Axiamo PADIS 2.0
Long Term Activity Monitoring in Soldiers

Axiamo Ltd. is an innovative Swiss high-tech company dedicated to motion tracking for physical performances in sports and military service. Axiamo PADIS 2.0 is the next generation of long term soldier activity monitoring. The system is designed to monitor large squads of soldiers using inertial motion and heart rate sensors. High wearing comfort and ease of use are the main design principles of this product. It requires minimal user interaction for setup and data evaluation. Fully automatic data processing and comprehensive visualization reveals the squads physical activities and energy expenditure levels with minimal effort for the operator.

Contact:
info@axiamo.com  www.axiamo.com

Our Sponsors

ICSPP2017 gratefully acknowledges the generous support from its sponsors

Gold Sponsors

Axiamo Ltd. is an innovative Swiss high-tech company dedicated to motion tracking for physical performances in sports and military service. Axiamo PADIS 2.0 is the next generation of long term soldier activity monitoring. The system is designed to monitor large squads of soldiers using inertial motion and heart rate sensors. High wearing comfort and ease of use are the main design principles of this product. It requires minimal user interaction for setup and data evaluation. Fully automatic data processing and comprehensive visualization reveals the squads physical activities and energy expenditure levels with minimal effort for the operator.

www.axiamo.com

IsoTechnology has provided the most effective medical systems for assessing closed head injuries and soldier wellness. Fully integrating into military software platforms our highly portable units can be easily customized. A 5 minute Balance and Cognitive test can be combined with additional physiological measurements provided from a portable diagnostic unit. Secure online transmission of soldier information enables online medical consultancy if required and provision of individualized Medevac care (soldier blood type, medical history already available). Our additional technologies enable absolute identification of personnel at entry points and within camps, prisons and hospitals.

isotechnology.net

Silver Sponsor

IMeasureU help tactical athletes win by minimizing injury risk and optimizing return to combat. We enable this via precise measurement and management of body and limb load in the field. The body is more than a single unit of mass so we measure impacts and load where they occur, on multiple body parts, to help soldiers, physiotherapists and trainers better understand and manage mechanical load. We are more than just scientists, mathematicians, engineers and software developers; we are athletes, coaches and practitioners with deep experience in biomechanics, machine learning and sports science’

www.immeasureu.com
COGNITIVE BALANCE SCORE

CBS

You want your soldiers to perform at their most efficient level to defend your country’s interests.

Your soldiers and their families expect you to enable this to happen by providing the best training, weaponry and peak physical performance possible.

CBS makes this possible by non-invasively monitoring your soldier’s cognitive and balance status = FIT TO FIGHT

In 5 minutes know that your soldier is ready for combat.

Portable – Robust – Effective

Developed since 2000 and down range tested.

IsoTechnology
“The Leading Edge in Technology”

http://www.isotechnology.net

Organising Committee
Dr Dan Billing (Co-Chair)
Dr Jace Drain (Co-Chair)
Professor Bradley Nindl
Mr Craig Butler
Professor Yoram Epstein
Dr Graham Fordy
Mr Patrick Gagnon
Dr Herb Groeller
Associate Professor Jason Kai Wei Lee
Associate Professor Rob Orr
Associate Professor Nigel Taylor

ICSPP2017 Congress Secretariat
ICMS Australasia
GPO Box 5005
South Melbourne
VIC 3205 Australia

P: +61 (0) 3 9682 0500
F: +61 (0) 3 9682 0344
info@icspp-australia2017.org
General Information

ATMs
ATMs are located adjacent to the Convention Centre entry and on the Exhibition Centre concourse.

Business Centre
A business centre with reception, secretarial support and business equipment for sale and photocopying services is located off the Clarendon Street entrance to the Exhibition Centre.

Catering
Morning tea, lunch and afternoon tea will be available during the Congress in the Exhibition area and is included in your registration fee. Please refer to the program for catering times.

Cloakroom and Luggage Storage
Located off the main Convention Centre foyer, providing storage for visitors’ and delegates’ belongings.

Dietary Requirements
If you have advised the Congress Secretariat of special dietary requirements, please speak to a member of the catering staff during the designated break times. Catering staff will have a full list of those with special dietary requirements.

Emergency Details
In an emergency telephone 000 for Ambulance, Fire Service or Police. Refer to the Melbourne Convention and Exhibition Centre emergency procedures document included in your Congress satchel for detailed information.

Exhibition
The Congress exhibition will be located in the Foyer, Level 1 at the Melbourne Convention and Exhibition Centre (MCEC) and will be open at the following times:
Tuesday 0700 - 1800
Wednesday 0800 - 1800
Thursday 0800 - 1830
Friday 0800 - 1800

Filming
A reminder that some of the Congress sessions will be filmed for livestreaming and archiving. By attending the Congress, you accept the potential that your image may be used in this way. For further details please contact info@icspp-australia2017.org.

First Aid
The Melbourne Convention and Exhibition Centre’s main first aid room is located off the convention centre foyer. A smaller first aid room is located off the exhibition centre foyer. Contact the Registration Desk, or the Melbourne Convention and Exhibition Centre security for further details.

Internet
Free wireless internet is available for conference delegates. To connect:
• Select the M Connect wireless service as you would normally do using your wireless device
• Open your preferred internet web browser (such as Safari, Firefox, Chrome, Internet Explorer)
• The M Connect log in page will appear in your browser
• Read the terms and conditions page and choose to agree in order to connect
• Click “Connect Now”
• Commence using M Connect
You will need to resubscribe (free of charge) to the service after 12 hours, or once the 100MB download limit is reached.

Lost and Found
Any found item may be turned into the Registration Desk located in the Exhibition Area. Enquiries about lost items can be directed there.

Media
Please note that specialist media may be present at the Congress. Please contact info@icspp-australia2017.org if you have any concerns.

Mobile Phones
Delegates are asked to switch off their mobile phones or set them to silent when in sessions.

Name Badges
For security purposes, delegates, speakers and exhibitors are asked to wear their name badges to all sessions. Entrance into sessions is restricted to registered delegates only.

Program
The Congress Organising Committee reserves the right to change the Congress program at any time without notice. Please note that this program was accurate at the time of printing.

Registration Desk
The registration desk is located in the Foyer, Level 1 at the Melbourne Convention and Exhibition Centre (MCEC). The registration desk will be open at the following times:
Tuesday 0700 - 1800
Wednesday 0800 - 1800
Thursday 0800 - 1830
Friday 0800 - 1800

Security
Please ensure that you take all items of value with you at all times when leaving a room. Do not leave bags or laptops unattended. Refer to Cloakroom and Luggage Storage.

Speakers
Please ensure that you are available in your presentation room at least 15 minutes prior to the start of the session to meet with the Session Chair. Speakers are requested to report to the Speaker Preparation Room at least 2 hours before their scheduled presentation with their presentation on a USB to allow sufficient time to upload and check their audiovisual presentations with the technician. The Speakers Preparation Room is located in Room 107. All oral presentations uploaded in the speaker ready room will be archived. By attending the Congress, you accept that your presentation may be archived. For further details or if you have any concern regarding this please contact info@icspp-australia2017.org

Telephones
Public telephones are located on all levels of the Convention Centre and in the Exhibition Centre foyer and concourse.
Venue Map

Level 1

POSTERS

EXHIBITION

PLENARY

REGISTRATION

Balcony access to Plenary
## Program
Tuesday 28 November 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.00</td>
<td>Registration Open</td>
</tr>
<tr>
<td>08.15-09.00</td>
<td>Congress Opening  &lt;br&gt; Indigenous Official Welcome to Country  &lt;br&gt; Opening Remarks, Dr Ian Dagley  &lt;br&gt; Scientific Program and House Keeping  &lt;br&gt; Congress Chairs, Dr Dan Billing and Dr Jace Drain  &lt;br&gt; Invited keynote MAJGEN Simone Wilkie</td>
</tr>
<tr>
<td>09.00-10.00</td>
<td>Invited keynote: Bruce Jones, USA  &lt;br&gt; Musculoskeletal Injury Prevention in the U.S. Army: Evolution of the Science and Public Health Process</td>
</tr>
<tr>
<td>10.00-10.30</td>
<td>Morning Tea</td>
</tr>
<tr>
<td>10.30-12.30</td>
<td>Featured Science Session 1 - Load carriage for the warfighter and tactical athlete: strategies for load carriage optimization  &lt;br&gt; Session chair: Chris Connaboy, USA  &lt;br&gt; A review of the literature on the effect of load carriage on exercise induced muscle damage and potential links to musculoskeletal injury risk mitigation  &lt;br&gt; Sam Blacker, UK  &lt;br&gt; Efficacy of unilateral strength training for enhancing load carriage performance  &lt;br&gt; Chris Connaboy, USA  &lt;br&gt; Methodologies for assessing the effects of soldier load on biomechanical, physical and cognitive performance  &lt;br&gt; Leif Hasselquist, USA  &lt;br&gt; Duty loads carried by the LA sheriff’s department officers  &lt;br&gt; Joe Dulla, USA  &lt;br&gt; Australian tactical loads and their operational impacts  &lt;br&gt; Robin Orr, Australia</td>
</tr>
<tr>
<td></td>
<td>Featured Science Session 2 - Occupational and operational physical tests and standards for the military - international status and lessons learned  &lt;br&gt; Session chair: Deborah Gebhardt, USA  &lt;br&gt; Development of criterion measure task simulations for physically demanding tasks  &lt;br&gt; Peter Frykman, USA and Stephen Myers, UK  &lt;br&gt; Physical tests and standards from selection through training to operations  &lt;br&gt; Neal Baumgartner, USA  &lt;br&gt; Physical employment standards developed for the Armed Forces - a summary of the international status  &lt;br&gt; Sam Blacker, UK  &lt;br&gt; Pre-enlistment physical employment standards screening of US Army recruits  &lt;br&gt; Marilyn Sharp, USA  &lt;br&gt; Physical employment standards - more than a set of discrete tests  &lt;br&gt; Jace Drain, Australia  &lt;br&gt; A new physical employment standard for the Canadian Armed forces, 3 years later: a reflection on implementation and reporting challenges  &lt;br&gt; Tara Reilly, Canada</td>
</tr>
</tbody>
</table>
### Program

