

DHSS Program, Tuesday 19th November	
0845 – 0900	Welcome – Nick Beagley [Research leader: Land Human Sciences]
0900 – 0940	Opening Keynote Address GPCAPT Jerome Reid Director, Plan Jericho, RAAF
0940-1000	Morning Tea
Session 1– Human-Systems Integration	
1000 – 1020	Jayden Greenwell-Barnden, Angela Bender, Shayne Loft, Vanessa Bowden, Susannah Whitney, Ottmar Lipp and Troy Visser. One size fits one: The benefits of customizing automation to accommodate differences in operator multitasking
1020 – 1040	Anna Ma-Wyatt, Justin Fidock, David Badcock, Siobhan Banks, James Baumeister, Heidi Long, Jessica O’Rielly, Ben Kilsby, Shane Ploenges, O. Scott Gwinn, Mike Nicholls and Allison McKendrick. Informing the design of next generation Augmented Reality: The effect of stereo vision and fatigue on performance in a human-autonomy teaming task
1140 – 1100	Cassandra Heffernan and Kingsley Fletcher. Integration of Maritime Tactical Uninhabited Aerial Systems into a Maritime Task Group: Integration of Sensor Data and Payload Control
1120 - 1140	Stephanie Michailovs, Stephen Pond, Megan Schmitt, Jessica Irons, Matt Stoker, Troy Visser, Sam Huf and Shayne Loft. Increased Information Integration in Future Undersea Command and Control
1140 – 1200	Ben Elix and Neelam Naikar. Designing for Adaptation in Workers’ Individual Behaviours and Collective Structures with Cognitive Work Analysis: Case Study of the Diagram of Work Organisation Possibilities
1200 – 1300	Lunch
Session 2– Assistive and Protective Technologies	
1300-1320	Rob Davidson, Celeste Coltman and Mark Pickering. A novel method for determining thoraco-abdominal organ location using low dose X-ray: Applications for body armour design.
1320 – 1340	Wayne Spratford and Phil Newman. A Workload Monitoring System That Calculates Neck Forces In Fast Jet Pilots
1340 – 1400	Celeste Coltman and Richard Molloy. Ergonomic fit of current in-service ADF body armour on female soldiers
1400 – 1420	Shahid Hussain. Development of Intrinsically Compliant Robotic Orthoses for Rehabilitation of Warfighters
1420-1425	Brief Intermission
Session 3– Measurement and Prediction	
1425 – 1445	Michelle Magee, Janet Fletcher, Paul Maruff and Adam P Vogel. Speech biometric analysis can be used to detect performance impairments under conditions of sustained wakefulness.
1445 – 1505	Lisa Zhang, Eugene Aidman, Bruce Burns and Sabina Kleitman. Measuring individual differences in adaptability: Integrating self-report and performance-based assessment
1505 – 1525	Michael David Wilson, Timothy Ballard and Karina Jorritsma. Developing the ‘Fatigue Impairment and Performance Simulator’: A Computational Implementation and Application in a Naval Context
1525 – 1545	Danny Boga. Predicting potential for future Cyber Warfare Operators
1545 – 1605	Melanie Cooper, Philip Temby, Brett Murdoch and David Said. Examining the Utility of Cognitive and Psychological Assessments for Special Forces Selection
1605-1645	Poster Session & Afternoon Tea

DHSS Program, Tuesday 19th November continued ...	
Session 4– Health and Performance	
1645– 1705	Matthew Cooke, Stephen Keenan, Shakuntla Gondalia, Amirul Islam and Regina Belski. Using the gut microbiome to predict changes in muscle mass and function: Preliminary findings
1705 – 1725	Bradley Baker, Bianka Probert, Diane Pomeroy, Julia Carins and Katie Tooley. Prevalence and Predictors of Dietary and Nutritional Supplement Use in the Australian Army: A Cross-Sectional Survey
1725 – 1745	Katie Tooley. Can the Human Microbiota enhance Cognition for the warfighter?: A Scoping Study
1900 – 2200	Conference Dinner

DHSS Program, Wednesday 20th November	
Session 5– Cognitive Processes and Augmentation	
0830 – 0850	Amy Jarvis, Philip Temby, Benjamin Hoggan and Anna Ma-Wyatt. Multiple object tracking ability, working memory capacity and individual differences as predictors of complex task performance
0850 – 0910	Hannah Filmer and Paul Dux. For a minute, there I lost myself... dosage dependent increases in mind wandering via prefrontal tDCS
0910 – 0930	Troy Visser and Susannah Whitney. “Are we there yet?” Perceiving, comprehending and projecting lessons learnt from SA research
0930 – 0950	Luke Thiele and Philip Temby. Developing Army Decision Support Tools from Problem-Solving Meta-Strategies Mined from the Observed Reasoning of Tactical Experts
0950 – 1010	Gary Coombs. A Review of Intelligent Decision Support Systems for Land Tactical Planning
1010 – 1030	Morning Tea
Session 6– Training and Simulation	
1030 – 1050	Ben Rattray, Luca Filipas, Kristy Martin, Joseph Northey, Antonio La Torre and Richard Keegan. Endurance training improves tolerance to mental exertion in untrained individuals
1050 – 1110	Stephanie Black, Susannah Whitney, Angela Bender, Ottmar Lipp, Shayne Loft and Troy Visser. “There’s an app for that”: The effect of app-based multitasking training on situation awareness and performance
1110 – 1130	Pinata Sessoms. Large-Scale Virtual Reality Systems for Integrated Physical and Cognitive Tasking of the Warfighter
1130 – 1150	Michael Chapman, Philip Temby, Benjamin Hoggan and Daniel Gucciardi. A Longitudinal, Qualitative Study of Team Resilience Emergence in Newly Formed Teams Undertaking Military Training
1150 – 1210	SPECIAL PRESENTATION: Helen Pongracic, Adella Bhaskara, James Brooks, Marcin Nowina-Krowicki, Sandra Lambeth, Luke Marsh, Glenn Moy, Ben Rice, Christopher Shanahan, Julian Vince, Steve Wark, Darren Williams and Michael Skinner. Autonomy Strategic Challenge: Achievements at Autonomous Warrior 2018
1210 – 1300	Lunch
Session 7– Social and Environmental Stressors	
1300 – 1320	Julien Periard. Heat tolerance testing: moving on beyond a single test
1320 – 1340	Ruchi Sinha. Team Power Asymmetry, Egalitarianism, and Team Learning Climate: The Moderating Role of Environmental Hardship
1340 – 1400	Steven Talbot and Tiffany Fischer. Vulnerability to Influence: A National Level Framework for Cross-Case Comparison
1400 – 1420	Kristy Martin, Andrew Flood, Julien Periard, Richard Keegan, David Pyne and Ben Rattray. Traits, states and behaviours that predict cognitive resilience
1420 - 1520	Panel Discussion: Human sciences delivering impact for the warfighter
1520 – 1530	Symposium Close & Awards