



**ROYAL  
AERONAUTICAL  
SOCIETY**

AUSTRALIAN DIVISION  
SYDNEY BRANCH INC

Vol 2012-8 PO Box 573, Mascot, NSW 2020 ABN 75 134 058 731 Email: [sydneybranch@raes.org.au](mailto:sydneybranch@raes.org.au) <http://www.facebook.com/S.Sydney> [www.raes.org.au](http://www.raes.org.au)

# NEWSLETTER

OCTOBER 2012

Date: **Wednesday, 31<sup>st</sup> October 2012**

Time: **18:00 for 18:30 hours**

Speaker: **Dr Naomi Tsafnat**

**Aerospace Engineering Associate Lecturer School  
of Mechanical and Manufacturing Engineering,  
University of New South Wales**

Topic: **'Aerospace Engineering:**

**From NASA via Lockheed-Martin to UNSW'**

Venue: **Mechanical Engineering Lecture Theatre**

**Mechanical Engineering Building, J07**

**University of Sydney**

Refreshments will be available prior to the commencement of the meeting

by clicking on the link: <http://www.raes.org.au/events/> or email by lunchtime Wednesday 31<sup>st</sup> Oct to: [sydneybranch@raes.org.au](mailto:sydneybranch@raes.org.au)

## Sir Charles Kingsford Smith Memorial Lecture

Delivering the 54<sup>th</sup> Sir Charles Kingsford Smith Memorial Lecture in Sydney on Wednesday evening 20th September, 2012 at the Royal Aeronautical Society Sydney Branch annual formal dinner, Airbus' Charles Champion spoke of the considerable challenges facing the aviation industry, but also highlighted possible solutions. Pointing out the significant contribution that aviation makes to the global economy and the conflict between growth and ecological imperatives, he insisted that a path forward needs to be defined urgently. "We need to start prioritising on what the world's long term priorities are when it comes to making choices between emissions or noise, cost or recycling," Champion told the assemblage. "And we need to start addressing some of the issues that will make it possible to deliver the solutions." Champion, Airbus' Executive Vice President Engineering, made a particular point about the industry's failure to maximize its access to engineering talent. "In the last decade schools only turned out half the number of engineers that Australia needs, with failure and dropout rates running at about 40%. "Many graduates then decide to follow different careers; and of those that finally make it into aeronautics we're seeing a growing skills gap. "We've got to start attracting the best talent back into engineering and then to stay in it. We've got to invest in education and training at all levels. "We've got to recognize the professional standing of people already working in engineering. And we've got to capture and pass on the knowledge and passion of those heading into retirement." Champion also shared some of the engineering concepts that Airbus is exploring in the search for solutions to the industry's challenges. Under the umbrella of *Airbus Smarter Skies*, the European manufacturer is looking at:

- Assisted takeoff and continuous 'eco-climb';
- Aircraft in free flight and formation along 'express skyways';
- Low-noise, free-glide approaches and landings;
- Low emission ground operations; and
- Powering future aircraft and infrastructure.

A lot of that would be familiar in some sense to industry insiders, but the concept of formation flying is perhaps a novel one. Airbus talks of "high frequency routes (which) would also allow aircraft to benefit from flying in formation like birds during cruise, bringing efficiency improvements due to drag reduction and lower energy use." With around 300 people in attendance to hear the lecture, David Cox, Chairman, Sydney Branch of the Royal Aeronautical Society, said that, "The Branch was very excited to be able to attract a speaker of Charles' stature to come to Sydney. "It was rare opportunity for us to hear