**Tuesday 28 November 2017**

<table>
<thead>
<tr>
<th>12.30-13.30</th>
<th>LUNCH</th>
<th>13.30-15.00</th>
</tr>
</thead>
</table>
| Room 103    | **Featured Science Session 3** - Physical fitness trends in soldiers – implications for recruitment and combat readiness  
*Session chair: Jani Vaara, Finland* | Room 104 | **Featured Science Session 5** - Sleep optimization to prevent sleep loss  
*Session chair: Fabien Sauvet, France* |
| Room 105    | **Free Communication Session 1** - Injury prevention 1  
*Session chair: Yoram Epstein, Israel* | Room 106 | **Featured Science Session 4** - Gender integration is just an application of human variability: biological aspects of gender integration on military performance  
*Session chair: Matthew Tenan, USA* |

**Physical fitness of German Soldiers 2010-2015**  
*Dieter Leyk, Germany*

Secular trends in the physical fitness of United States Army recruits, 1975-2013  
*Joseph Knapik, USA*

Physical fitness trends in Finnish male conscripts between 1975 and 2015 and female recruits during 2005-2015  
*Matti Santtila, Finland*

Physical activity and physical fitness trends in Finnish reservists during 2003-2015  
*Jani Vaara, Finland*

Impact of work and rest schedules on performance and mood in members of the US military  
*Nita Lewis Shattuck, USA*

A comparison of alternative work and rest schedules on Canadian patrol frigates and their impact on sleep, mood and neurobehavioural performance  
*Wendy Sullivan-Kwantes, Canada*

Performance during unplanned night time awakenings and following disrupted sleep  
*Rachel Markwald, USA*

Differential benefits of sleep extension on sustained attention and executive processes during and after an acute total sleep deprivation  
*Arnaud Rabat, France*

Benefits of sleep extension on hormonal and immune-inflammatory responses during an acute sleep deprivation  
*Fabien Sauvet, France*

Upgrading naps in occupational settings: lengthening and deepening sleep naps with hypnotic suggestions  
*Eden Debellemiere, France*

The association of prospective upper extremity musculoskeletal injuries with body composition and physiological measures in Special Operation Forces  
*Kim Beals, USA*

Low back pain in the Marine training course: a study of incidence, risk factors and occupational physical activity  
*Andreas Monnier, Sweden*

Evaluation of physical screening tests for military recruits – a prospective cohort study  
*Chen Fleischmann, Israel*

Upper limb musculoskeletal overuse injuries among female soldiers working with dogs  
*Ran Yanovich, Israel*

Musculoskeletal, physiological, and balance characteristics associated with prospective lower extremity injury type in Special Operations Forces  
*Meleesa Wohleber, USA*

Injury risk in staff cadets is associated with performance in the Army basic fitness assessment and with gender  
*Jeremy Witchalls, Australia*

Sex hormones and the nervous system, do they matter for physical performance?  
*Matthew Tenan, USA*

Effect of female sex hormones on muscle function and resistance training regimens  
*Xanne Janse de Jonge, Australia*

Oral contraceptive use and adaptations to exercise training  
*Mia Schaumberg, Australia*

Metabolic responses to exercise in male and female Warfighters: implications on operational nutrition  
*Stefan Pasiakos, USA*

Sex differences in thermoregulation: implications for physical performance  
*Sarah Jackson, UK*
## Program

**Tuesday 28 November 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Room 103</th>
<th>Room 104</th>
<th>Room 105/106</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>15.00-15.30</strong></td>
<td><strong>AFTERNOON TEA</strong></td>
<td><strong>AFTERNOON TEA</strong></td>
<td><strong>Free Communication Session 2 - Occupational performance and testing 1</strong></td>
</tr>
<tr>
<td><strong>15.30-16.30</strong></td>
<td><strong>Thematic Oral Poster Session 1 - Injury prevention</strong></td>
<td><strong>Thematic Oral Poster Session 2 - Health and physical training</strong></td>
<td><strong>Influence of neuromuscular factors and body composition on anaerobic simulated warfighter task performance</strong></td>
</tr>
<tr>
<td></td>
<td><em>Session chair: Rodney Pope, Australia</em></td>
<td><em>Session chair: Michael Spivock, Canada</em></td>
<td><em>Tommi Ojanen, Finland</em></td>
</tr>
<tr>
<td></td>
<td>The effect of hormonal contraceptive use on tibial adaptations to arduous training</td>
<td>Royal New Zealand Navy nutrition, health and wellbeing intervention</td>
<td>Baseline soldier physical readiness requirements study</td>
</tr>
<tr>
<td></td>
<td><strong>Rachel Izard, UK</strong></td>
<td><strong>Helen Kilding, New Zealand</strong></td>
<td><em>Whitfield East, USA</em></td>
</tr>
<tr>
<td></td>
<td>Injury risk in specific body regions is associated with performance in the Army basic fitness assessment in Army staff cadets</td>
<td>The Swedish version of the human performance programme concerning musculoskeletal health: optimize the training</td>
<td>Estimation of military training demand from a wrist-worn activity monitor and the potential impact of activity level on improvement of aerobic fitness</td>
</tr>
<tr>
<td></td>
<td><strong>Jeremy Witchalls, Australia</strong></td>
<td><strong>Helena Larsson, Sweden</strong></td>
<td>Andrew Siddall, UK</td>
</tr>
<tr>
<td></td>
<td>Changes in lower limb strength and ankle joint range of movement after one year of military boot wear</td>
<td>Analysis of the physical demand of the RNZN basic common training course – implications for recruitment, preparation and course delivery</td>
<td>Physical fitness and body composition of Estonian active servicemen</td>
</tr>
<tr>
<td></td>
<td><strong>Jacques Rousseau, New Zealand</strong></td>
<td><strong>Adam Dooley, New Zealand</strong></td>
<td><em>Leila Oja, Estonia</em></td>
</tr>
<tr>
<td></td>
<td>Musculoskeletal complaints and injuries, perceived health and work ability in Swedish peacekeeping soldiers preparing for a mission in Mali – a pilot study</td>
<td>Defining athletic training in a military setting: a survey investigation into profession characteristics of working with tactical athletes</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Alexandra Halvarsson, Sweden</strong></td>
<td><strong>Kara Radzak, USA</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dynamic Movement Assessment™ as an injury prediction tool in Brazilian Navy cadets: a cohort study</td>
<td>Training and motives of 50-65 year old male sport newcomers: results of a nationwide survey of endurance runners</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Priscila Bunn, Brazil</strong></td>
<td><strong>Dieter Leyk, Germany</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Musculoskeletal, balance, biomechanical, and physiological predictors of shoulder injury in Special Operations Forces</td>
<td>The effects of kick-box training based group fitness on cardiovascular and neuromuscular function in male non-athletes</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Kim Beals, USA</strong></td>
<td><strong>Fatih Senduran, Turkey</strong></td>
<td></td>
</tr>
<tr>
<td><strong>16.30-17.30</strong></td>
<td><strong>Invited keynote: Samuele Marcora, UK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limits to exercise tolerance in humans - mind over muscle?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17.30-19.00</strong></td>
<td><strong>Welcome Reception - MCEC Level 1 Foyer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informal evening with roving Aussie animals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Program

#### Wednesday 29 November 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.00</td>
<td>Registration Open</td>
</tr>
<tr>
<td>08.30-09.30</td>
<td><strong>Defence keynote:</strong> MAJGEN Kathryn Toohey &amp; Nick Beagley</td>
</tr>
<tr>
<td>09.30-10.30</td>
<td><strong>Invited keynote:</strong> Romain Meeusen, Belgium</td>
</tr>
<tr>
<td></td>
<td>The underlying mechanisms of overtraining and physical and psychological markers for early detection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Room 105/106</th>
<th>MORNING TEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.30-11.00</td>
<td>MORNING TEA</td>
</tr>
</tbody>
</table>

#### 10.30-11.00  MORNING TEA

<table>
<thead>
<tr>
<th>Room 103</th>
<th>MORNING TEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.00-12.00</td>
<td>Featured Science Session 9 - CISM Sport Science Commission</td>
</tr>
<tr>
<td></td>
<td>Session chair: Heikki Kyröläinen, Finland</td>
</tr>
</tbody>
</table>

- **Free Communication Session 4 - Aviators**
  - Session chair: Phil Newman, Australia
  - Association between physical fitness test results and flight duty limitations due to spinal disorders. 
  - **Tuomas Honkanen, Finland**
  - EEG-based assessment of pilot spatial navigation on an aviation simulator. 
  - **Yukai Wang, Australia**
  - Determining fighter pilot’s G load: pilot’s fatigue index. 
  - **Harri Rintala, Finland**
  - **Grace Guindani, Brazil**

<table>
<thead>
<tr>
<th>Room 104</th>
<th>MORNING TEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00-11.00</td>
<td>Featured Science Session 7 - Acute, short and long term responses to heat stress – implications for combatants’ performance and health</td>
</tr>
<tr>
<td></td>
<td>Session chair: Jason Lee, Singapore</td>
</tr>
</tbody>
</table>

