



AS CF

1st Australian Space Cyber Forum

Adelaide Convention Centre - Riverbank
Tuesday, 10th October 2023

Major Sponsors



Forum Program

8.00	Registrations Tea and coffee on arrival	13.30	Q&A Expert Panel Cyberspace and Outerspace: between regulation and militarisation
8.25	Welcome MC Mrs. Paula Oliver Senior Manager, Cyber Security Strategy and Innovation, Critical Technologies, Department for Industry, Innovation and Science - Government of South Australia		Keynote speaker: Associate Professor Rodrigo Praino, Jeff Bleich Centre Flinders University Cyberspace and outerspace are interdependent. As awareness of potential cyber threats to both public and private space assets become more widespread, space powers have started to incorporate these issues in national policies. This panel explores these issues in an Australian context, taking into account how cyber threats to space assets have been treated and regulated in recent years.
8.30	Hon. Susan Close MP Minister for Defence and Space Industries		
8.40	GPCAPT Steve Henry Defence Space Command	13.45	Facilitator: Mr. Marco Aliberti, Flinders University and European Space Policy Institute Ms. Clemence Poirer, European Space Policy Institute Professor Melissa de Zwart, University of Adelaide Dr. Jordan Plotnek, University of South Australia
8.55	Mr. Reece Biddiscombe, Director, National Space Capability Integration Australian Space Agency		
9.10	Mr. Ron Keen, US Dept Homeland Security (DHS) Senior Advisor-Space, National Risk Management Center (NRMCC) Cybersecurity and Infrastructure Security Agency (CISA)	14.30	Concrete case to solve: What if a cyberattack to space assets disrupts an election? Presented by: Dr. Kathryn Robison Hasani, Flinders University
9.30	Morning tea	15.00	Afternoon tea
10.30	Q&A Expert Panel Space Cyber – The increasing use of cyber attacks in the space domain Keynote Speaker: Dr. Daniel Floreani, CyberOps Many of the technologies we take for granted in the modern world are increasingly critically reliant on space-enabled mobility, positioning and timing services for their operation and security. However, the risks to the use of space are escalating as it becomes increasingly composed of commercial equipment and services that open it up to the same threats we increasingly face on the ground. The ongoing conflict in Ukraine has clearly demonstrated the need to consider the cyber security aspects of current and future space services in the next decade. The inclusion of Space into the Australian critical infrastructure landscape also brings responsibilities for more complex and frequent technical cyber assessments of space systems before, during and after launch.	15.30	Q&A Expert Panel Quantum in Space and its security impacts Keynote Speaker: Dr. Giuseppina Dall'Armi, Research Leader Electronic Warfare Operations Defence Science and Technology Group Quantum technologies will play an important role in the routine activities of life and have already shown vast impact in our economies (communication, computation, sensor, network etc). While quantum computing is making headlines, quantum sensing and quantum communication could reach the market earlier and potentially transform multiple industries concurrently. Quantum communication networks and cybersecurity technologies have potential application in diverse industries including telecommunications, finance, health, government, defence, infrastructure and space. All these sectors have a pivotal role in modern Australia and our everyday lives.
10.45	Facilitator: Professor Jill Slay, SmartSatCRC Mr. Gareth Willis, FUGRO CISO Professor Olaf Maennel, Tallinn University, Adelaide University Mr. Robert DiPietro, PWC, Australia Cybersecurity & Digital Trust Lead	15.45	Facilitator: Dr. Scott Martin, Acting Director, Quantum Technologies Future Science Platform CSIRO Mr. Peter Owen, Senior Director APAC, QuintessenceLabs Dr. David Gozzard, Senior Research Fellow International Space Centre University of Western Australia Dr. Fred Baynes, Research Group Leader at QuantX Labs
11.30	Concrete case to solve: Space missions, what steps do you need to take when preparing to launch? Presented by: Mr. Derek Grocke, CyberOps	16.30	Concrete case to solve: CSIRO - Growing Australia's Quantum Communication Industry Presented by: Dr. Stephen Gensemer, Team Leader, Optical Systems Industrial Innovation Program, Manufacturing CSIRO
12.00	Lunch	17.00	Conclusion: Adjunct Professor Nicola Sasanelli AM, Chairman and Founder Agora High-Tech



Mr. Marco Aliberti
Flinders University and European Space Policy Institute



Marco is Associate Manager and Lead on International Engagement at the European Space Policy Institute (ESPI) in Vienna, the only pan-European think-tank providing decision-makers with an informed view on short to long-term issues relevant to the European space policy. Since 2020, he is also a Research Consultant at the Space Power and Policy Applied Research Consortium (SPPARC) established by Flinders University, Adelaide, and Associate Partner at AstroAnalytica. Mr. Aliberti has carried out and published a number of research projects in the areas of space safety and security, governance and international space politics, and Asia's space programmes, particularly those of China, Japan and India. He is the author of six books and dozens of policy papers, conference proceedings and public reports on space policy matters. Prior to joining ESPI in 2012, he had experience in the private sector.



