



A DIVISION OF THE
ROYAL AERONAUTICAL SOCIETY

Newsletter of the Aeronautical Society of South Africa

September 2017

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AeSSA Annual Conference
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RAeS
The website of the Royal Aeronautical Society

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Message from the President

Dear members

Less than two months to go before our 2017 Annual Conference!

We are honoured to have a line-up of truly impressive keynote speakers at our conference. I encourage you to read the biographies below.

Dr Jaiwon Shin of NASA Associate Administrator for Aeronautics Research Mission Directorate is our opening plenary speaker. Kevin Ward of Denel Dynamics is another keynote speaker. Dr Sergey L. Chernyshev, General Director of the Central AeroHydrodynamic Institute, is our second overseas keynote speaker. Prof. Thomas Jones of S-PLANE Automation and an Extraordinary Professor at Stellenbosch University will deliver the Alan Nurick Rotorcraft Lecture.

Please take note of the updates on the AeSSA Annual Conference. The pre-events are on 24 October 2017, and the AeSSA Annual Conference runs from 25 to 26 October 2017.

Sadly, we bid farewell to one of our council members, Dr Madeleine Combrinck, who leaves South Africa in September to take a post at Northumbria University in Newcastle. Madeleine has confirmed that she will remain part of the technical committee for the annual conference, a commitment for which I am very thankful.

Our Aerospace Challenge is six weeks away, and promises to be an exciting event.

The sale of our AeSSA-branded jackets is now in full swing! Be sure to place your order.

Kind regards

Glen Snedden

South Africa NPC

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#AerospacePeople: movers and shakers in South African aerospace

NASA's Jaiwon Shin to deliver opening plenary at AeSSA Annual Conference



Credits: NASA

NASA Associate Administrator for Aeronautics Research Mission Directorate Dr Jaiwon Shin (left) will give the opening plenary of the AeSSA Annual Conference on 25 October 2017. The title of his talk is *Future Trends in Aeronautics R&D*.

Dr Jaiwon Shin is the NASA Associate Administrator for the Aeronautics Research Mission Directorate. In this position, he manages the agency's aeronautics research portfolio and guides its strategic direction. This portfolio includes research in the fundamental aeronautics of flight, aviation safety and the nation's airspace system.

Shin co-chairs the National Science & Technology Council's Aeronautics Science & Technology Subcommittee. Comprising federal departments and agencies, which fund aeronautics-related research, the subcommittee wrote the nation's first presidential policy for aeronautics research and development (R&D). The policy was established by Executive Order 13419 in December 2006 and will guide U.S. aeronautics R&D programmes until 2020. The subcommittee finished writing the National Aeronautics R&D Plan in December 2007 and is currently writing the Research, Development, Test and Evaluation (RDT&E) Infrastructure Plan, both of which were called for by the Executive Order.

Between May 2004 and January 2008, Shin served as deputy associate administrator for the Aeronautics Research Mission Directorate where he was instrumental in restructuring NASA's aeronautics programme to focus on fundamental research and better align with the nation's Next Generation Air Transportation System (NextGen).

Prior to working at NASA Headquarters, Shin served as chief of the Aeronautics Projects Office at NASA's Glenn Research Center. In this position he had management responsibility for all of the centre's aeronautics projects. Prior to this, he was Glenn's deputy director of aeronautics, where he provided executive leadership for the planning and implementation of Glenn's aeronautics programme, and interfaced with NASA Headquarters, other NASA centres, and external customers to explore and develop technologies in aeropropulsion, aviation safety and security, and airspace systems.

Between 1998 and 2002, Shin served as chief of the Aviation Safety Program Office, as well as the deputy programme manager for NASA's Aviation Safety Program and Airspace Systems Program. He assisted both programme directors in planning and research management.

Dr Shin received his doctorate in mechanical engineering from the Virginia Polytechnic Institute and State University, Blacksburg, Virginia. His bachelor's degree is from Yonsei University in Korea and his Master's degree is in

mechanical engineering from the California State University, Long Beach. His honours include NASA's Outstanding Leadership Medal, NASA's Exceptional Service Medal, a NASA Group Achievement Award, Lewis Superior Accomplishment Award, three Lewis Group Achievement Awards, and an Air Force Team Award. He is a graduate of the Senior Executive Fellowship Program at the Kennedy School of Government at Harvard University. He has extensive experience in high speed research and icing, and has authored or co-authored more than 20 technical and journal papers.

<https://go.nasa.gov/2vodv56>

Kevin Ward of Denel Dynamics to deliver keynote address on Seeker 400 certification



Kevin Ward, UAVS Certification Manager of Denel Dynamics will deliver an address titled *Why having completed a UAS certification programme raises more questions than answers*.

Ward has over 32 years' experience in the design, development, commissioning and certification of safety critical systems. From 1985 he spent 11 years with GEC Marconi, on systems as diverse as the Tornado GR4, the Euro fighter and Boeing 777 flight control systems, as well as air data systems for every aircraft in the USAF inventory, including Air Force One.