- **Featured Science Session 7 - Acute, short and long term responses to heat stress – implications for combatants’ performance and health**
  - Acute physiological responses during exercise in the heat. 
  - **Robert Kenefick, USA**
  - Short term training in a cool vs. warm environment on aerobic performance in a warm and humid condition. 
  - **Jason Lee, Singapore**
  - Heat adaptation within a military context. 
  - **Nigel Taylor, Australia**

<table>
<thead>
<tr>
<th>Room 105</th>
<th>MORNING TEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00-11.00</td>
<td>Featured Science Session 6 - The Soldier’s Brain</td>
</tr>
<tr>
<td></td>
<td>Session chair: Kristy Martin, Australia</td>
</tr>
</tbody>
</table>

- **Featured Science Session 6 - The Soldier’s Brain**
  - Exercise, thermoregulation, and the brain. 
  - **Romain Meeusen, Belgium**
  - Combating mental fatigue in soldiers. 
  - **Kristy Martin, Australia**
  - Brain adenosine and endurance performance. 
  - **Samuele Marcora, UK**
  - Resilient cognition in soldiers. 
  - **Richard Keegan, Australia**
  - Brain-based interventions for improving performance. 
  - **Ben Rattray, Australia**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Chair</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.00-13.00</td>
<td>Free Comm</td>
<td>Session 5 - Load carriage 1</td>
<td>Nicola Armstrong, UK</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The effects of increasing thoracic load carriage, using a backpack</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and body armour ensemble, on ambulatory lung volumess</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lachlan Hingley, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The impact of load carriage exercise on the etiology of neuromuscular</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>fatigue</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sebastian Garcia, France</td>
<td></td>
<td>France</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sex differences in the physiological and neuromuscular responses of</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>British Army recruits to load carriage in the field</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rachel Izard, UK</td>
<td></td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The impact of ambulatory gradients on the oxygen cost of torso load</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>carriage for people of varying body mass</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heather Bowes, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Free Comm</td>
<td>Session 3 - Public health and health promotion</td>
<td>Dieter Leyk, Germany</td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Canadian Armed Forces physical performance strategy: creating</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>the conditions to support optimal physical activity, sleep, nutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and injury prevention practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michael Spivock, Canada</td>
<td></td>
<td>Canada</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HEALTH (Healthy Eating, Activity, Lifestyle Training Headquarters)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>internet / mobile weight management program for the U.S. Army:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>outcomes and future directions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tiffany Stewart, USA</td>
<td></td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sport biography, exercise and subjective health status of middle</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>agers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Alexander Witzki, Germany</td>
<td></td>
<td>Germany</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A physical fitness intervention during basic military training</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>improves health behavior in civil life afterwards</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lilian Roos, Switzerland</td>
<td></td>
<td>Switzerland</td>
</tr>
<tr>
<td></td>
<td>Featured Science</td>
<td>Session 8 - Components of an effective heat tolerance test for</td>
<td>Jay Heaney, USA</td>
<td>Switzerland</td>
</tr>
<tr>
<td></td>
<td></td>
<td>military populations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of a Heat Tolerance Test (HTT) within the Israel Defense Force</td>
<td>Yoram Epstein, Israel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(IDF)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Impact of the Naval Health Research Center’s heat tolerance testing</td>
<td>Douglas Jones, USA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>within the U.S. Navy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heat tolerance in wet tropical natives using an established heat</td>
<td>Jason Lee, Singapore</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>tolerance test</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Featured Science</td>
<td>Session 6 - The Soldier’s Brain continued</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Wednesday 29 November 2017

<table>
<thead>
<tr>
<th>13.00-14.00</th>
<th>LUNCH AND POSTER SESSION 1 - see page 40</th>
<th>LUNCH AND POSTER SESSION 1 - see page 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room 103</td>
<td>Free Communication Session 9 - Psychological and cognitive factors</td>
<td>Free Communication Session 8 - ICSPP-CISM travel grant recipients</td>
</tr>
<tr>
<td>Room 104</td>
<td>Session chair: Richard Keegen, Australia</td>
<td>Session chair: Pat Gagnon, Canada</td>
</tr>
<tr>
<td>Room 105</td>
<td>Free Communication Session 7 - Environmental considerations</td>
<td>Free Communication Session 6 - Physical training and adaptations</td>
</tr>
<tr>
<td>Room 106</td>
<td>Session chair: Jason Lee, Singapore</td>
<td>Session chairs: Jace Drain, Australia &amp; Tim Doyle, Australia</td>
</tr>
</tbody>
</table>

**Free Communication Session 9 - Psychological and cognitive factors**

Session chair: Richard Keegen, Australia

- The cognitive fitness framework: a roadmap for systematic, evidence-based mental skills training and performance enhancement
  - Eugene Aidman, Australia

- High intensity intermittent training to combat chronic stress in an already trained population
  - Sally Lark, New Zealand

- 2B-Alert app: real-time learning and individualized prediction of cognitive performance
  - Jaques Reifman, USA

- Understanding team resilience in the Australian Army: a qualitative study
  - Philip Temby, Australia

- Habituation of acoustic startle: a new biomarker of psychological resilience
  - Eugene Nalivaiko, Australia

- Achievement motivation in basic military task performance
  - Alexander Witzki, Germany

**Free Communication Session 8 - ICSPP-CISM travel grant recipients**

Session chair: Pat Gagnon, Canada

- Asymmetrical landing patterns combined with heavier body mass increases lower extremity injury risk in special operations forces
  - Shawn Eagle, USA

- Serum creatine kinase and immune system relationship in different Brazilian biomes during the 2012 Commandos Special Operations Course
  - Nilton Gomes Rolim Filho, Portugal

- Comparing lower extremity strength with aerobic and anaerobic capacity to predict novice combat swimmer 500 meter time trial performance
  - Anne Beethe, USA

- Phase one of a musculoskeletal injury prediction model validation: a prospective study in Navy cadets
  - Thiago Lopes, Australia

- Impact of whey protein supplementation on fitness performance, body composition and injury rates in Army initial entry soldiers
  - Jeremy McAdam, USA

**Free Communication Session 7 - Environmental considerations**

Session chair: Jason Lee, Singapore

- When the hypoxia “silent killer” starts to talk: the early detection of presymptomatic hypoxia through voice stress analysis
  - Martine Van Puyvelde, Belgium

- Sleep, exercise and hypoxia: how an altitude deployment creates unexpected risks
  - Nathalie Pattyn, Belgium

- Interval microclimate cooling with the Dry Air Comfort (DAC) method: an effective strategy to sustain evaporative heat loss
  - Karl Jochen Glitz, Germany

- Physiological responses to a 10 km self-paced loaded march in a tropical climate
  - Priscilla Fan, Singapore

- Estimating thermal-work strain and physical fatigue from a wearable physiological status monitor
  - Jeffrey Palmer, USA

- Short-term, low-volume training improves heat acclimatization in an operational context
  - Alexandra Malgoyre, France

**Free Communication Session 6 - Physical training and adaptations**

Session chairs: Jace Drain, Australia & Tim Doyle, Australia

- Effects of periodised versus non-periodised resistance training on army specific fitness and skills performance
  - Brian Heilbronn, Australia

- Stretching of voluntarily-activated muscles evokes greater acute and chronic adaptive changes than (traditional) static stretching
  - Anthony Blazevich, Australia

- Human performance training program utilization and training outcomes in United States Marines special operations operators
  - Stuart Best, USA

- Neural mechanisms that regulate repeated, high-intensity muscular performance – new insights into fatigue?
  - Benjamin Kirk, Australia

- Muscle damage after whole body eccentric exercises
  - Kazunori Nosaka, Australia

- The effect of training frequency and initial training status on adaptation amongst basic army conscripts
  - Thor Anders Kilen, Denmark
Wednesday 29 November 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.30-16.00</td>
<td>AFTERNOON TEA + Catapult Sports Product Presentation, Room 104</td>
<td>AFTERNOON TEA + Catapult Sports Product Presentation, Room 104</td>
<td>Room 101/102</td>
</tr>
<tr>
<td>Room 101/102</td>
<td></td>
<td>Thematic Oral Poster Session 3 - Deployment and environmental considerations</td>
<td></td>
</tr>
<tr>
<td>14.00-15.30</td>
<td>Thematic Oral Poster Session 3 - Deployment and environmental considerations</td>
<td>Room 103</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Session chair: Mark Buller, USA</td>
<td>Thematic Oral Poster Session 4 - load carriage 1</td>
<td>Thematic Oral Poster Session 5 - Occupational performance and testing 1</td>
</tr>
<tr>
<td></td>
<td>Effects of combined strength and endurance training intervention on aerobic capacity, body mass and body composition during military deployment</td>
<td>Session chair: Sam Blacker, UK</td>
<td>Session chair: Tara Reilly, Canada</td>
</tr>
<tr>
<td></td>
<td>Kai Pihlainen, Finland</td>
<td>The effects of body armour and load carriage on respiratory function and physical performance during a simulated military task in male and female soldiers</td>
<td>Comparison of untrained vs trained Soldiers performing the occupational physical assessment test</td>
</tr>
<tr>
<td></td>
<td>Impact of diet macronutrient composition and physical activity on body composition in soldiers during a six-month military operation</td>
<td>Nicola Armstrong, UK</td>
<td>Marilyn Sharp, USA</td>
</tr>
<tr>
<td></td>
<td>Tarja Nykanen, Finland</td>
<td>A contribution to understanding the impact of variations in body mass on fractionating the metabolic burden of military load carriage</td>
<td>Basic military fitness: validation of a pre-deployment assessment tool</td>
</tr>
<tr>
<td></td>
<td>Evaluating the effects of Asthaxanthin as a preconditioning strategy to heat stress in humans - a preliminary study</td>
<td>Heather Bowes, Australia</td>
<td>Ulrich Rohde, Germany</td>
</tr>
<tr>
<td></td>
<td>Chen Fleischmann, Israel</td>
<td>The physiological demand of a loaded march at five incremental speeds</td>
<td>Physical fitness of population as a risk factor of military recruitment</td>
</tr>
<tr>
<td></td>
<td>The effects of flame resistant protective clothing on heat exchange and thermal strain</td>
<td>Gemma Milligan, UK</td>
<td>Lubomir Priveivý, Czech Republic</td>
</tr>
<tr>
<td></td>
<td>Denise Linnane, Australia</td>
<td>Backpack and body-armour ensembles reduce pulmonary function according to the mass carried and its distribution around the thorax</td>
<td>Establishing a physical test battery for mountain soldiers in the Austrian Armed Forces</td>
</tr>
<tr>
<td></td>
<td>Cold acclimation does not improve cycling performance</td>
<td>Lachlan Hingley, Australia</td>
<td>Thomas Hölzl, Austria</td>
</tr>
<tr>
<td></td>
<td>Douglas Jones, USA</td>
<td>Extensive increase of metabolic demand while walking wearing night vision goggles in hilly terrain</td>
<td>Sex differences in physical performance and body composition adaptations to British Army basic military training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lena Norrbrand, Sweden</td>
<td>Rachel Izard, UK</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Athletic performance and body composition in cadets of the Brazilian Army</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mauro Pascoa, Brazil</td>
</tr>
</tbody>
</table>