The Honourable Susan Close MP
Deputy Premier



Susan Close is the Deputy Premier of South Australia and the Minister for Climate, Environment and Water, Minister for Industry, Innovation and Science and Minister for Defence and Space Industries. Susan has been the Member for Port Adelaide since 2012. Before entering parliament, Susan was an executive in the Department of Environment and Natural Resources and played a key role in the establishment of the Adelaide Dolphin Sanctuary as a community advocate. She previously worked at the University of Adelaide managing student services and holds a PhD from Flinders University. Susan is a fierce advocate for women in the workplace, passionate about ensuring accessible and quality education for all, deeply concerned about protecting nature, and driven to deliver the best economic outcomes for South Australia so everyone can benefit from a prosperous future for our state.



Dr. Fred Baynes
Research Group Leader, QuantX Labs



Fred Baynes began his career with a passion for fundamental science and has transitioned to delivering cutting edge solutions for Industry and Defence. He obtained a PhD in Physics from the University of Western Australia in 2013 for an optical test of special relativity and undertook post-doctoral positions in the Time and Frequency divisions of both the National Institute of Standards and Technology in the USA and the National Physical Laboratory in the UK. Since returning to Australia in 2016 he worked at the University of Adelaide on precision oscillators for Defence and is now the Research Group Leader at QuantX Labs overseeing projects in cryogenic sapphire oscillators, magnetometers and time transfer.



Dr. Giuseppina (Pina) Dall'Armi
Research Leader, Electronic Warfare Operations Defence Science and Technology Group



Pina obtained her PhD degree in Physics in 1996 from Flinders University. She worked in private industry before joining Defence Science Technology Group in 2000. As a research scientist and then as a senior research scientist Pina has worked on assessing the impact of electromagnetic interference and compatibility of systems for maritime, land, space and air domains. Pina was awarded a Defence Science Fellowship placement at the Naval Postgraduate School, USA. In 2018 she was promoted to Group Leader of the Electromagnetic Characterisation and Effects group, and then Directed Energy and Technologies and Effects Group. In 2021, Pina took on the role as Research Leader of Electronic Warfare Operations overseeing all Radiofrequency and Electro Optics Electronic Warfare and Quantum Technologies Science and Technology (S&T). Her current role is Research Leader Electro Optics Sensors and Electromagnetic Warfare. Pina has published numerous technical reports and papers in her research field and is an advocate of STEM outreach.



Mr. Reece Biddiscombe
Director, National Space Capability Integration,
Australian Space Agency



Reece is responsible for the delivery of Space Architecture definitions. In 2020, he led delivery of the Australian Earth Observation from Space Roadmap through close engagement with the Australian and international Earth observation communities. Reece also led the Bushfire Earth Observation Taskforce that explored how Earth observation can make a greater contribution to bushfire risk management in Australia. Reece was seconded to the Australian Space Agency in 2020 and transitioned from Defence to a substantive role at the Agency in late 2021. In Defence he had a long career as a geospatial intelligence analysis team leader and, since 2013, led space capability development and directed Defence minor and major projects including DEF799 Phase 1 and DEF799 Phase 2. Reece has bachelor degrees in surveying and data management and has nearly completed a Master of Space Operations with a focus on space program delivery.



Professor Melissa de Zwart
University of Adelaide



Melissa is the Deputy Director and Chief Investigator of the ARC Centre of Excellence in Plants 4 Space and Professorial Member of the Andy Thomas Centre for Space Resources, University of Adelaide. Melissa is a prominent legal researcher, working in the areas of commercial and military uses of outer space, encompassing both domestic and international space law. She has worked closely with the Australian space industry, including serving as Deputy Director and Board Member of the Space Industry Association of Australia, as well as on the successful bid team for the 2025 International Astronautical Congress to be held in Sydney. She has published widely on all legal and regulatory aspects of the space environment.



Mr. Robert DiPietro

PWC, Australia Cybersecurity & Digital Trust Lead



LinkedIn

Robert is PwC Australia's Cybersecurity and Digital Trust Lead. He has over 17 years of experience in leading delivery of cyber security and technology services for clients across multiple industries in IT and Operational Technology (OT) environments. This includes cyber security strategy, threat and vulnerability management, cyber operations and incident response. Robert studied Physics as part of his Bachelor of Science degree and continues to actively research subjects at the intersection of science and IT, including quantum computing and space technology. He has spoken at numerous events on cyber security and critical infrastructure security.