In 1996 he joined Denel whence he worked on development and certification of the Rooivalk and the Oryx helicopter programmes. Since 2012 he has been certifying the Seeker 400 UAS programme with Denel Dynamics.

Ward also currently certifies explosives equipment for the mining industry, and performs numerous consultancies and safety analyses for the defence industry.

Over the years, Ward has helped draft certification standards, including those of DEF STAN; MIL-STDs; RTCA; and the latest SACAA Part 101 Remotely Piloted Aircraft Systems Regulations.

General Director of Central AeroHydrodynamic Institute Sergey L. Chernyshev to give keynote address on the future of aeronautics



Dr Sergey L. Chernyshev is General Director of the Central AeroHydrodynamic Institute named after Professor N.E. Zhukovsky (TsAGI), PhD, professor and Academician of the Russian Academy of Sciences. The title of his address is *Future of Aeronautics: Existing Challenges*.

He graduated from the Moscow Institute of Physics & Technology (PhysTech) with honors and received his M.S. Degree (1978) in aeronautical engineering, focusing on aircraft aerodynamics & multidisciplinary design. He received his PhD at Moscow PhysTech (1981) and a Senior Doctorate Degree (Physics & Mathematics) at TsAGI (2005).

Chernyshev is an expert in aircraft aerodynamics, sonic boom, CFD, as well as aircraft concept design & integration. He has been working at TsAGI for over 30 years at different research and management positions, recently as Executive Director of TsAGI, and, since 2015, as General Director of TsAGI. He is a professor at the Moscow Institute of Physics & Technology and Chairman of its Flight Physics Department.

Chernyshev is an Associate Fellow of AIAA and also Member of AIAA International Affairs Committee (since 1998), Member of the ICAS Council (since 1999). In the mid-90s he worked in the United States as a Director of the TsAGI field office and contributed to expanding technical cooperation between Russian and US, along with other Western countries. He was personally behind the 1990s US-Russia Engineering Student & Scholars exchange programme and many other initiatives aimed at expanding TsAGI's international cooperation in aeronautics worldwide.

Chernyshev also received several national awards from the Russian Government and international awards, among which is the Aviation Week & Space Technology Laurels Award for significant contributions to Global Aerospace 2000 (2001), the French National Order of Merit (2012), and ICAS – Daniel and Florence Guggenheim Award (2014).

AeSSA Annual Conference 2017: Updates

All updates are posted at www.aessa.org.za and at [@AerospaceSA](https://twitter.com/AerospaceSA)

POSTPONEMENT OF PAPER SUBMISSION DATE

Please note that the date for the submission of papers has been extended until 20 September 2017. Please visit

<http://aessa.org.za/Conference/index.php/submissions-37075/submissions> without delay to submit your paper.

The date for submission of papers for peer review has closed.

PRE-EVENTS

Young Professionals Forum (*by invitation only*) 24 October 2017, CSIR ICC

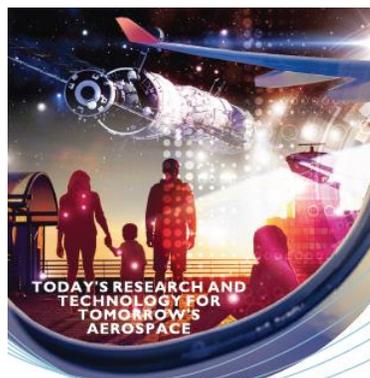
Latest news

The keynote speaker for this event has been confirmed as Pfumelani Ndala of Denel Aeronautics.

For more information on the programme, please contact [Busi Nkonki](#)

**IFAR Summit Open Session
24 October 2017, CSIR ICC**

Hosted by the CSIR. ***Have you registered for the AeSSA Annual Conference to attend this open session and the networking function?***



TODAY'S RESEARCH AND TECHNOLOGY FOR TOMORROW'S AEROSPACE

**AERONAUTICAL SOCIETY OF SOUTH AFRICA
ANNUAL CONFERENCE 2017**

24 October 2017
IFAR open session
CSIR ICC
25-26 October 2017
AeSSA Annual Conference
CSIR ICC

Register online at
www.aessa.org.za/Conference/index.php



15:00 - 16:00 Empowering Aviation in Africa:
panel discussion with the South African
aerospace community

16:00 - 17:00 Brainstorming session

17:00 - 20:30 Networking function

AeSSA ANNUAL CONFERENCE 25-26 October 2017, CSIR ICC

Registration for AeSSA Annual Conference 2017

Please register [here](#) to attend the two-day event.

Please note that you must register for the Young Professionals Forum (attendance by invitation only) and the IFAR Summit Open Session (listed above) and the AeSSA Annual Conference **social events**. More details on dates, times, and the venue for collection of name badges, and the programme will follow.