| Room 105/106 | Invited keynote: Karl Friedl, USA | |
| 17.00-18.00 | Role and benefits of wearable physiological sensors in the military | |

22 23
### Program

**Thursday 30 November 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.00</td>
<td>Registration Open</td>
</tr>
<tr>
<td>Room 105/106</td>
<td><strong>Invited keynote: Louise Burke, Australia</strong>&lt;br&gt;The low-carb high-fat diet: updates on sports performance and applications to the military</td>
</tr>
<tr>
<td>08.30-09.30</td>
<td><strong>Invited keynote: Maria Fiotorone Singh, Australia</strong>&lt;br&gt;Resistance training, it’s a no brainer….</td>
</tr>
</tbody>
</table>

#### 10.30-11.00 MORNING TEA

<table>
<thead>
<tr>
<th>Room 103</th>
<th>Room 104</th>
<th>Room 105</th>
<th>Room 106</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Featured Science Session 13 - Injuries and injury surveillance systems in military and other tactical occupations</strong>&lt;br&gt;Session chair: Rob Orr, Australia</td>
<td><strong>Featured Science Session 12 - Fitness, training, cognitive and hormonal characteristics associated with musculoskeletal injury and physical performance in Special Operation Forces - an international perspective</strong>&lt;br&gt;Session chair: Kim Beals, USA</td>
<td><strong>Featured Science Session 11 - Sex-specific considerations in stress fracture risk of military personnel</strong>&lt;br&gt;Session chair: Karl Friedl, USA</td>
<td><strong>Featured Science Session 10 - Metabolic fuelling for performance and recovery during high altitude combat operations</strong>&lt;br&gt;Session chair: Stefan Pasiakos, USA</td>
</tr>
<tr>
<td>Injuries suffered by Australian Army recruits completing basic training&lt;br&gt;&lt;br&gt;Ben Schram, Australia</td>
<td>Evaluation of musculoskeletal injury trends in United States initial entry Soldiers&lt;br&gt;&lt;br&gt;Jo Ellen Sefton, USA</td>
<td>The association of physical training with musculoskeletal injuries in US Special Operation Forces&lt;br&gt;Kim Beals, USA</td>
<td>Physiological effects of hypoxia on Warfighters conducting high-altitude operations&lt;br&gt;&lt;br&gt;Andrew Young, USA</td>
</tr>
<tr>
<td>Injury surveillance systems in military and other tactical occupations&lt;br&gt;&lt;br&gt;Robert Young, USA</td>
<td>Injuries suffered by an Australian State Police Force&lt;br&gt;&lt;br&gt;Michael Stierli, Australia</td>
<td>Special operations mental agility training for the Canadian Special Operations Forces Command&lt;br&gt;Paige Mattie, Canada</td>
<td>Nutritional countermeasures to skeletal muscle loss during high-altitude operations&lt;br&gt;&lt;br&gt;Stefan Pasiakos, USA</td>
</tr>
<tr>
<td>Contributing factors to structural firefighter injury&lt;br&gt;&lt;br&gt;Kaitlin McGinnis, USA</td>
<td>Changes in body composition, power and hormonal status during and after a prisoner of war exercise in Norwegian Navy Special Operations Command (NORNAVSOC) recruits&lt;br&gt;Paul Andre Solberg, Norway</td>
<td>Risk of lower extremity stress fracture with commonly prescribed drugs in female warfighters&lt;br&gt;&lt;br&gt;Julie Hughes, USA</td>
<td>Appetite and diet composition at high altitude&lt;br&gt;&lt;br&gt;Philip Karl, USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sex differences in skeletal adaptation to mechanical loading; implications for stress fracture risk&lt;br&gt;Rachel Izard, UK</td>
<td>Effects of carbohydrate supplementation during aerobic exercise and altitude acclimatization on exogenous carbohydrate oxidation and performance&lt;br&gt;&lt;br&gt;Robert Kenefick, USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The incidence and risk factors for stress fractures and other injuries among U.S. Army trainees&lt;br&gt;Bruce Jones, USA</td>
<td></td>
</tr>
<tr>
<td>Room 103</td>
<td>Room 104</td>
<td>Room 105</td>
<td>Room 106</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| **12.00-13.15** | **Free Communication Session 11 - load carriage 2**  
*Session chair: Leif Hasselquist, USA* | **Free Communication Session 10 - Injury prevention 2**  
*Session chair: Bruce Jones, USA* | **Featured Science Session 10 - Metabolic fuelling for performance and recovery during high altitude combat operations continued** |
| Stress and determinants of shooting performance among Norwegian Navy Special Forces Operators  
*Mikael Mattsson, Sweden* | Utility of incident and injury surveillance systems for incident and injury risk management in tactical populations  
*Rod Pope, Australia* | | |
| The effects of increasing thoracic load carriage, using a backpack and body-armour ensemble, on peak aerobic power and exercise tolerance  
*Gregory Peoples, Australia* | Force preservation through individual blast exposure surveillance  
*Scott Featherman, USA* | | |
| Vertical ground reaction forces and sagittal plane ankle kinetics during stair ascent and descent as a function of load carried  
*Harrison Crowell, USA* | Embedded physiological monitoring programme to reduce injury rates  
*David Edgar, New Zealand* | | |
| Lower-limb joint work and power are modulated differently during load carriage based on speed and load configuration  
*Gavin Lenton, Australia* | Does low aerobic performance increase musculoskeletal injury risk in the military? a systematic review with meta-analysis  
*Jeremy Witchalls, Australia* | | |
| The soldier’s load: how much is enough?  
*Stephen Rudzki, Australia* | | | |
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Chair(s)</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.00-14.00</td>
<td>LUNCH AND POSTER SESSION 2 - see page 42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.00-15.15</td>
<td>Free Communication Session 12 - Sleep and recovery</td>
<td>Brad Nindl, USA</td>
<td>Fabien Sauvet, France</td>
</tr>
<tr>
<td></td>
<td>Efficacy of THN102, a new combination between modafinil and flecainide low-dose, during total sleep deprivation in healthy subjects: a double-blind, randomized, placebo and modafinil controlled study</td>
<td></td>
<td>Olga Troynikov, Australia</td>
</tr>
<tr>
<td></td>
<td>Effective soldier’s recovery and dynamic sleep: objective method for evaluating transient sleeping environments</td>
<td></td>
<td>Helen Kilding, New Zealand</td>
</tr>
<tr>
<td></td>
<td>Analysis of work-rest profiles, fatigue and performance during an ANZAC class frigate cruising watch</td>
<td></td>
<td>Joseph Knapik, USA</td>
</tr>
<tr>
<td></td>
<td>Secular trends in insomnia and associations with deployment and combat exposure in the entire population of US Army Soldiers, 1997-2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUNCH AND POSTER SESSION 2 - see page 42</td>
<td>Featured Science Session 16 - Wearable assistive devices for dismounted soldiers</td>
<td>Angela Boynton, USA</td>
<td>Thomas Karakolis, Canada</td>
</tr>
<tr>
<td></td>
<td>Viability of using a wearable assistive device to reduce soldier burden</td>
<td></td>
<td>powered lower limb soft exosuit to reduce energy cost during load carriage</td>
</tr>
<tr>
<td></td>
<td>Angela Boynton, USA</td>
<td></td>
<td>Kurt Mudie, Australia</td>
</tr>
<tr>
<td></td>
<td>Passive exoskeleton to transfer backpack mass to the ground</td>
<td></td>
<td>Effect of a load distribution system on mobility and performance during simulated and field hiking while under load</td>
</tr>
<tr>
<td></td>
<td>Kurt Mudie, Australia</td>
<td></td>
<td>Karen Kelly, USA</td>
</tr>
<tr>
<td></td>
<td>Effect of a load distribution system on mobility and performance during simulated and field hiking while under load</td>
<td></td>
<td>Mitigating load carriage burden – the Dynamic Weight Distribution (DWD) hip belt</td>
</tr>
<tr>
<td></td>
<td>Yoram Epstein, Israel</td>
<td></td>
<td>Courtney Haynes, USA</td>
</tr>
<tr>
<td></td>
<td>Wearable energy harvesting technologies: physiological cost and operational readiness</td>
<td></td>
<td>Relationship between metabolic cost and power output with a prototype energy harvesting assault pack</td>
</tr>
<tr>
<td></td>
<td>Courtney Haynes, USA</td>
<td></td>
<td>Courtney Haynes, USA</td>
</tr>
<tr>
<td>LUNCH AND POSTER SESSION 2 - see page 42</td>
<td>Featured Science Session 15 - Physical performance in soldiers at environmental extremes: responses and adaptations</td>
<td>Julien Périard, Australia</td>
<td>Mitigating the impact of cold air exposure on soldier wellbeing and performance</td>
</tr>
<tr>
<td></td>
<td>Heat stress and the modern day soldier: can we prevent heat illness?</td>
<td></td>
<td>Ollie Jay, Australia</td>
</tr>
<tr>
<td></td>
<td>Julien Périard, Australia</td>
<td></td>
<td>Laura Garvinian-Lewis, Australia</td>
</tr>
<tr>
<td></td>
<td>Altitude: friend or foe?</td>
<td></td>
<td>Challenges and opportunities of aquatic environments for healthy and injured soldiers</td>
</tr>
<tr>
<td></td>
<td>Jim Cotter, New Zealand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUNCH AND POSTER SESSION 2 - see page 42</td>
<td>Featured Science Session 14 - Non-pharmacological military performance enhancement technologies</td>
<td>Karl Friedl and Mark Buller, USA</td>
<td>A novel individual heat acclimatisation dosimeter concept</td>
</tr>
<tr>
<td></td>
<td>Physiologically-based real-time pacing algorithms</td>
<td></td>
<td>Simon Delves, UK</td>
</tr>
<tr>
<td></td>
<td>Subject-specific prediction of body core temperature using nonlinear population modelling</td>
<td></td>
<td>Mark Buller, USA</td>
</tr>
<tr>
<td></td>
<td>Predicting individual risk of altitude illness using real-time monitoring of accumulated hypoxic debt</td>
<td></td>
<td>Kok-Yong Seng, Singapore</td>
</tr>
<tr>
<td></td>
<td>Auditory closed-loop stimulation to enhance sleep quality</td>
<td></td>
<td>Beth Beidleman, USA</td>
</tr>
<tr>
<td></td>
<td>Wearable energy harvesting technologies: physiological cost and operational readiness</td>
<td></td>
<td>Pierrick Arnal, France</td>
</tr>
<tr>
<td></td>
<td>Courtney Haynes, USA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Program
### Thursday 30 November 2017

