ENGINEERS
AUSTRALIA

ASEW

**AUSTRALIAN SYSTEMS
ENGINEERING WORKSHOP**

BRISBANE | 30-31 OCTOBER 2017

WORKSHOP
PROGRAM

SESA

INCOSE

WELCOME

The Systems Engineering Society of Australia (SESA) is proud to host the Australian Systems Engineering Workshop (ASEW) in Brisbane.

ASEW 2017 brings together leading technical, research, government and industry delegates from around Australia and overseas.

SESA is the leading professional body for sharing, promoting and advancing the best of Systems Engineering for the benefit of Australian organisations and community. It is a Technical Society of Engineers Australia and the Australian chapter of the International Council on Systems Engineering (INCOSE).

The ASEW is the annual working meeting of SESA. It provides opportunities for practitioners, researchers, managers and others interested in the field of Systems Engineering to network, develop practice, communicate issues and ideas.

SESA members participate in a number of INCOSE Working Groups which are the fundamental building blocks for the development of technical product that forms the basis of the Systems Engineering Body of Knowledge. In particular, SESA has active engagement in the following INCOSE Working Groups and Initiatives.

- Model-based Concept Design
- Test and Evaluation
- System-of-Systems
- Project Management – Systems Engineering planning
- Telecommunications
- Transport
- Standards
- Systems

The ASEW will provide working group participants with opportunities to come together and create meaningful dialogues by sharing their knowledge through workshops, panel and roundtable sessions and develop ongoing work plans that advance the practice of SE in each functional domain or industry sector.

In addition, this ASEW will host a paper INCOSE Knowledge exam for SESA and EA members desiring to become chartered as an Australian Systems Engineer under the new CASE program recently agreed between Engineers Australia and INCOSE.

On the behalf of SESA, I warmly welcome you to the ASEW in Brisbane.

Bill Parkins
ASEW Conference Chair

KEYNOTE SPEAKERS

Lilanthi Balasingham
Lead Systems Engineering Manager
WSP Parsons Brinckerhoff

Lilanthi Balasingham is the lead Systems Engineer for Intelligent Transport within WSP (Australia) and an INCOSE Industry Ambassador. She is currently the Systems Engineering Manager for the Cooperative Intelligent Transport Systems Pilot as part of the Queensland Department of Transport and Main Roads' Cooperative and Automated Vehicle Initiative. Prior to her engagement with the CAVI program, she was responsible for providing systems engineering management services for TfNSW's Sydney Metro Northwest and City & Southwest projects.

With dual qualifications in electronics engineering and information technology (software engineering & computer science), Lilanthi's technical specialty is in the engineering of information and control systems for public infrastructure, developed over a career spanning over 19 years' in engineering, planning and delivery of complex systems in a range of domains including water, wastewater, rail and road transportation, manufacturing and airport logistics. She is an experienced systems engineering practitioner, combining her technical knowledge and experience with project management and contract management.

Lilanthi's professional experience spans work in Australia, New Zealand and the United Kingdom.

Dr Miranda Blogg
Director, Cooperative and Automated Vehicle Initiative
Department of Transport and Main Roads

Dr Miranda Blogg is the Director of the Cooperative and Automated Vehicle Initiative at the Queensland Department of Transport and Main Roads. Miranda has worked for the department for the last 4 years, and prior to this was a consultant working both in Australia and the United States. Miranda is a registered civil engineer with a PhD in traffic engineering, and has specialised in traffic engineering, transport planning and research for the past 20 years.

Jonathan Luey
Engineering Manager, Parramatta Light Rail
Transport for NSW

Jonathan is an engineering leader with 13 years of experience working in and around the rail industry. His experience ranges from being a safety manager in a juice factory to client side management of projects valued over $1B dollars. His first exposure to systems engineering was at London Underground working on the Piccadilly Line Extension to Heathrow Terminal 5, with that understanding reinforced through design and delivery of the climate control subsystem to the Waratah Trains project.

Recently he has been part of the TfNSW Asset Standards Authority working groups developing and promoting systems engineering practice. Jonathan is now working to embed systems engineering into the Parramatta Light Rail development lifecycle with ARUP as the technical advisor.