Submission of a paper for AeSSA Annual Conference 2017

Please submit your papers [here](#) – please pay attention to the instructions on the submission form and consult the [guidelines](#).

Deadline for paper submission: 20 September 2017

Social events

Ahrlac, based at Wonderboom Airport, is the venue for the tour, a presentation, and the conference dinner on 25 October 2017. Book your place for this outing when you [register](#). Transport by bus to the venue will be arranged for registered conference attendees only.

The **Women in Aerospace Breakfast**, a firm tradition at the AeSSA conference, is on 26 October 2017 at the CSIR Knowledge Commons. Guests of Honour (to be announced) have been invited for this networking event, starting at 8:00 for 8:30 – 9:30. It is open for both women and men. Please confirm attendance when you [register](#).

The AeSSA Annual Conference 2017 concludes on 26 October 2017 with a **cocktail function hosted by the Young Professionals Forum**. This is the time for your final networking before you head back home! Please confirm your attendance when you [register](#).

Media ahead of AeSSA Annual Conference

The September issue of *Engineering News* carries a feature on aerospace. Have a look for our advertisement on the conference and take time out to read the [article](#), 'Industry support evident despite challenges', based on an interview by journalist Victor Moolman with Glen Snedden.

Outreach: Aerospace Challenge



*Aerospace Challenge
Participants of 2016*

The Aeronautical Society's Aerospace Challenge competition for universities and schools will take place in Oct 2017. Schools from Soweto will be included via the winner of the Avi Afrique award and ex-CSIR engineer Tshepo Nkodi. The **rules** will be updated to include schools, universities and corporate classes. Drones for Africa will not be participating this year.

More information will be made available at www.aessa.org.za

Date: 14 October 2017

Venue: JOMAC

AeSSA Lectures: MARLIN



MARLIN: South Africa's beyond-visual range air-to-air missile technology demonstrator

This lecture by Ivan Gibbons, Chief Systems Engineer, Denel Dynamics, and Jaco Botha, Programme Manager, Denel Dynamics, takes place on 13 September 2017. The venue is the auditorium at Denel Dynamics, Centurion. More details at www.aessa.org.za

RSVPs by 11 September 2017 to [Liza Barnard](mailto:l.barnard@csir.co.za)

Upcoming AeSSA lecture: All lectures are advertised on www.aessa.org.za

15 November 2017 Col. Miller lecture on civil aviation: Comair. Presenter: Martin Louw. Venue: Comair Orta.

For more information, contact [Kevin Jamison](mailto:Kevin.Jamison@csir.co.za)

AeSSA annual award for best final year students



The annual award for 'Best 4th Year or Honours Degree Project' of the Aeronautical Society of South Africa (AeSSA) will be awarded for a second time in 2017. Students at any African university or university of technology are eligible for this award. Submissions may be made by individuals or teams in the final year of a four-year study programme in engineering, science, commerce, law or other disciplines, and whose final-year project focuses on the aerospace domain. Due date for submission: 31 October 2017.

Aspiring students will be required to submit the following:

- A technical report (in English) in the format required by their university
- A hyperlink to a YouTube clip of an audio-visual presentation (in English) of the project
- Contact details of the team leader or sole author

In addition, a supervisor's report with a short motivation (in English) supporting the submission, is required.

For more information, please send an email to info@aessa.org.za

AeSSA-branded jackets on sale

We take pleasure in offering you an Aeronautical Society of South Africa-branded Hi-Tec jacket (see pdf attached) for sale.

All members have the opportunity to buy one jacket at a 50% discounted price. Should you wish to purchase additional jackets at the full price, please send an email to info@aessa.org.za to request the price list. Purchasing of jackets for non-members can be arranged, following the successful application to the Aeronautical Society of South Africa. Membership forms are available at www.aessa.org.za



All jackets feature the logos of both the Royal Aeronautical Society as well as the Aeronautical Society of South Africa, as displayed on the *Lady Neri insulated vest* (left). As the AeSSA has secured a limited number of these items, you are encouraged to forward details below (1&2) to info@aessa.org.za with the following information:

1. Jacket style e.g. *ORION 3 in 1 Jacket*.
2. Size (M, L, XL, 2XL, 3XL, 4XL)

NB: No items can be exchanged after delivery.

Your jacket can be collected from Liza Barnard, Building 12, CSIR, Meiring Naudé Road, Brummeria. Postage can be arranged at a minimum cost of R100 per item; please supply the address of your closest Postnet office.

RAeS: September issue of Aerospace

In the **September 2017 issue of AEROSPACE**, the RAeS monthly flagship magazine, read about The challenge of autonomous weapon systems, training the next generation of airline pilots and India's growing space sector, and lots more.

If you have forgotten what was in our July newsletter, you can visit the RAeS website to remind yourself!

The **RAeS South African Division** has published the Summer 2017 edition of its newsletter. See more at <http://bit.ly/2eEPVpO>