors, Optical Waveguides and Coatings for Field Emission Cathodes	Dr. Steven Fairchild AFRL
1430-1500	Interband Cascade Lasers Operating CW at Ambient throughout the Mid-IR	Dr. Jerry Meyer NRL
1500-1530	MidIR Solid-State Laser Development	Dr. Francois Prinsloo CSIR Group Manager
1530-1600	BREAK	
KEYNOTE LECTURE SERIES		
1600-1630	Surface Analysis: New Approaches to Access, Data and Analyses	Prof. Paul Pigram LaTrobe University
1630-1700	Cyberinfrastructure for Data Enabled Science	Dr. Peter McCartney NSF
1700-1730	Panel Discussion	
1700-1730	MEETING ADJOURNED FOR THE DAY	



Four Points by Sheraton, Washington DC

Day 3 ~ Wednesday, 2 May 2012

Session 2: ADVANCED MATERIALS AND POWER

Time	Topic	Speaker
0730-0830	Registration	
TECHNICAL PRESENTATIONS		
0830-0900	Atom Probe Microscopy and Sensor Materials Design	Dr. Miles Apperley Australian Microscopy & Microanalysis Research Facility
0900-0930	Large Tapered Crystal (LTC) Growth Method: A New Single Crystal Silicon Carbide Bulk Growth Technique	Dr. Andrew Woodworth NASA GRC
0930-1000	Development of Autonomous, Multi-Modal 3D Characterization Systems	Dr. Michael Groeber AFRL
1000-1030	BREAK	
1030-1100	Biomass Generation & Utilization for Creating op-in Fully Renewable and Sustainable Gas, Diesel & Jet Fuels	Dr. Michael Wright NAVAIR
1100-1130	Boron Nitride Nanotubes Films	Prof. Ian Chen Deakin University
1130-1200	Nanostructured Titanium via Controlled Atmosphere Sintering of Hydrides	Mr. Brady Butler ARL
1200-1330	LUNCH	
1330-1400	Using Heatable AFM Probes for the Nanolithography of Graphene, Polymers, and Nanoparticles	Dr. Paul Sheehan NRL
1400-1430	Use of Carbon Nanotubes in Novel Solar Cells	Prof. Joe Shapter Flinders University
1430-1500	High Temperature Polymers for Extreme Environmental Applications	Dr. Teddy Keller NRL
1500-1530	Organic Materials Chemistry at the Air Force Office of Scientific Research	Dr. Charles Lee AFOSR
1530-1600	BREAK	
KEYNOTE LECTURE SERIES		
1600-1630	Dealing with Data: New Approaches to Data, Access and Analyses	Prof. Paul Pigram LaTrobe University
1630-1700	Cyberinfrastructure for Data Enabled Science	Dr. Peter McCartney NSF
1700-1730	Panel Discussion	
1700-1730	MEETING ADJOURNED FOR THE DAY	



Army Research Laboratory, MD

Day 4 ~ Thursday, 3 May 2012

Transport Departing Four Points by Sheraton:

0730 to Aberdeen (Materials Group)

0830 to Adelphi (Electronics Group)

Time	
0900-1600	Visit to US Army Research Laboratory (<u>No Personal Electronic Devices Allowed, e.g., laptops, tablets, cell phones, etc.</u>)

Keynote Lecture Series at the American Association for the Advancement of Science

1200 New York Avenue, NW

Washington, D.C. 20005

Time	Topic	Speaker
1800-	Australia is having a Mining Boom – and that Includes Data Mining	Prof. Mary O’Kane Chief Scientist, New South Wales
	Data-To-Decisions	Dr. Robert Bonneau Program Manager, AFOSR Dr. Carey Schwartz Program Manager, ONR
1900	Reception	

MEETING ADJOURNED FOR THE DAY



Day 5 ~ Friday, 4 May 2012

Time	Topic	Speaker
0800-0900	Registration	
CLOSING DISCUSSIONS AND REMARKS		
0900-1030	Discussions on Follow-up Actions	
1030-1100	BREAK	
1100-1115	Closing Remarks	Dr. Patrick Carrick Director, Physics & Electronics Directorate, AFOSR
1115-1130	Closing Remarks	Prof. Chris Fell Chair, ANFF
1130-1145	Closing Remarks	Mrs. Rosie Hicks Chief Executive Officer, ANFF
1145-1155	Closing Remarks	Ms. Rachel Stephen-Smith Minister-Counsellor (Science and Technology), Embassy of Australia
1155-1200	Final Remarks	Sofi Bin-Salamon International Program Manager, AFOSR
1200	MEETING ADJOURNED	