



# AERONAUTICAL SOCIETY OF SOUTH AFRICA

Aeronautical Society of South Africa NPC  
Registration number 2000/026325/08  
P.O. Box 11928 Die Hoewes 0163  
Tel: (012) 662 5113/Fax: (012) 662 5198  
Email: [admin@aessa.org.za](mailto:admin@aessa.org.za)  
Web: [www.aessa.org.za](http://www.aessa.org.za)



A DIVISION OF THE ROYAL AERONAUTICAL SOCIETY

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## AeSSA Newsletter March 2017

### A MESSAGE FROM THE PRESIDENT OF AESSA

Members of the AeSSA and all other aerospace friends –

I am pleased to announce our first newsletter of 2017.

Several changes and developments took place during the first quarter of 2017. Alan Nelson has handed over responsibilities for the Cape Chapter of AeSSA to René Heise. We acknowledge with gratitude Alan's contribution and look forward to working with René.

The first winner of the AeSSA's annual award for 'Best 4th Year or Honours Degree Project' by a student in an African University has been announced. Read about Muaz Jan and the Department of Mechanical and Mechatronic Engineering at Stellenbosch University.

We hosted two excellent lectures by Captain Hugh Dibley (RAeS consultant), and Prof. Chris Atkin, President of RAeS. Both were well attended. The AeSSA exhibited at the 26th African Aviation Conference: MRO Africa 2017, where Liza Barnard did an excellent job of marketing the Society.

Outreach remains an important aspect of our engagement with our future members, and we acknowledge with appreciation Aerosud's activities at Sci-Bono Transport Week 2016.

Finally: Council has decided on a new name for the annual AeSSA event. It will now be known as the Aeronautical Society of South Africa Annual Conference. Please read the article and take cognisance of the changes to the communication mechanisms we shall use to keep you up to date.

We encourage you to comment on or give input to the newsletter by emailing [admin@aessa.org.za](mailto:admin@aessa.org.za)

Regards

Glen Snedden

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## Cape Chapter

### Alan Nelson steps down as Chair of AeSSA's Cape Chapter

After 14 years as Chair of the AeSSA's Cape Chapter, Alan Nelson handed over to Dr René Heise in January 2017. His tenure was characterised by innovations in youth development, and regular programmes, benefiting aeronautical enthusiasts from many walks of life.

As Chair, he ran a lively programme of lectures and technical visits in the Western Cape. He introduced the visiting VIP Lecture Programmes, ensuring that the AeSSA aeronautical community in the region had access to speakers of note. Students and AeSSA members were taken on various visits, including trips to Simons Town to see the new frigates and submarines, and flights to the Test Flight Development Centre at Air Force Base Overberg. In 2003 the Siyandiza Youth Development programme was introduced at AFB Ysterplaat, and initiated the Young Falcons Virtual Flying Training for grades 10, 11 and 12 learners. In 2015, the Aerotech Cadet Programme was established, to encourage learners who had an interest and passion for engineering, to follow a career in aeronautic engineering. The first graduates of these programmes have already been taken up into the SAAF Pilot training courses and/or are studying at Western Cape Universities.

Alan sees an important, integrative role for the Cape Chapter of AeSSA, in terms of interaction with the aerospace and aviation sectors in the region, "We have the opportunity to promote the AeSSA as a centre for aerospace and aviation excellence in the Western Cape." A youth development focus, inclusive university liaison, interaction with manufacturers and system developers, collectively hold the potential to promote aerospace as a science, business, and a career.

This, he says, should be seen against the exciting current developments in aerospace in South Africa and the world. These include the global search for green technology in aviation fuel and aircraft materials; and the improvement and development of aviation safety methods, both in flight and in ground systems in South and Sub-Saharan Africa. And last but not least, the rise of South Africa's own aerospace development and manufacturing abilities and capabilities.

AeSSA and its members wish Alan all the best for the future.



*Alan (middle) at the December 2016 Wings Parade with Lieutenant Nokubonga Tshefu, Aerotech Cadets Technical Officer and Assistant to Major Hlelo Cengani, Youth Development Facilitator AFB Ysterplaat. The cadet on the right is wearing the half wing.*

## René Heise takes on responsibility for AeSSA's Cape Chapter

Dr René Heise, systems engineer at Rheinmetall Denel Munitions, took over from Col. Dr Alan Nelson as the head of the Cape Chapter on 1 January 2017.

René is no stranger to the aeronautics community in South Africa. He says, "I wanted to study aerodynamics for almost as long as I can remember, and started my engineering academic programme in 1996 at Stellenbosch University."

He completed his PhD under Prof von Backström, with a study on the interface between turbomachinery and helicopter aerodynamics. He explains, "The vehicle for the studies was CIRSTEL, the brainchild of the late Alan Nurick, who conceived it as a tail rotor-less helicopter." During his time at the CSIR, René was involved in the development of research UAVs and also worked on the simulation of the release of external stores from aircraft.