<table>
<thead>
<tr>
<th>15.30-16.00</th>
<th>AFTERNOON TEA</th>
<th>Room 103</th>
<th>AFTERNOON TEA</th>
<th>Room 104</th>
<th>AFTERNOON TEA</th>
<th>Room 105/106</th>
</tr>
</thead>
</table>
| 16.00-17.00 | Thematic Oral Poster Session 6 - Psychological and cognitive considerations  
Session chair: Eugene Aidman, Australia | Thematic Oral Poster Session 7 - Occupational performance and testing 2  
Session chair: Herb Groeller, Australia | Free Communication Session 13 - Impact of deployment and combat exposure  
Session chair: Rob Orr, Australia |

- **Self-reported combat-related symptom scores change after witnessing a teammate's improvement following stellate ganglion block for post-traumatic stress symptoms**  
  **James Lynch, USA**
- **Using a controlled virtual reality simulation platform to induce, measure and feedback stress responses of soldiers**  
  **Olaf Binsch, The Netherlands**
- **A preliminary study of the effects of load carriage on cognition during a simulated military task in male and female soldiers**  
  **Nicola Armstrong, UK**
- **Effects of military survival training on Brazilian Air Force soldiers' cognitive function**  
  **Patricia Paiva, Brazil**
- **Tactics to Optimize the Potential (TOP) program for French military forces**  
  **Laurent Rocco, France**
- **Mental fatigue influences subsequent marksmanship decision**  
  **James Head, USA**

- **A fitness assessment for the Canadian Army - FORCE combat**  
  **Tara Reilly, Canada**
- **A physical employment standard for the Royal Air Force Regiment**  
  **James Treweek, UK**
- **USAF occupationally specific, operationally relevant physical fitness tests and standards: effects of mission and environmental stressors**  
  **Neal Baumgartner, USA**
- **A comparison of the metabolic demands of Royal Australian Navy criterion tasks to other physically demanding occupations**  
  **Catriona Burdon, Australia**
- **A novel method for estimating pull forces during a casualty extraction task**  
  **Kane Middleton, Australia**

<table>
<thead>
<tr>
<th>Room 105/106</th>
</tr>
</thead>
</table>
| 17.00-18.30 | Results from an International Survey - Critical Research "Gaps/Needs/Priorities" pertaining to Soldiers’ Physical Performance  
**Marilyn Sharp, USA** |
| | Interactive Case Study – Dismounted Soldier Performance Assessment: Going Beyond the Individual  
**Graham Fordy, New Zealand** |

---

15.30-16.00 AFTERNOON TEA  
Room 103  
16.00-17.00 Thematic Oral Poster Session 6 - Psychological and cognitive considerations  
Session chair: Eugene Aidman, Australia  
- Self-reported combat-related symptom scores change after witnessing a teammate's improvement following stellate ganglion block for post-traumatic stress symptoms  
  **James Lynch, USA**  
- Using a controlled virtual reality simulation platform to induce, measure and feedback stress responses of soldiers  
  **Olaf Binsch, The Netherlands**  
- A preliminary study of the effects of load carriage on cognition during a simulated military task in male and female soldiers  
  **Nicola Armstrong, UK**  
- Effects of military survival training on Brazilian Air Force soldiers' cognitive function  
  **Patricia Paiva, Brazil**  
- Tactics to Optimize the Potential (TOP) program for French military forces  
  **Laurent Rocco, France**  
- Mental fatigue influences subsequent marksmanship decision  
  **James Head, USA**  

16.00-17.00 Thematic Oral Poster Session 7 - Occupational performance and testing 2  
Session chair: Herb Groeller, Australia  
- A fitness assessment for the Canadian Army - FORCE combat  
  **Tara Reilly, Canada**  
- A physical employment standard for the Royal Air Force Regiment  
  **James Treweek, UK**  
- USAF occupationally specific, operationally relevant physical fitness tests and standards: effects of mission and environmental stressors  
  **Neal Baumgartner, USA**  
- A comparison of the metabolic demands of Royal Australian Navy criterion tasks to other physically demanding occupations  
  **Catriona Burdon, Australia**  
- A novel method for estimating pull forces during a casualty extraction task  
  **Kane Middleton, Australia**  

17.00-18.30 Free Communication Session 13 - Impact of deployment and combat exposure  
Session chair: Rob Orr, Australia  
- The physical demands of military operators during a 4 month peace keeping mission in Mali  
  **Mali Gerard Rietjens, The Netherlands**  
- The Shared Motorised Military Land Transit Experiences of Australian Defence Force Infantry Personnel  
  **Thomas Debenedictis, Australia**  
- Disease and non-battle injuries (DNBI) in austere environments: lessons learned, for the DoD Role I, from CL Garoua, Cameroon, U.S. Army Africa (USARAF/SPMAGTAF)  
  **Paul Auchincloss, USA**  
- The impact of a military training and operational deployment on health and performance measures in submariners of the Royal Netherlands Navy  
  **Pieter Helmhout, The Netherlands**
### Program

**Friday 1 December 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.00</td>
<td>Registration Open</td>
</tr>
<tr>
<td><strong>Room 105/106</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30-09.30</td>
<td>Invited keynote: Heikki Kyrolainen, Finland</td>
</tr>
<tr>
<td></td>
<td>Optimising physical training adaptations and military performance</td>
</tr>
<tr>
<td>09.30-10.30</td>
<td>Invited keynote: Thor Besier, New Zealand</td>
</tr>
<tr>
<td></td>
<td>The application of wearable technologies in the military context</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00-12.00</td>
<td>Room 103</td>
</tr>
<tr>
<td>10.00-12.00</td>
<td>Room 104</td>
</tr>
<tr>
<td>10.00-12.00</td>
<td>Room 105</td>
</tr>
<tr>
<td>10.00-12.00</td>
<td>Room 106</td>
</tr>
</tbody>
</table>

### Featured Science Session 21 - Performance nutrition: an international perspective
**Session chair:** James McClung, USA
- Nutritional habits among Israeli Defense Forces soldiers
  Ran Yanovich, Israel
- Performance nutrition: the New Zealand Defence Force perspective
  Nicola Martin, New Zealand
- Sustainable, healthy and performance nutrition: a Norwegian approach on how to sustain the warfighter in cold climate
  Pål Harald Stenberg, Norway
- Australian investigations of warfighter nutritional requirements and strategies to optimize nutritional intake and performance
  Bradley Baker, Australia

### Featured Science Session 19 - Ergonomics assessment methods of soldier protective equipment
**Session chair:** Alistair Furnell, Australia
- Determining the maximum acceptable length of a hard ballistic plate
  Alistair Furnell, Australia
- Benefits from the inclusion of users and application of a systems-approach during the methodology development for ergonomic assessments of soldier protective equipment
  Sheena Davis, Australia
- Encumbered warfighter range of motion measurement reliability
  Thomas Karakolis, Canada