Dr. David Gozzard

Senior Research Fellow International Space Centre University of Western Australia



LinkedIn

Dr David Gozzard is a Senior Research Fellow in the International Space Centre and International Centre for Radio Astronomy Research at the University of Western Australia. His work focuses on the development technologies for stable laser links for metrology, satellite optical communications, quantum communications, and quantum imaging. Dr Gozzard was part of the Australian team that developed the phase stabilisation system for the Square Kilometre Array radio telescopes, and his group have recently received funding from the Australian Space Agency to develop a network of optical communications ground stations. Dr Gozzard works across fundamental physics, industry, and defence.



Dr. Daniel Floreani

CyberOps



LinkedIn

Daniel is a consultant with over 25 years' experience in communication networks connecting diverse things to the Internet. Daniel has worked in many local and global roles during his career including R&D, systems engineering, sales, technical leadership, enterprise architecture, business development and market creation. He has developed a specialisation in Defence, Satellite, Cybersecurity and Public Sector ICT architectures and putting Internet based systems into Space.



Mr. Derek Grocke

CyberOps



LinkedIn

Derek is a key participant and instigator of change in many organisational management and ICT processes including Security systems architecture, the IT component of numerous due-diligence processes, financial IT external/internal audit, security resilience management, management of IT operations & Infrastructure groups, establishment of many architectural and security processes/policies and established IT enterprise risk/issues methodologies aligned with practical business governance. He is a Cybersecurity, RF, Flight systems and standards specialist.



Dr. Stephen Gensemer

Team Leader, Optical Systems Industrial Innovation Program, Manufacturing CSIRO



LinkedIn

Dr Gensemer earned his Ph.D. in Physics from University of Connecticut in 2000, studying light-matter interactions in atoms and molecules. He worked at the National Institute of Standards and Technology (U.S.), University of Amsterdam, Penn State University and Sydney University before joining CSIRO in 2013. At CSIRO he has developed a range of sensor technologies for environmental and agricultural uses, and manufactured precision optical components that are used for gravitational wave detection and in the ESA's Solar Orbiter. He leads the CSIRO Laboratory for Satellite Optics at the University of Adelaide, where CSIRO is building custom spectral imaging instruments for cubesats, drones, and high altitude pseudosatellite missions. The team is also building instruments for remote and in situ water quality sensing (part of CSIRO's Aquawatch effort), agricultural monitoring, and quantum communications.



GPCAPT Steve Henry

Defence Space Command



LinkedIn

GPCAPT Henry is Director Force Generation at Defence Space Command, responsible for the preparedness, training, exercising and assurance of ADF space forces. He graduated from ADFA in 1997. His first space role was at the 2nd Space Warning Squadron (2SWS), Buckley AFB, CO, operating the Space Based Infrared System (2003-05). GPCAPT Henry established what is now the Australian Space Operations Centre at HQ Joint Operations Command (2008-11) and completed Australian Command and Staff Course in 2015 before posting to the Pentagon where assisted in the development and application of U.S. Defence space policy (2016-17). GPCAPT Henry supported space capability development at Air Force Headquarters (2018-19), before commanding the Surveillance and Control Training Unit (2020 – 2022) where he developed the Space Fundamentals Course for Defence. He completed a Master of Space Operations in 2020 and is currently undertaking a Global Executive MBA in Defence and Space through UniSA.



Mr. Ron Keen

US Dept Homeland Security (DHS) Senior Advisor-Space, National Risk Management Center (NRMC) Cybersecurity and Infrastructure Security Agency (CISA)



Currently the Senior Advisor for Space to the Director of the National Risk Management Center (NRMC), Cybersecurity and Infrastructure Security Agency (CISA), U.S. Department of Homeland Security. Ronald Keen is a distinguished and decorated retired Air Force officer with an extensive background in intelligence, nuclear weapons, and space systems operations. He was instrumental in establishing one of the preeminent public-private Space advisory working groups and is a recognized expert throughout the industry in Space operations and cybersecurity. A published science fiction author, Ron is a graduate of Embry Riddle Aeronautical University with a Masters in Aeronautical Science and earned his bachelor's at the University of Texas Southwest.