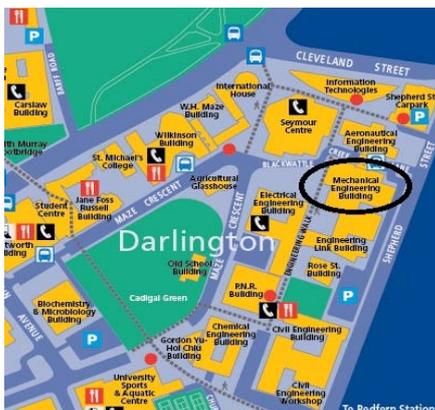


### Speaker Profile

Dr. Naomi Tsafnat is an Associate Lecturer of Aerospace Engineering at UNSW School of Mechanical and Manufacturing Engineering. Her research focuses on micro-structural finite element analysis of biological materials, and bio-heat transfer. Naomi was a post-doctoral research fellow at the Australian Key Centre for Microscopy and Microanalysis at the University of Sydney. Naomi's Ph.D. in Biomedical Engineering, from the University of New South Wales, is on the topic of numerical modelling of bio-heat transfer in hyperthermia liver cancer treatment. She completed her B.Sc. (Summa Cum Laude) in Mechanical Engineering at San Jose State University, California, and has worked at NASA Ames Research Center and at Lockheed Martin Space Systems.

### Synopsis

Naomi will discuss her career starting as a student working for NASA Ames Research Centre and as a graduate thermal engineer working for Lockheed-Martin then finally as an aerospace engineering lecturer for UNSW School of Mechanical and Manufacturing Engineering. She will talk about the research projects that she was involved with and will give an insight into the modern aerospace industry.



### Parking

Best parking is in the Shepherd St Car park corner of Cleveland St and Shepherd St. Please observe parking restrictions and allow time to drive to the University of Sydney, park and walk to the venue. (Refer map).

### Post Presentation

The Sydney Branch

Committee will be providing 'Pizzas and Drinks' following the presentation to encourage attendees to mingle and interact with the speaker.

**RSVP:** Attendance registration for the presentation & 'Pizzas and Drinks' afterwards is essential. Please register

from one of the truly leading figures in world aviation. It was great talk with an inspirational message for the many students and young people present who then had the opportunity to network with the wide cross section of people present including many leading figures from industry." An innovation tried this year was an industry gathering prior to the lecture. This allowed the Sydney Branch to gather input from industry about where to put our efforts plus reconnect to some with whom our relationship had faded. "When an organization sets out to ask for guidance it is easy to focus on the half empty part of the glass," he said. "So I have been delighted to find how strong our brand is, how willing industry is to help and how generous people have been with their time. And the Society does have strengths –the half full part of the glass - our brand is globally recognized, in Sydney we have hundreds of people in our network who take an active interest in our activities, we average 40-50 attendees at 10+ lectures a year and our links with the students in this city are the strongest I can remember thanks to some initiatives put in place over the last few years. Given the current state of the industry and the economy in NSW, these could be seen as good enough for an organization of our size and resources". "But of course it isn't, there is much to do if we see our role as fostering a vibrant and active aerospace community in this city. Fortunately there is great commonality in views about what needs to be done as expressed by our friends from industry". David spoke of "three I's", innovation, inspiration and information. "If the Australian economy is to have a future beyond being a beautifully engineered hole in the ground,

we must learn to innovate and embed a culture of innovation into the fabric of our society. We must inspire our young people to take up careers in the technical fields and inspire the smart people in our workforce to have the courage to take risks and develop new ideas. Many people and organizations lack the time or resources to search through the torrent of information that confronts them and we need to help get the right ideas to the right people so they can act effectively. The leadership of the Society is determined to play a full, relevant and active role in developing a lively and successful aerospace community in Sydney". David also acknowledged the presence of Mr Tom Sonter who discovered the 'Southern Cloud' on 26 October 1958 – 27 years after its disappearance during a flight from Sydney to Melbourne, on a stormy day 21<sup>st</sup> March 1931. The evening concluded with pre-dinner drinks and hors d'oeuvres, followed by a three course dinner which was enjoyed by some 115 attendees - an evening not to be forgotten.