### Featured Science Session 18 - Military applications of wearable physiological monitoring – from concept to implementation
**Session chairs:** Karl Friedl, USA and Bertil Veenstra, The Netherlands
- The comfort, acceptability and accuracy of energy expenditure estimation from wearable ambulatory physical activity monitoring systems in soldiers
  Thomas Wyss, Switzerland
- Microsleep and alertness monitoring in French Air Force long haul pilots
  Mounir Chennaoui, France
- Physiological monitoring during multi-day Norwegian ski patrols in the arctic
  Hilde Teien, Norway
- Development of an integrated physiological monitoring system for the Royal Netherlands Army – monitoring the load carriage workload component
  Bertil Veenstra, The Netherlands

### Featured Science Session 17 - Predicting injuries in the military: what works, what doesn’t, and does it even matter?
**Session chair:** Deydre Teyhen, USA
- Musculoskeletal injury - when do we start eating the elephant in the room?
  Deydre Teyhen, USA
- Predicting injuries: are we using the appropriate statistical approach?
  Phil Newman, Australia
- Should musculoskeletal injury prevention interventions target personal and/or organizational factors?
  Andreas Monnier, Sweden
- Primary prevention: global prevention for all, and total force fitness
  Sarah de la Motte, USA
- Are we trying to prevent injuries or prevent disability? why it matters
  Daniel Rhon, USA
<table>
<thead>
<tr>
<th>Room 103</th>
<th>Room 104</th>
<th>Room 105</th>
<th>Room 106</th>
</tr>
</thead>
</table>
| **12.00-13.00** **Featured Science Session 22 - Physiology in practice: utilising physiological markers to risk-manage work in the heat**  
*Session chairs: Andrew Hunt, Australia and Mark Buller, USA*  
Using real-time physiological monitoring to enable training adjustments to avoid heat illness  
*Simon Delves, UK*  
Using physiological markers in real-time as individualized indicators of thermal-work strain  
*Mark Buller, USA*  
Strengths and weaknesses of population based guidance for work in the heat  
*Andrew Hunt, Australia*  
Integrative strategies to optimize metabolic performance in the heat  
*Karl Friedl, USA*  
| **Featured Science Session 20 - Harnessing physical performance to build a better weapon and improve marksmanship**  
*Session chair: Jemma Coleman, Australia*  
Shooting performance as a function of weapon-ammunition configuration: design, weight distribution and recoil energy  
*Frank Morelli, USA*  
User-based validation of future assault rifle mass properties  
*Linda Bossi, Canada*  
Controlled Every Soldier A Rifleman (CESAR)  
*Olaf Binsch, The Netherlands*  
Tactical shooting performance: effects of physical and cognitive loads  
*Brian Higginson, USA*  
| Mobility and Biomechanics Inserts for Load Evaluation (MoBILE): measuring load and terrain based gait changes  
*Joe Lacirignola, USA*  
Implementation of physiological status monitoring in Weapons of Mass Destruction – Civil Support Teams (WMD-CSTs) to enhance performance and ensure safety of soldiers  
*William Tharion, USA*  
| **Featured Science Session 17 - Predicting injuries in the military: what works, what doesn’t, and does it even matter? continued** |
## Friday 1 December 2017

<table>
<thead>
<tr>
<th>13.00-14.00</th>
<th>LUNCH AND POSTER SESSION 3 - see page 44</th>
<th>13.00-14.00</th>
<th>LUNCH AND POSTER SESSION 3 - see page 44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room 103</td>
<td>Free Communication Session 16 -</td>
<td>Room 104</td>
<td>Free Communication Session 15 -</td>
</tr>
<tr>
<td></td>
<td>Occupational performance and testing 2</td>
<td></td>
<td>Nutritional considerations</td>
</tr>
<tr>
<td></td>
<td>Session chair: Marilyn Sharp, USA</td>
<td></td>
<td>Session chair: James McClung, USA</td>
</tr>
</tbody>
</table>

### Free Communication Session 14 - Lower limb injuries

- **Quantifying tibial shock during military foot drill training**
  - Rachel Izard, UK
- **Changes in balance and lower limb muscle activity after one year of military boot wear**
  - Jacques Rousseau, New Zealand
- **Predicting individual risk for medial tibial stress syndrome in Navy recruits**
  - Cameron Garnock, Australia
- **Past methylphenidate exposure and stress fractures in combat soldiers: a case-control study**
  - Ran Yanovich, Israel
- **Increased autophagy signalling but not proteasome activity in human skeletal muscle after prolonged low-intensity exercise with negative energy balance**
  - Mikael Mattsson, Sweden
- **Water intake after dehydration makes muscles more susceptible to cramp**
  - Kazunori Nosaka, Australia
- **Extension of physical endurance and protection against physical, chemical and radiological trauma by NAD+ precursors**
  - Lindsay Wu, Australia

### Free Communication Session 15 - Nutritional considerations

- **Changes in iron status of British Army Recruits in basic military training**
  - Sarah Jackson, UK
- **Iron status and associations with aerobic performance and stress fracture risk during initial military training**
  - Nicola Martin, New Zealand
- **Physical activity and energy homeostasis during a nine-week training program in the Dutch Special Forces unit**
  - Gerard Rietjens, The Netherlands
- **Increased autophagy signalling but not proteasome activity in human skeletal muscle after prolonged low-intensity exercise with negative energy balance**
  - Mikael Mattsson, Sweden
- **Water intake after dehydration makes muscles more susceptible to cramp**
  - Kazunori Nosaka, Australia
- **Extension of physical endurance and protection against physical, chemical and radiological trauma by NAD+ precursors**
  - Lindsay Wu, Australia

### Free Communication Session 16 - Occupational performance and testing 2

- **Mechanical whole-body vibration during military vehicle transit and lower limb explosive power**
  - Thomas Debenedictis, Australia
- **A job task analysis of a parachuting training exercise conducted by the British Army parachute regiment**
  - Julianne Doherty, UK
- **Criterion task work rates in Royal Australian Air Force personnel do not align with the acceptable work rate determined using the Bookmark method**
  - Adam Hayes, Australia
- **Physical fitness and physical activity in Norwegian Home Guard soldiers**
  - Anders Aandstad, Norway
- **Apprehension of a suspect: how important is muscular strength?**
  - Kent Delbridge, Australia

### Featured Science Session 23 - Reducing the burden on the dismounted soldier

- **Characterizing the loads of NATO soldiers**
  - Linda Bossi, The Netherlands
- **Factors influencing soldier burden: more than just load**
  - Paul Sanderson, UK
- **Technological solutions for mitigating against physical burden effects on soldier performance**
  - Angela Boynton, USA
- **Framework for load carriage burden reduction**
  - Dan Billing, Australia
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Event</th>
<th>Room</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.30-16.00</td>
<td><strong>AFTERNOON TEA</strong></td>
<td>Room 103</td>
<td><strong>AFTERNOON TEA</strong></td>
<td>Room 104</td>
<td><strong>AFTERNOON TEA</strong></td>
</tr>
<tr>
<td>16.00-17.00</td>
<td><strong>Thematic Oral Poster Session 8 - load carriage 2</strong></td>
<td>Room 105/106</td>
<td><strong>Thematic Oral Poster Session 9 - Marksmanship</strong></td>
<td>Room 105/106</td>
<td><strong>Free Communication Session 17 - Occupational performance and testing 3</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Session chair: Mike LaFiandra, USA</strong></td>
<td></td>
<td><strong>Session chair: Graham Fordy, New Zealand</strong></td>
<td></td>
<td><strong>Session chair: Mark Patterson, Australia</strong></td>
</tr>
<tr>
<td></td>
<td>Biomechanical, physiologic, and mobility performance changes during</td>
<td></td>
<td>The effect of about-turn direction on</td>
<td></td>
<td>Basic Military Fitness Tool (BMFT): a reliable</td>
</tr>
<tr>
<td></td>
<td>prolonged load carriage</td>
<td></td>
<td>marksmanship kinematics</td>
<td></td>
<td>field uniform-test for performance prediction of</td>
</tr>
<tr>
<td></td>
<td>Angela Boynton, USA</td>
<td></td>
<td>Jemma Coleman, Australia</td>
<td></td>
<td>strength-related common military tasks</td>
</tr>
<tr>
<td></td>
<td>Influence of armored vest sizing on markers of vest movement and sprint</td>
<td></td>
<td>Effect of rifle firing position on upper body</td>
<td></td>
<td><strong>Ulrich Rohde, Germany</strong></td>
</tr>
<tr>
<td></td>
<td>performance</td>
<td></td>
<td>muscle activity in U.S. Marines during</td>
<td></td>
<td>Manual handling task demands across the Australian Army</td>
</tr>
<tr>
<td></td>
<td>Daniel Hell, USA</td>
<td></td>
<td>simulated 100-yard marksmanship tasks</td>
<td></td>
<td><strong>Greg Carstairs, Australia</strong></td>
</tr>
<tr>
<td></td>
<td>Do weak postural muscles contribute to pain when wearing body armour?</td>
<td></td>
<td>Trevor Vibo, USA</td>
<td></td>
<td>The Danish Armed Forces basic physical test –</td>
</tr>
<tr>
<td></td>
<td>Tracy Carroll, Australia</td>
<td></td>
<td>Head and rifle kinematics of rifle shooting in U.S. Marines</td>
<td></td>
<td>evaluation and development Henritte</td>
</tr>
<tr>
<td></td>
<td>Assessment of pressure distribution and comfort from systematic</td>
<td></td>
<td>Aaron Wolf, USA</td>
<td></td>
<td><strong>Albinus Hasselstrom, Denmark</strong></td>
</tr>
<tr>
<td></td>
<td>load redistribution on the torso</td>
<td></td>
<td>Effects of loaded march on marksmanship</td>
<td></td>
<td>The association between weight status and</td>
</tr>
<tr>
<td></td>
<td>Lefi Hasselquist, USA</td>
<td></td>
<td>performance</td>
<td></td>
<td>fitness test results in British Army personnel</td>
</tr>
<tr>
<td></td>
<td>The effects of load configuration, mass, and movement speed on</td>
<td></td>
<td>Tong Lee, Singapore</td>
<td></td>
<td><strong>Paul Sanderson, UK</strong></td>
</tr>
<tr>
<td></td>
<td>biomechanical risk factors for musculoskeletal injuries</td>
<td></td>
<td>A preliminary look at muscle activity in a</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gavin Lenton, Australia</td>
<td></td>
<td>sustained-hold rifle aiming activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spatiotemporal and lower body kinematic differences between normal</td>
<td></td>
<td>Jemma Coleman, Australia</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>walking and walking while holding weapon aim</td>
<td></td>
<td>Effect of a mechanical small-arms support system on pre-shot jitter: a</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Courtney Webster, USA</td>
<td></td>
<td>pilot study</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Free Communication Session 17 - Occupational performance and testing 3</strong></td>
<td></td>
<td>Andrew Tweedell, USA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Room 105/106</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.00-18.00</td>
<td><strong>Resilience Roundtable - Moderator: Brad Nindl, USA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.30-22.30</td>
<td><strong>Networking Function</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>Networking Function</strong></td>
</tr>
<tr>
<td></td>
<td>Meat Market - 53 South Wharf Promenade, South Wharf</td>
<td></td>
<td></td>
<td></td>
<td>sponsored by</td>
</tr>
<tr>
<td></td>
<td>Featured speaker: CPL Mark Donaldson, VC</td>
<td></td>
<td></td>
<td></td>
<td>BOND UNIVERSITY</td>
</tr>
<tr>
<td></td>
<td>Presentation of awards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Official handover to the next ICSSP series host</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Poster Session 1
Wednesday 29 November 2017

