

Call for Submissions

Defence Human Sciences Symposium 2019

Human Sciences Impact for the Warfighter

19 and 20 November 2019

University of Canberra, ACT

Hosted by Defence Science and Technology and the University of Canberra

The Defence Human Sciences Symposium (DHSS) is the principal Australian forum for those interested in the application of human sciences research to enhance Defence capability.

Symposium Theme. The theme for this year's symposium is *"Human Sciences Impact for the Warfighter"*. Defence is dependent on government departments like Defence Science and Technology, private sector organisations and universities to conduct research and development activities that ultimately affect the way that that Defence fulfils its roles and missions. Having an impact in tomorrow's complex Defence environment will be a key challenge for human sciences because of the complex nature of modern operations.

The Chief Defence Scientist, Professor Tanya Monro echoes the need for impactful research:

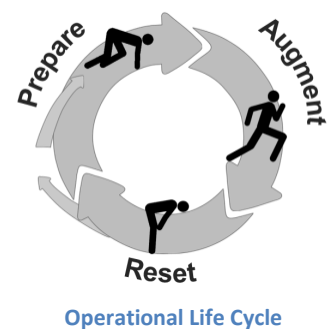
"What I'm really passionate about is creating new knowledge — or new science, new technology — but pulling it through to have an impact, to make a difference."

The Australian, 19 May 2019

The Black Box flight recorder (invented by "DST" scientist Dr David Warren) shows how defence funded research can make an enormous difference. Fitted to tens of thousands of aircraft since the 1960s the Back Box has been integral to improving aircraft safety. More recently, the development and delivery of new body armour variants through the [Diggerworks](#) project have undoubtedly saved soldiers' lives. Deployed DST scientists are also having an impact by providing on-the-ground solutions to difficult problems.

Human performance research is delivering impact across a range of domains, including the Future Submarine, Future Frigate and Joint Strike Fighter programs. This research will have positive impacts at all phases of the warfighter's operational life cycle at the individual, team and organisational levels.

The Defence White Paper (2016) presents a picture of how complex the current and future Defence environment will be. Increased tempo of operations, cyber warfare, emerging technologies and fewer recruits are anticipated. It is clear that enhanced human performance is a key area that should be developed. Recent Defence initiatives calling for collaboration between Defence and academia such as the Human Performance Research Network (HPRnet), the Research Network in Undersea Decision Superiority, and the Intelligent Decision Superiority Research Network all point to the increasing demand for human sciences research and development.



The success of these initiatives will be judged by their impact on Defence capability. We therefore need to question whether our existing methods, tools and techniques are up to the task of supporting the delivery of Defence impacts, and identify what needs to be done to ensure that human sciences research and development in the future is up to the challenge of delivering impact. This year's DHSS will address these and other questions by providing a showcase for research programs that have and will deliver impact to the warfighter.

Preliminary Program. The DHSS program will take place over two days and will include a number of keynote speakers as well as presentations. Presentations will be held at the Ann Harding Conference Centre, University of Canberra, 24 University Dr S, Bruce ACT 2617. The full program will be made available closer to the date.

The DHSS Organising Committee is aiming for a diverse program. Abstract submissions are invited for presentations, in a wide range of topics including, but not limited to, the following.

Defence focused themes

- Future technologies (including Biotechnology)
- Health and Wellbeing
- Resilience
- Support to operations
- Trusted Autonomous Systems

Human Performance themes

- Anthropometry
- Cognitive enhancement and augmentation
- Cognitive performance: From Perception to Decision Making
- Food and nutrition
- Physical augmentation (assistive technologies)
- Physiology

Human Systems Analysis themes

- Ergonomics and Human Systems Engineering
- Human Systems Integration
- Training and Education

Human Sciences in National Security themes

- Cyber security
- Evaluation of software tools and techniques
- Mathematical and statistical modelling of social processes
- Social and cultural analysis of groups
- Social media exploitation

Methodologies themes

- Ethics
- Measurements and Metrics
- Modelling and Simulation
- Multidisciplinary Research
- Tools and Techniques

Organisational Effectiveness themes

- Health and Safety
- Organisational Culture
- Personnel Selection and Retention

The above topics are indicative rather than all-inclusive. All submissions that directly relate to delivering human sciences impact for the warfighter will be considered.

Extended Abstract Submissions

- Extended Abstracts of no more than 500 words are to be submitted by **Monday 2nd September** via [EasyChair](#). Full papers are not required.
- Submission instructions and abstract template will be provided closer to the date.
- The review committee will accept submissions describing theoretical and applied research, as well as discussion papers, and papers describing work-in-progress.
- All submissions should be Unclassified.

Registration. Registration costs and details will be announced soon. It is expected that delegate numbers will be limited to 150.

HPRnet Symposium. Delegates interested in hearing more about the Human Performance Research network can attend the [HPRnet Symposium](#) which will be held on 21 and 22 November, also at the University of Canberra.

Contacts. If you have any enquiries please email DHSS@dst.defence.gov.au or contact the organising committee:

- David Crone +61 8 738 93246 David.Crone@dst.defence.gov.au
- Sam Huf +61 8 955 33571 Samuel.huf@dst.defence.gov.au
- Chris Best +61 3 9626 7252 Christopher.Best@dst.defence.gov.au
- Steven Talbot +61 8 73894242 Steven.Talbot@dst.defence.gov.au,

HPRnet enquiries

- Tom Radtke +61 3 962 68004 Tom.Radtke@dst.defence.gov.au