### Diary 2012

**14 Nov:** Air Marshal Clifford Spink CB CBE FCMI FRAeS - the current Master of the Guild of Air Pilots and Air Navigators [GAPAN]

**5 Dec:** AGM, Sydney Branch

### The Annual General Meeting of the Royal Aeronautical Society Australian Division - Sydney Branch Inc

will be held on Wednesday 5<sup>th</sup> December 2012, commencing at 18:00 hours, in the Mechanical Engineering Theatre, Mechanical Engineering Building, The University of Sydney.

#### 2012 AGM AGENDA

- PRESENT:** Members to sign attendance book.
- APOLOGIES:**
- PREVIOUS MINUTES:** Minutes of the 2011 AGM, discussion and motion to accept.
- BUSINESS ARISING:** Discussion and motion to accept.
- BRANCH RULES:** Updated Branch Rules – for approval. (The updated Sydney Branch Rules are available from our website; [www.raes.org.au/assets/Sydney-Branch-Rules-June-2011R1-JV13August.doc](http://www.raes.org.au/assets/Sydney-Branch-Rules-June-2011R1-JV13August.doc). Printed copies will be available prior to the AGM).
- CHAIRMAN'S REPORT:** Annual report, discussion and motion to accept.
- TREASURER'S REPORT:** Presentation of 2012 financial statement. (Audited report will be sent with the February Newsletter). Discussion and motion to accept.
- ANNUAL ELECTIONS:** The Hon Sec to report on Nominations received for the classes of Committee by the due date 14<sup>th</sup> November 2012 and, should there have been more Nominations received than positions available for any of the classes, the result of elections.
- APPOINTMENT OF HONORARY AUDITOR:** Mr Stephen Howard, Harrison and Howard.
- GENERAL BUSINESS:** Any business raised and accepted by the Chairman.
- CLOSE OF MEETING:** Thank you for attending, and best wishes for the Festive Season. Close of AGM.
- PRESENTATION:** **To be advised** (To commence 18:30 hours)

*Refreshments will follow the conclusion of Jason Held's presentation entitled 'Sabre Astronautics'.*

### 2013 Committee Nomination Form

Send to: The Honorary Secretary, RAeS Aust Division – Sydney Branch, 88 Trafalgar St, ANNANDALE NSW 2038/email: [sydneybranch@raes.org.au](mailto:sydneybranch@raes.org.au) / Fax: 9905 2579 (please ensure that nomination forms have been correctly signed before forwarding)

The Sydney Branch AGM is to be held 18:00 hours, Wednesday, 5<sup>th</sup> December 2012 at the Mechanical Engineering Theatre, The University of Sydney.

In accordance with the proposed Branch Rules (2011) of the Sydney Branch of the Royal Aeronautical Society, nominations for the Committee are called and shall be made in writing and signed by one member of the Branch and countersigned by the Nominee. The committee consists of one Chairman, 11 Ordinary Committee Members, and 2 Student Representatives (in total 14 people).

Please forward completed Nomination Forms to the Branch Honorary Secretary at the address above by Wednesday, 14<sup>th</sup> November, 2012 which is at least twenty one (21) days prior to the 2012 Annual General Meeting.

I ..... (Nominator's Full Name)  
of ..... (Nominator's Address)  
nominate ..... (Nominee's Full name)  
of ..... (Nominee's Address)

as an: Ordinary Committee Member/Student Representative/Chairman (*delete 2 of these classes as appropriate*) for the Sydney Branch of the Royal Aeronautical Society for the Year 2013.

**Signed:** ..... **Date:** ..... **Member Number:** ..... (Nominator)  
**Signed:** ..... **Date:** ..... **Member Number:** ..... (Nominee)  
**Tel contact:** ..... (Nominee) **email:** ..... (Nominee)

**NOTE: PLEASE USE ONE FORM FOR EACH POSITION BEING NOMINATED**

**Office Use Only:** Nomination received by the Sydney Branch Hon Sec: ..... (Initials) ..... (Date)