Panagiotis Asimoglou
Analysis of the Trojan war combat fighting

Thiago Augusto Rochetti Bezerra
Analysis of Intracranial Pressure of Brazilian Air Force Pilots During Maneuvers in a Force Simulator

Kim Beals
Heart Rate Variability changes in Reserve SEAL Operators during close quarters combat training

Sean Bulmer
Soldier monitoring: a systematic review

Sarah Louise Coakley
The Application of a Mathematical Model to Estimate the Aerobic Capacity Required to Complete an 8-mile Loaded March from an Individual's Body Mass

Adam Dooley
Fatigue, Performance and Health of RNZN Trainee Divers

Stephen Foulis

Michel Gonçalves
Effects of jump squat in the performance of the squat lunge and squat hold in Brazilian military parachute

Jay Heaney
Upper Extremity Function in Warfighters Following Cold Water Immersion and Rewarming in the Field

Andrew Hunt
Usability and Acceptability of Real-Time Physiological Status Monitoring Devices in the Australian Defence Force

Deborah Jeppesen
Emotional Intelligence and Military Advisors

Karen Kelly
Changes in androgen hormones during intense training in elite military men

Ben Lee
A Job Task Analysis of Digging Tasks Conducted by the Ground Close Combat (GCC) Roles in the UK Armed Forces

Runer Marson
Evaluation of sports infrastructure of the Brazilian Army: A methodological proposal

Runer Marson
The influence of the diameter of the bar in the maximum repetitions of pull-up test

Katherine Blake Mitchell
Encumbered Range of Motion Assessment of a Novel Body Armor System Designed to Improve Mobility

Katherine Blake Mitchell
Development of a building clearing methodology for the assessment of soldier

Leila Oja
Estonian conscripts’ health and motivation in entering military service

Alex Rawcliffe
Changes in Somatosensory and Sensorimotor Function following an Acute Bout of British Army Foot Drill Training: Implications of Lower-limb Musculoskeletal Injury Risk in Women

Carla Rue
A Job Task Analysis of Casualty Evacuation by Stretcher Performed by Ground Close Combat Roles in the UK Armed Forces

Pierre-emmanuel Tardo-dino
Protective effects of exercise training on endothelial dysfunction induced by total sleep deprivation in healthy subjects

Bruno Terra
A Supervised Physical Training Phase Prior to a Brazilian Navy Special Operations Course Seems to Increase Their Approval Rate

Christopher Vine
A Job Task Analysis to Quantify the Physical Demands of Load Carriage Duties Conducted by Ground Close Combat (GCC) Roles in the UK Armed Forces
Anne Beethe
Acute Effects of a 500 Meter Combat Swimming Time-Trial on Balance, Ankle Range of
Motion, Strength, Pain and Exertion in Novice Performers

Priscila Bunn
Association between musculoskeletal symptoms and possible risk factors in Brazilian Navy
high school students

Justin Cupples
USAF Occupationally Specific, Operationally Relevant Physical Fitness Tests and Standards:
Test-Retest Reliability

Kent Delbridge
The development of a test for a strength-based criterion RAAF tent lift task

Jace Drain
Evaluation of a pilot community-based pre-conditioning program for female Army recruits

Peter Frykman
Comparing the Ability of Two Different Batteries of Physical Performance Tests to Predict
Occupational Task Performance.

Stephen Goodman
Dehydration does not impair motor performance or motor learning in military and civilian
participants

Adam Hayes
The selection of generic or task-related physical employment tests for the Royal Australian Air
Force

Dan Heil
The Energetic Consequences of Wearing a Belt-Supported Armored Vest During Overground
Hiking

Allan Inoue Rodrigues
Training Load, Stress Tolerance and Upper Respiratory Tract Infection in Brazilian Navy
Combat Divers Special Operations Course

Jemma King
Special Forces Soldiers Training: A Pre-Emptive Approach to Stress Management using
Emotional Intelligence (EI) and Bio-Measures of Stress (cortisol-stress hormones and IgA-
immune function)

Thiago Lopes
Are there differences between men and women or limb dominance during physical
performance tests in healthy Navy cadets?

Runer Marson
Analysis of competitive performance in obstacle run of military pentathlon through
biomechanics

Runer Marson
The acute effect of cadence on the maximum number of repetitions in the push-up test

Katherine Blake Mitchell
Static versus dynamic marksmanship task: a performance assessment comparison

Katherine Blake Mitchell
The relationship between physical fitness and military operational obstacle course
performance times

Eduardo Borba Neves
Musculoskeletal Injuries in Sergeants Training Courses from Brazil and Colombia

Tommi Ojanen
Physical Activity of Soldiers during a Military Field Exercise

Angus Pike
The quantification of the individual contribution required to perform a Royal Australian Navy
casualty firehose lift

Jan Redmond
The Relationship between Anthropometric Measures and Common Occupational Task
Performance of Female Soldiers

Kase Saylor
Markerless Biomechanics Analysis for Optimization of Soldier Physical Performance

Matthias Tegern
Screening Aviators- can we include movement control tests?

Ella Walker
Physical Demands of a Boarding Operations Training Exercise Conducted by the Royal
Marines
Poster Session 3
Friday 1 December 2017

Paul Auchincloss
Atraumatic Lower Extremity Musculoskeletal Injuries and Running in U.S. Army Rotational Units in South Korea

Piete Brown
The Sex Gap in Simulated Royal Navy Manual Handling Tasks is Reduced in Relation to Isometric Strength Scores

Sean Bulmer
The Multi-component Training Distress Scale: Firefighter

Eden Debellemaniere
Deep, short sleep naps in occupational settings using relaxation techniques

Dean Dickson
Lessons learnt from ADF Trial of Live Physiological Monitoring to improve soldier performance in both training and operational scenarios

Tessa Flood
A job task analysis of casualty drags performed within Ground Close Combat roles in the UK Armed Forces

Nilton Gomes Rolim Filho
Glomerular Filtration Range (eGFR) and Hematological changes during 2012 Comandos Special Operations Course

Matthew Gruse
A Physical Demands Analysis to Establish Critical Physical Tasks for USAF Explosive Ordnance Disposal and Battlefield Airmen Occupations

Phil Karl
Impact of nootropic supplementation on measures of marksmanship performance in Active Duty Soldiers

Karen Kelly
Caloric Estimate of SEAL Delivery Vehicle Operators During Unit Level Training

Nathalie Koulmann
Circulating miRNAs as skeletal muscle fiber-type specific biomarkers

Ji Zheng Ma
Effect of Load Carriage with Aerobic-Based Tasks Interspersed with High-Intensity Bursts of Tasks on Lethality Capability

Danielle Soares Morel
Morel Effects of whole body vibration exercise on handgrip strength and muscular activity of flexor digitorum superficialis on soldiers from Brazilian Army

Eduardo Borba Neves
Prevalence and anthropometric predictors of metabolic syndrome in Brazilian military

Stavros Petmezas
Wearer comfort and performance of the Dendra panoply during simulated Trojan war combat fighting

Alex Rawcliff
A kinetic and kinematic analysis of British army foot-drill in untrained men and women: implications for lower-extremity injury risk

Tara Reilly
The effect of previous loaded marching experience and environmental condition on a simulated urban combat task

Jesse Stein
Top 5 Critical Combat Tasks Identified by Combat Veterans

Jesse Stein
Differences Between US Army and Marines in Self-Reported Combat-Relevant Physically Demanding Tasks

Bruno Terra
Physical Performance Differences Between Successful and Unsuccessful Candidates of a Brazilian Navy Special Operations Course

Damien Van Tiggelen
The Effect of Suspension Training Systems on Muscle Recruitment During Two Types of Dynamic Exercises

Courtney Webster
Muscle Fatigue Indicators during Paced Live-Fire Shooting with and without a Body Armor-Integrated Prototype Weapon Mount
Sponsors and Exhibitors

NovoFit
Table Top: 01

Contact Person: Carl Dermott
Address: 72-74 Rodeo Drive, Dandenong South
VIC, Australia 3175
Phone: +61 439 766 682
Email: cdermott@novofit.com.au
Web: www.novofit.com.au

NovoFit has a single mission to be Australia’s leading provider of global fitness brands for the commercial, wellness, performance and functional training markets. A complete solution for all clients that will bring together innovation, design, quality, performance, technology and most importantly a user experience that will ensure all clients are set on the path of success.