Malaeka Nadeem
Systems Engineering Lead
ARUP

Malaeka is the Systems Engineering Lead for ARUP within the Transport team. She has over 10 years Systems Engineering experience in both defence and transport industries, working on major projects including FFG Upgrade Project, Waratah Train Project, CBD and South East Light Rail, Melbourne to Brisbane Inland Rail and recently Sydney Growth Trains as the Systems Engineering Manager.

Malaeka has been working with TfNSW on Parramatta Light Rail since January 2016, generating Business Requirements Specifications, System Requirements Specification and a Systems Architecture Report for the project. Recently she has been working with the Digital Engineering team to support the definition of Asset Classification System to be used to manage digital data on the project.
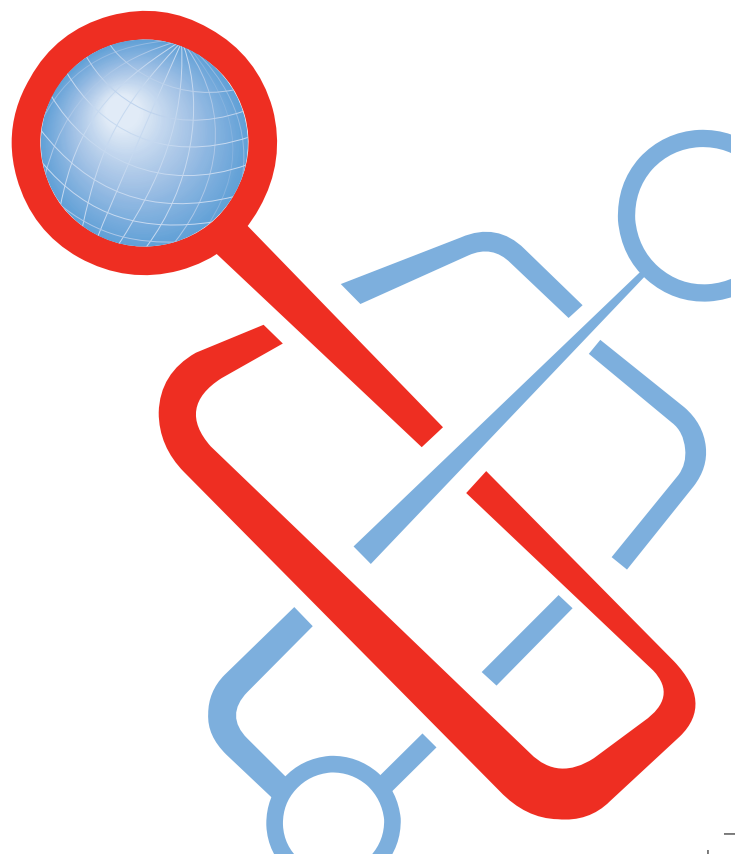
Clive Reeves
Chief Engineer, Defence Engagement
Telstra Enterprise

Clive Reeves is an engineering graduate of the Royal Melbourne Institute of Technology and holds an MBA in Technology Management.

He has served in the Royal Australian Air Force (RAAF), the Australian Government, and Telstra. He has over 20 years of experience in cyber security, system engineering, information operations, and counter-terrorism.

Clive joined Telstra in January 2012. He works in a great team and is responsible for delivering a range of network engineering and information security capabilities and professional services to key Telstra customers. He also manages a secure operations and incident response centre that protects critical customer networks.

He is an active member of a number of industry organisations, including the International Telemanagement Forum.

WORKSHOP PROGRAM

Monday 30 October 2017

8:00am - 8:15am	Registration (Grand Ballroom Foyer)		
8:15am - 8:30am	Welcome - Bill Parkins, ASEW Conference Chair (Grand Ballroom)		
8:30am - 9:30am	**Keynote Presentation 1:** Systems Engineering on the Parramatta Light Rail Jonathan Luey, Transport for NSW Malaeka Nadeem, ARUP (Grand Ballroom)		
9:30am - 10:00am	**Morning Tea (Grand Ballroom Foyer)**		