Mrs. Paula Oliver

Senior Manager, Cyber Security Strategy and Innovation, Critical Technologies, Department for Industry, Innovation and Science - Government of South Australia



Paula Oliver is the Senior Manager for the Cyber Security Strategy and Innovation within the SA Governments' Department for Industry, Innovation and Science, responsible for the strategic development and delivery of a program of work, in partnership with industry, academia and government, driving growth and innovation in the cyber industry in SA. Paula is a "Certified Information Security Manager" (CISM) and prior to her current role held a position for four years as the Manager for the South Australia Cyber Security Innovation Node (part of the Australian Growth Network for Cyber Security) as well as having served as Principal Cyber Advisor within the Department of the Premier and Cabinet in SA Government providing policy and risk advice, and cyber security training and awareness to all levels of Government including Ministers and the Premier. Paula is passionate about ensuring Cyber Security is an economic priority for South Australia and a strong advocate for increasing diversity in the cyber security workforce.



Professor Olaf Maennel

Tallinn University, Adelaide University



Professor Maennel started his career 17 years ago at the University of Adelaide as a post-doctoral researcher interested in computer networks and network security. He has since then held faculty positions at Loughborough University in England and Tallinn University of Technology (TalTech) in Estonia. Before rejoining the University of Adelaide, he led the research at centre for digital forensics and cybersecurity and established a centre for maritime cybersecurity in Estonia. His research interests have broadened over the years to include cyber defence technical exercises and critical infrastructure protection with a focus on the transport sector cybersecurity. He has been chairing numerous conferences, including ACM SIGCOMM in London in 2015 and the ACM Internet Measurement Conference (2017).



Dr. Jordan Plotnek

University of South Australia

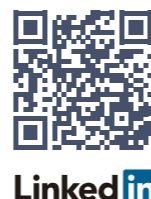


Dr Jordan Plotnek received a PhD in space system security and resilience from the University of South Australia and a Bachelor of Engineering with first class Honours in telecommunications from Swinburne University in Melbourne. Jordan is an Australian Air Force veteran and has served in senior cyber security positions for aerospace, defence, utilities, transportation, and mining organisations in Australasia, Canada, and the Middle East. Jordan is currently a Senior Lecturer in security architecture and operational technology security at the University of South Australia and the Lead Partner for critical infrastructure protection at Anchoram Consulting. Jordan's research and professional interests are centred around space security, critical infrastructure resilience, and cyber-physical conflict.



Dr. Scott Martin

Acting Director, Quantum Technologies Future Science Platform CSIRO



Scott is the Senior Manager, Strategic Relationships, Quantum Industry and Technology within CSIRO's Strategic Partnerships Group. The focus of his role is to address the immediate and expanding needs of quantum technologies across CSIRO and to position CSIRO as a key innovator and advocate to Australia's emerging quantum industry. Working closely with CSIRO's Quantum Technologies Future Science Platform (FSP), of which he was Acting Director from March to September 2023, his role is to liaise with industry, academic and government partners to identify research-led projects that enable CSIRO to develop and deploy capability, provide advice on quantum strategy and develop unique research collaborations with universities.



Ms. Clemence Poirer

European Space Policy Institute



Clémence Poirier is a Research Fellow at the European Space Policy Institute (ESPI) in Vienna, Austria. She has expertise on space security and cybersecurity issues as she conducted policy research on cyber threats on space systems as part of the war in Ukraine; the perception of cyber threats on satellites in French policies; the militarization of outer space; and the applicability of data protection laws to satellite images. She previously carried out policy research on the cybersecurity of the Australian infrastructure for Flinders University in Adelaide, Australia. She is also SGAC's Space Generation Advocacy and Policy Platform Co-Lead on Responsible Behavior in Outer Space and an active member of SGAC's Space and Cybersecurity Project Group. She holds a master's degree in International Relations, International Security, and Defense from University Jean Moulin Lyon 3, France.



Associate Professor Rodrigo Praino

Jeff Bleich Centre, Flinders University



LEARN MORE

Dr. Rodrigo Praino is Associate Professor of Politics and Public Policy and Director of the Jeff Bleich Centre for the US Alliance in Digital Technology, Security and Governance at Flinders University. He holds a PhD in Political Science and has received several prestigious fellowships, scholarships and awards, including a Fulbright Scholarship. In 2018 he became the first political scientist to win a Tall Poppy Science Award for excellence in scientific research and communication. A/Professor Praino is one of few scholars in Australia engaged in research on space politics and space policy. He is particularly interested in understanding and analysing the importance of space assets for defence, economic development, international relations, and decision-making. A/Prof Praino's research has been published by top peer-reviewed academic journals in the Social Sciences. It has attracted funding from various sources, including the Australian Research Council, SmartSat CRC, Defence, and UNICEF.



