

# Defence and Industry Research Symposium

Tuesday 8 August 2023 | National Wine Centre of Australia, Adelaide

Hosted by



**University of  
 South Australia**

**SPEAKERS INCLUDE:**



MAJGEN Chris Field, *Special Advisor to the CDF on Force Structure, Australian Defence Force*



The Hon Susan Close MP, *Deputy Premier and Minister for Defence and Space Industries, South Australia*



COL Tim Orders, *Deputy Commander 9th Brigade, Australian Army*



Dr Robert Hunjet, *Program Leader Artificial Intelligence, Defence Science and Technology Group*



Dr Anne Collins, *Chief Operations Officer, Sementis*



John Towers, *LM Fellow, Lockheed Martin Australia*



Horden Wiltshire, *CEO, Acacia Systems*



Dr Margaret Law, *General Manager, Technology Development & Commercialisation, Defence Trailblazer*



Thomas Hastwell, *Chief Commercial Officer, Lumination*



Dr Peter Schumacher, *Design Lead, Studio for Complex Human Environmental Design, University of South Australia*



MAJGEN Jason Walk, *Commander Joint Logistics, Joint Capability Group, Australian Defence Force*



Dr Peter Shoubridge, *Chief Land Division, Defence Science and Technology Group*



Sumen Rai, *Director, Defence Innovation Partnerships*



Jeremy Satchell, *Head of Global Access Program, BAE Systems*



Al Jawhari, *Co-Founder and Group CEO, Starke-AMG*



Greg Wicks, *Manager Strategic Innovation, Nova Systems*



Dr Mark Hodge, *Chief Executive Officer, DMTC Limited*



Dr Mel McDowall, *Director, Defence Artificial Intelligence Research Network*



Prof Siobhan Banks, *Behaviour-Brain-Body Research Centre, University of South Australia*



Prof Colin Hall, *Future Industries Institute, University of South Australia*

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## 8:50 OPENING | Opening remarks from the Chair

Sumen Rai, *Director, Defence Innovation Partnerships*

## 9:00 Welcome Address

Peter Stevens, *Director Enterprise Partnerships, University of South Australia*

## 9:10 DEPUTY PREMIER'S ADDRESS

### Defence innovation – an underpinning advantage

The Hon Susan Close MP,  
Deputy Premier and Minister for Defence and Space Industries, South Australia

## 9:40 KEYNOTE ADDRESS

### Science and Research - a key enabler for the Defence Enterprise

- How the ADF's Integrated Campaigning concept enables the ADF to build, unlock, maximise and apply power through working with others to achieve more
- The connection between strategy, operating environments, concepts, and doctrine to create ADF force options
- How ADF concepts unify the ADF and enable Australia's security
- How ADF missions interconnect to achieve campaign objectives and effects

MAJGEN Chris Field, *Special Advisor to the CDF on Force Structure, Australian Defence Force*

## 10:10 Drivers for military innovation and the need for military, industry and academia collaboration

COL Tim Orders, *Deputy Commander, 9th Brigade, Australian Army*

## 10:30 PANEL DISCUSSION

### Collaboration a key for defence- from research to capability

- The art of forming long-term successful partnerships
- Establishing the KPIS to determine progress and outcomes
- Navigating the transition from research to implementation and commerciality

Dr Peter Shoubridge, *Chief Land Division, Defence Science and Technology Group*

Dr Mark Hodge, *Chief Executive Officer, DMTC Limited*

Dr Margaret Law, *General Manager, Technology Development & Commercialisation, Defence Trailblazer*

11:10 Morning tea

## CASE STUDIES IN COLLABORATION

### 11:40 Test and evaluation model for planning and architecture optimisation

- The value of academic relationship for Nova Systems, and why collaboration with the University of South Australia on this particular research topic is important
- Challenges mid-tier (and smaller) commercial organisations might face in research engagements

Greg Wicks, *Manager Strategic Innovation, Nova Systems*

### 12:00 Challenges and opportunities of developing a novel viral vector vaccine platform in Australia

- "Spin-in" model
- Crossing the chasm from Research to Development
- Accessing local biologics development and biomanufacturing expertise

Dr Anne Collins, *Chief Operations Officer, Sementis*

12:20 Lunch

## 1:20 KEYNOTE ADDRESS

### Overcoming current and future challenges in logistics

- What are the major challenges facing Joint Logistics and what's on the horizon?
- What role can industry and research play in assisting logistics support?
- The challenge of balancing affordability with investment in supply chain resilience and stock depth
- Highlights of current collaborative approaches in logistics support

MAJGEN Jason Walk, *Commander Joint Logistics, Joint Capability Group, Australian Defence Force*

### 1:50 Development of Human Factors Engineering (HFE) design tools for control centres

- How traditional HFE methods constrain an ability to meet current schedule pressures
- Establishing new tools to provide insight into warfighter needs
- Translating these needs into engineering design guidance
- An overview of research undertaken by LMA and UniSA to overcome these issues and ensure that HFE output is established early in the engineering process to guide system design

John Towers, *LM Fellow, Lockheed Martin Australia*

Dr Peter Schumacher, *Design Lead, Studio for Complex Human Environmental Design, University of South Australia*



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## CASE STUDIES IN COLLABORATION

### 2:10 Integrating physiological and tactical data to improve Command decision making

- Update on the collaboration between the University and South Australia and Acacia Systems to better understand submarine Command decision making
- Outcomes of the early research
- Outlining how it is envisaged that this will be implemented aboard Collins class submarines

Horden Wiltshire, *CEO, Acacia Systems*

Prof Siobhan Banks, *Behaviour-Brain-Body Research Centre, University of South Australia*

### 2:30 Advancing performance through advanced materials

- Collaboration from the Industry perspective
- Collaboration from the University perspective
- Future material challenges

Al Jawhari, *Co-Founder and Group CEO, Starke-AMG*

Prof Colin Hall, *Future Industries Institute, University of South Australia*

2:50 Afternoon tea

## CASE STUDIES IN COLLABORATION

### 3:20 Mobile AI-enabled VR training and simulation for the ADF

Thomas Hastwell, *Chief Commercial Officer, Lumination*

Jeremy Satchell, *Head of Global Access Program, BAE Systems*

### 3:40 DAIRNet: Management and Coordination of the Defence AI Research Network

- Overview of Defence in AI and current issues engaging with academia
- Overview of DAIRNET's objectives, current activities
- Building and expanding the Defence AI ecosystem

Dr Mel McDowall, *Director,*

**Defence Artificial Intelligence Research Network**

Dr Robert Hunjet, *Program Leader Artificial Intelligence, Defence Science and Technology Group*

4:00 End of symposium and networking drinks



## SPONSORSHIP AND EXHIBITION OPPORTUNITIES

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For further information, please contact:

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## VENUE DETAILS

### National Wine Centre of Australia

Corner of Hackney Rd &, Botanic Rd, SA 5000

Phone: (08) 8313 3355



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