	Grand Ballroom	**Atcherley Room**	**Fraser Room**
10:00am - 11:00am	**Workshop:** Decision Making in complex systems **Facilitators:** Luke Brown and Malcolm Tutty	**Presentation:** Inland Rail Project Management - Benefits & Risks **Speaker:** Simon Thomas	**Tutorial:** Capability Lifecycle **Speakers:** Mike Ryan and Shari Soutberg
11:00am - 12:00pm		**Workshop:** SMART vs SMARTISH requirements **Facilitators:** Nick Facchina and Gareth Hughes	
12:00pm - 1:00pm	**Lunch (Grand Ballroom Foyer)**		

	Grand Ballroom	**Atcherley Room**	**Fraser Room**
1:00pm - 3:00pm	**Workshop:** First Principles Review - Where now in SE? **Facilitator:** Kerry Lunney **Work-shoppers:** Luke Brown, Bill Parkins, Mike Ryan and Shaun Wilson	**Panel session:** Implementation of Systems Engineering on Transport Projects **Panellists:** Ricky Clayton, Jonathan Luey, John Nasr, Daniel Powell and Helen Williams	**Workshop:** Healthcare Working Group - Systems Engineering applications in medical devices **Facilitator:** Andrew Madry
3:00pm - 3:30pm	**Afternoon Tea (Grand Ballroom Foyer)**		

	Grand Ballroom	**Atcherley Room**	**Queen Adelaide Room**
3:30pm - 4:30pm	**Workshop:** Effective Systems Engineering and Project Management Integration **Facilitator:** Angela Tuffley	**Roundtable:** Systems Engineering for Connected & Autonomous Vehicles **Facilitator:** Malaeka Nadeem	**Exam:** INCOSE Knowledge Exam **Invigilator:** Wayne Biden
4:30pm - 5:30pm	**Keynote Presentation 2:** Cooperative and Automated Vehicles - the systems challenges Dr Miranda Blogg, Queensland Department of Transport and Main Roads Lilanthi Balasingham, WSP Australia (Grand Ballroom)		
5:30pm	Closing Remarks - Bill Parkins, ASEW Conference Chair (Grand Ballroom)		
5:40pm	Day One Concludes		
7:00pm	ASEW 2017 Workshop Dinner (Blackbird Bar & Grill, Riverside Centre, 123 Eagle Street, Brisbane)		

Tuesday 31 October 2017

8:00am - 8:15am	Registration (Grand Ballroom Foyer)		
8:15am - 8:30am	Welcome - Bill Parkins, ASEW Conference Chair (Grand Ballroom)		

	Grand Ballroom	**Atcherley Room**	**Fraser Room**
8:30am - 9:30am	**Workshop:** Telecommunications Systems Engineering - Software-Defined Network Case Study **Facilitator:** John Risson	**Workshop:** INCOSE System - Software Interface Working Group **Facilitator:** Sarah Sheard (via teleconference)	**Workshop:** Systems Summit on Critical Problem Definitions **Facilitator:** Roger McCowan
9:30am - 10:00am	**Morning Tea (Grand Ballroom Foyer)**		
10:00am - 11:00am	**Tutorial:** Modelling for Conceptual Design **Speaker:** Sondoss El Sawah	**Tutorial:** Systems Engineering, Modelling and Simulation **Speaker:** Jawahar Bhalla	**Workshop:** Systems Summit on Critical Problem Definitions **Facilitator:** Roger McCowan
11:00am - 12:00pm			
12:00pm - 1:00pm	**Lunch (Grand Ballroom Foyer)**		
1:00pm - 3:00pm	**Workshop:** Modelling across the Contract Boundary **Facilitator:** Jon Hallett	**Tutorial:** Decision Analysis & Lifecycle **Speaker:** Bill Parkins	**Workshop:** Systems Summit on Critical Problem Definitions **Facilitator:** Roger McCowan
3:00pm - 3:30pm	**Afternoon tea (Grand Ballroom Foyer)**		
3:30pm - 4:15pm	**Keynote Presentation 3:** Telecomms - Security Clive Reeves, Telstra Enterprise (Grand Ballroom)		
4:15pm - 4:30pm	Closing Remarks - Bill Parkins, ASEW Conference Chair (Grand Ballroom)		
4:30pm	Workshop concludes		