Mr. Peter Owen

Senior Director APAC, QuintessenceLabs



LinkedIn

30+ years industry veteran, the last 23 years focused on cybersecurity, networking and developing technology scale ups businesses across Australia, New Zealand and Asia. Known as specialist in building technology businesses his background in cybersecurity as well as significant networking and infrastructure experience have led to a broad range of roles. Having qualified as a communications engineer in the RAN and transitioning to the IT industry in 1989 with expertise in multiple disciplines and having been able to hold senior management positions in many recognizable brands, most recently Rapid7 growing that business from 4 to 75 staff in Australia over 5 years and prior similar success with BlueCoat and Packeteer to name a few. Peter is now applying that wealth of experience to the Quantum industry to build out and commercialise QuintessenceLabs across APAC.



Dr. Kathryn Robison Hasani

Flinders University



LinkedIn

Dr Kathryn Robison Hasani holds a PhD in Political Science with a focus on governance and policies around space, science, and technology. She is a research affiliate of the Space Power and Policy Applied Research Consortium (SPPARC) and a member of the Jeff Bleich Centre for the US Alliance in Digital Technology, Security & Governance. Dr Robison is also a research fellow at the Australian Centre for Space Governance. She has published on the impact of US space and technology policy on international relations and is currently conducting research on public opinion on space and on the uses of earth observation data in political contexts.



Professor Jill Slay

SmartSatCRC



LinkedIn

I am currently the University of South Australia SmartSat Professorial Chair in Cybersecurity. My work focuses on the context of developing a national technical agenda in satellite cybersecurity and resilience with Industry. In a technical context, I was ranked as being in the top 2% of scientists in the world in ICT Networking and Telecommunications sub field (in 2019) since I was an early adopter of AI and Machine Learning in Cyber Security and Real Time Forensics. I apply these to satellite security. I am also Vice-Chair of the IEEE. I am also Chair of ISC2 and of the Advisory Board of the Defence Employer Partnering Network. Previous appointments have included Optus Chair in Cybersecurity at La Trobe University, and Founding Director of the Australian Centre for Cyber Security at the Australian Defence Force Academy.



Adjunct Professor Nicola Sasanelli AM

Chairman and Founder Agora High-Tech



LinkedIn

Nicola graduated from the University of Bari, Italy with a degree in Electronic Engineering. He started his career as a researcher in microelectronics high-reliability components before being appointed as Scientific Attaché at the Embassy of Italy in Canberra from 2001 to 2008. In 2009, Nicola joined the South Australian Government as a Special Envoy for higher education research and technology transfer to Europe and later became Director for International R&D Collaborations. In September 2017 the South Australian Space Industry Centre was established with Nicola as Director. In 2019 he was instrumental in establishing the SmartSat Cooperative Research Centre and in 2020 he founded, and for about three years was the CEO of the Andy Thomas Space Foundation. In January 2023 he established the 'Agora High-Tech' and is now the current Chairman. 'Agora High-Tech' is a private consultancy company focused on enhancing collaborations and encouraging networking which aim to bring a significant advantage to the innovation processes.



Mr. Gareth Willis

FUGRO CISO



LinkedIn

Gareth is an expert in the field of cyber security, assurance, and trust. With a career spent understanding and protecting critical systems in finance, software, remote operations and space, his interest lies in the tension between systems and reductionist thinking that informs system resilience. Further afield his interest extend to the future of education, movement as a discipline, and how we engage with creativity.

New economies increasingly rely on secure space services, and cyber security represents a new challenge for governments and industries to deliver critical infrastructure services to the nation.

The Australian Space Cyber Forum will provide an excellent opportunity for Australian stakeholders to meet and network with key national and international space cyber experts. Participation in this forum is targeted at researchers, entrepreneurs, academics, private consultants, public employers, and others with an interest in the space and cyber sectors.

The first national edition of the Space Cyber Forum will contain a welcome introduction followed by international speakers and three specific panels. Each panel will include a discussion on approaches to solving real world issues to help organisations understand what the risks are and how to start to mitigate them, now and into the future.

Panel 1 ‘Space Cyber – The increasing use of cyber-attacks in the space domain’, Keynote Speaker: Dr. Daniel Floreani, CyberOps Defence.

The surplus funds of this conference will be used to foster an internship program at Flinders University in the area of Space Cyber.

Sponsorship opportunity info@agora-hightech.com.au

Panel 2 ‘Cyberspace and Outer Space: between regulation and militarisation’, Keynote Speaker: Associate Professor Rodrigo Praino, Jeff Bleich Centre, Flinders University.

Panel 3 ‘Quantum in Space and its Security Impacts’, Keynote Speaker: Dr. Giuseppina Dall’Armi, Research Leader Electronic Warfare Operations Defence Science and Technology Group.

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