



16 March 2015

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**SIA 3rd Submarine Science, Technology and Engineering Conference  
17-19 November 2015**

**CALL FOR PAPERS**

We are fast approaching a critical period for Project SEA 1000 – The Future Submarine. Much of this work will focus on the technical challenges of how to execute the procurement policy chosen by the Government and issues associated with those challenges. The Committee of the Submarine Institute of Australia (SIA) will convene the Third Submarine Science, Technology and Engineering Conference of the SIA in Adelaide, SA between 17th and 19th November 2015 inclusive.

The theme for the Conference is:

**The Future Submarine Program:  
Australia's greatest Science, Technology and Engineering Challenge**

The conference focuses on the multi-national considerations of sovereignty, IP protection, transfer of sensitive technology, development, test and evaluation, systems integration and team/individual training. Day 2 will include invited speakers from major stakeholder organisations. Days 1 and 3 will mainly comprise technical papers from this open call.

The SIA is seeking papers of 20 minutes in length plus 10 minutes for questions for oral and poster presentation during Days 2 and 3 of the conference

Suggested topics include (but not limited to) the following:

**Sovereignty, IP Protection, Transfer Of Sensitive Technology**

- Stealth Technology
- Combat systems integration, test, evaluation and software development.
- Sensors and Weapon Systems

**Research and Development, Test and Evaluation Policy and Management**

- Scientific research and development strategy and management;
- Network design and evolution for submarines in theatre-wide C4ISR;
- Acoustic communications and signal processing research and education programs;
- Life-cycle approaches to submarine research, development, test and evaluation.
- Long term consideration of future adoption of nuclear propulsion

**Engineering Design**

- Hydrostatic and hydrodynamics programs relevant to submarines and other undersea technology applications;
- Naval architecture challenges for integration of unmanned underwater vehicles [UUV] in submarines;
- Submarine safety, escape, survival, and rescue systems
- Developments in integrated design and development environments [IDDE]

**Workforce Skills Development**

- National and regional engineering and technical skill training development, demand and supply relevant to submarine design, construction, operation and sustainment;
- Education programs for advanced systems engineering and systems integration for submarines;
- Materials science and technology education and workforce development.

**Integrating Multi-National Technology**

- Computer-based tools and training and their use for submarine design, development and integration;
- Extension of computer-based design tools to estimate cost of ownership contributions
- Research, development, education and training associated with air-independent propulsion for submarines;
- Advances in battery technology and electric propulsion.
- Game-changing developments in undersea warfare technology

**Complex Program Management**

- Workforce planning for co-ordinating submarine design, construction and sustainment both overseas and in Australia;
- Acquisition management principles applicable to design construction and sustainment of submarines in a multi-national context;
- Principles of and case studies for managing cost-of-ownership and life-cycle sustainment of complex platforms in a multi-national context;

**Submission Timetable:**

- Abstracts of proposed papers in MS Word format (limit 250 words) should be submitted by Friday 10<sup>th</sup> April using the form available at <http://www.jotformpro.com/frankowen/Conf15.papers>
- Acceptance of abstracts will be notified by Friday 26<sup>th</sup> June.
- Full papers in PDF and MS Word (A4 paper format) required by Friday 11<sup>th</sup> September.
- Acceptance of paper and draft conference program notified by Monday 21<sup>st</sup> September.

The Institute is seeking conference participation from Australian and overseas government and industry representatives, together with other involved organisations.

The program includes a reception on 16<sup>th</sup> November and a Conference Dinner on 17<sup>th</sup> November. Further details will be made available under 'Conferences' on the SIA website: <http://www.submarineinstitute.com/>

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