Fusion Sport
Table Top: 02

Contact Person: Dr Markus Deutsch
Address: 76 Neon Street, Sumner QLD, 4074, Australia
Phone: +61 7 3123 7124
Email: info@fusionsport.com
Web: www.fusionsport.com

Fusion Sport develops, implements and supports a range of technologies to drive human performance and health in sport and the military. Fusion’s SMARTABASE Data Management System is providing customisable data management and reporting solutions for leading military organisations in both Australia and the USA for human performance capability optimisation.

IMeasureU
Table Top: 03

Contact Person: Matt Clarke
Address: Level 4, 125 St Georges Bay Rd, Parnell
Auckland, New Zealand, 1052
Phone: +61 414 784 888
Email: matt.clarke@imeasureu.com
Web: www.imeasureu.com

Inertial Sensor and Software platform to precisely quantify body movement and workload metrics in the field.

Sparta Science
Table Top: 04

Contact Person: Liana Henry
Address: 165 A Constitution Drive Menlo Park
CA, USA, 94025
Phone: 1 831 566 9074
Email: lhenry@spartascience.com
Web: www.spartascience.com

Sparta Science reduces injuries and optimizes performance by using patented software and force plate technology to identify individual injury risk. Sparta’s customers include over 40 professional and collegiate sports organizations globally as well as multiple branches of the U.S Military.

Catapult
Table Top: 05

Contact Person: Boden Westover
Address: 1 Aurora Lane, Docklands VIC, Australia, 3008
Phone: +61 431 221 343
Email: boden@catapultsports.com
Web: www.catapultsports.com

Catapult enlightens sport with scientifically-validated analytics, obtained with the most advanced wearable technology in the world. With over 1500 elite teams worldwide, Catapult innovates how information shapes athletic performance.

Rocktape Australia
Table Top: 06

Contact Person: Tenille Bazzinotti
Address: Unit 13/515 Walter Road East, Morley
WA, Australia, 6062
Phone: +61 8 9379 3400
Email: sales@rocktape.com.au
Web: www.rocktape.com.au

Rocktape is an elastic tape used for reducing pain, hastening recovery, maintaining posture and improving movement. Go Stronger, longer with Rocktape- the Movement Company.

Axiamo
Table Top: 07

Contact Person: Michael Gasser
Address: Aarbergstrasse 5
2560 Nidau, Switzerland
Phone: 0041795678546
Email: michael.gasser@axiamo.com
Web: www.axiamo.com

Axiamo Ltd. is an innovative Swiss high-tech company dedicated to motion tracking for physical performances in sports and military service.

GymAware
Table Top: 08

Contact Person: Evan Lawton
Address: Unit 8 26-28 Winchcombe Court
ACT, Mitchell 2911
Phone: +61 408 296 086
Email: office@kinetic.com.au
Web: gymaware.com

GymAware measures performance in the weights room. It is the gold standard technology for implementing Velocity Based...
Sponsors and Exhibitors

Training and monitoring power. Designed for teams, GymAware’s engaging interface, multiple real-time leaderboards, 1RM reports and video analysis make it the only system which delivers the accuracy and features desired by coaches.

**Ideation Product Solutions**

**Table Top: 09**

**ideation product solutions**

Contact Person: Colin Howard  
Address: 2/107 Highbury Rd, Burwood  
VIC, Australia 3125  
Phone: +61 412 421 333  
Email: colinh@ipsol.com.au  
Web: www.ipsol.com.au

Ideation Product Solutions are the designers and manufacturers of the ESIM2.0 Environmental Stress Index Monitor. Developed in conjunction with Australia’s Defence Science and Technology Group, the ESIM2.0 is a lightweight, portable, rugged, fast and simple to operate alternative to WBGT. ESIM2.0 readings can be used as a direct substitute for WBGT. The ESIM2.0 is currently widely deployed within the Australian Army.

**Vald Performance**

**Table Top: 10**

Contact Person: Christopher Rowe  
Address: 75 Sandgate Road, Albion  
QLD, Australia, 4010  
Phone: +61 449 724 896  
Email: chris@valdperformance.com  
Web: www.valdperformance.com

Vald Performance is an Australian-based health technology company. The company is behind the NordBord Hamstring Testing System, the GroinBar Hip Strength Testing System and the HumanTrak Movement Analysis System.

**IsoTechnology**

**Table Top: 11**

Contact Person: Terence Vardy  
Address: 3/32-34 Bay St Tweed Heads  
NSW, Australia, 2485  
Phone: +61 402 240 893  
Email: tv8000@isotechnology.net  
Web: www.isotechnology.net


**ADA**

**Table Top: 12**

Contact Person: Mitch Edward  
Address: 1 Equator Road, Thomastown  
VIC, Australia, 3074  
Phone: +61 417 930 329  
Email: mitch.edward@ada.com.au  
Web: www.ada.com.au

ADA is the leading provider of apparel on load carriage equipment to the ADF.

**EPE**

**Table Top: 13**

Contact Person: Narelle Hoffman  
Address: 91 Robertson Street Fortitude Valley  
QLD, Australia, 4006  
Phone: +61 402 486 393  
Email: narelle@epequip.com  
Web: www.epequip.com

EPE specialises in protecting soldiers from Non Traditional Threats. In response to an ADF problem we developed Scimitar C5i. Scimitar provides, at a glance, who is where, when and what they are seeing as the story unfolds to enhance and support both operational and training activities. Provides a live view of the team and assets including: Video and Audio; Live Physiological Monitoring and Biometrics; Geolocation mapping; Communications; Global Connectivity; CBRN and other specialised sensors.

**Medilink**

**Table Top: 14**

Contact Person: Jenni Nowland  
Address: 4/7 Millennium Crt, Silverwater  
NSW, Australia, 2128  
Phone: +61 419 251 167  
Email: jenni@medilinkaustralia.com  
Web: www.medilinkaustralia.com

Medilink is based in Sydney and has been operational for over 25 years. Medilink distributes premium brand scientific instrumentation to clinical and research end users in Australia and New Zealand. Medilink supplies, services and supports a selection of products in Neuro-diagnostics, Neuro-modulation, Neuro-stimulation, Neuro-imaging and Neuro-navigation. Applications include, fNIRS, EEG, rTMS, tDCS, tACS, and ECT technology.
Sponsors and Exhibitors

**Diggerworks**

Table Top: 15

Contact Person: Diggerworks Engagement Officer
Address: Victoria Barracks Melbourne, Southbank
VIC, Australia, 3006
Phone: + 61 3  9282 4342
Email: diggerworks@defence.gov.au

Diggerworks identifies, develops and integrates Soldier Combat System Solutions to continuously enhance the capability of the ADF Land Combatant.

**AlMedical International**

Table Top: 16

Contact Person: Mat van Heerden
Address: Adelaide, SA | Melbourne, VIC | Sunshine Coast, QLD
Phone: +61 8 8294 8664
Email: sales@aimedical.com.au
Web: www.aimedical.com.au

AlMedical International combines a dynamic mix of technology and innovation resulting in an array of medical, rehabilitation, sport science and research equipment of highest quality. Superior customer service and technical support is our number one focus – keeping our customers working seamlessly and to their full potential. Our AIM is your success!

**Steel Blue**

Table Top: 17

Contact Person: Michael Rennison
Address: 18 Irvine Drive Malaga
WA, Australia, 6090
Phone: +61 8 9209 3322
Email: Michael.rennison@steelblue.com
Web: www.steelblue.com

If you work on your feet all day, comfort is absolutely essential. So whatever game you’re in, demand the 100% Comfort of Steel Blue work boots. Steel Blue not only meet the world’s highest safety standards, we also produce a range of boots with legendary levels of comfort.

**Foot Science International**

Table Top: 18

Contact Person: n/a
Address: 26, Dakota Crescent, Stockburn
State, Country, Post code: Christchurch,
New Zealand, 8042
Phone: +64 3 348 2115
Email: orders@footscienceinternational.co.nz
Web: www.formthotics.com

Formthotics are prefabricated orthotics which research has shown can reduce injury rates in naval recruits by 34%. Already used by armed forces around the world and millions of civilians. Podiatrists and physiotherapists say “Formthotics make them heroes in their practice”. Come to the Formthotics table and try them for yourself!

**Crossfire (Aus) P/L**

Table Top: 20

Contact Person: Peter Marshall
Address: 138 Wallace St, Braidwood
NSW, Australia, 2622
Phone: +61 2 4842 2677
Email: info@crossfire.com.au
Web: www.crossfire.com.au

Load Carriage, Combat boots and Field Kit with a mountaineering heritage. Crossfire attends to biomechanical first principles for every design project.