He says, "The line between my work and my hobby was always somewhat blurred, and being a member of the Cape Rocket Society has delivered highlights, such as launching a 2.8 m rocket at Denel's OTR range, which we designed as a carrier rocket for students of the University of Cape Town's space technology programme."



René is looking forward to leading the Cape Chapter and is thankful to Alan for a smooth hand over and ongoing assistance during 2017. René intends to continue with the youth development programme and is thinking of hosting a rocket build-off event aimed at challenging young students.

He is optimistic about the future of aerospace in South Africa, "There are a number of start-ups and relatively new companies in the Cape, which work in the aerospace sector. This is an exciting development and change from the previous large state-owned companies that dominated the South African aerospace sector. This momentum of smaller companies must be supported, as their agility makes them well suited to compete internationally. I see the establishment of such companies as one of the few means of survival of the aeronautics sector in this country."

## #AerospacePeople

*A series of interviews with movers and shakers in the South African aerospace domain*

In this newsletter, we feature the winner of the AeSSA's annual award for 'Best 4th Year or Honours Degree Project' by a student in an African University'.

### **Stellenbosch University scoops AeSSA award for 4<sup>th</sup> year project**

The AeSSA's annual award for 'Best 4th Year or Honours Degree Project' by a student in an African University' went to Muaz Jan and the Department of Mechanical and Mechatronic Engineering at Stellenbosch University.

Muaz completed the atmospheric testing of a combustor for a compressor test stand at the university and was judged to be the best student on the basis of his presentation, report and endorsement by

the faculty and by members of the AeSSA council representing academia, research institutes and industry. Nominations were received from a number of South African universities.

The award recognises and rewards excellence in the study of aerospace topics in a range of disciplines. It comprises the Denel Aviation floating trophy and a sponsored prize of R10,000, which was handed over by Dr Glen Snedden, President of AeSSA, on 2 March 2017 at Stellenbosch University.

For more information on the award, please contact [admin@aessa.org.za](mailto:admin@aessa.org.za)



*Dr Glen Snedden, Muaz Jan, Prof. Kristiaan Schreve*

*Bronwyn Meyers, Muaz Jan, and Dr Johan van der Spuy*



## Royal Aeronautical Society lectures

### Royal Aeronautical Society's lectures draw AeSSA members and aerospace enthusiasts

During February and March 2017 AeSSA members and aerospace enthusiasts had the opportunity to attend two lectures by representatives of the Royal Aeronautical Society (RAeS). Both events draw well over 60 attendees.

On 23 February Captain Hugh Dibley (right) Consultant, RAeS, delivered the Lt-Col. Allister Miller Memorial Lecture in Civil Aviation entitled *Development of aircraft simulation – an essential part of training & aircraft design* at the CSIR. His lecture gave an extensive and well-researched overview of aircraft simulation developments from the early 20<sup>th</sup> century flight trainers to the latest visual and motion systems, as well as the role of the RAeS and other roleplayers on standardisation of simulators. “Simulators give pilots the option of learning by doing,” said Hugh. “They offer significant advantages in terms of cost saving and improved training. There is no risk of a training accident and no pollution or loss of a slot for air traffic control.”



On 15 March Prof. Chris Atkin, President of the RAeS, gave a lecture entitled *Technology, innovation and changing product strategies in aeronautics*, at the CSIR (below). The lecture was preceded by talks with Dr Glen Snedden, AeSSA President, on the South African division and its challenges.



Chris (front, middle) was joined by the RAeS's Simon Levy, the head of Business Development manager who focuses on corporate partners.

Glen confirmed that discussion on the AeSSA's corporate partners had gone well. Both Chris and Simon expressed their appreciation for the fact that the AeSSA is doing well in South Africa.

On 14 and 15 March, Chris and Simon attended the 26th African Aviation Conference: MRO Africa 2017, which was co-located with the 5th African Aviation Training Conference & African Aviation Military MRO. The events took place in Kempton Park.

A two-day AeSSA exhibition at the event was managed by Liza Barnard, who is responsible for the AeSSA's administration. Supported by the new AeSSA banner display, the new AeSSA brochure and material from RAeS, Liza did an excellent job of promoting awareness of the society and advantages of its membership.

## Outreach

### AeSSA and Aerosud at Sci-Bono Transport Week 2016

The Aeronautical Society of South Africa, in cooperation with Aerosud, participated in the 2016 Sci-Bono Transport Week from 24 to 28 October 2016 at the Sci-Bono Discovery Centre in Newtown, Johannesburg.



The focus week provided an opportunity for learners and teachers to interact and engage with professionals from the transport industry, focusing on aviation, road, railway and maritime. The focus week usually targets around 6, 000 learners ranging from Grade 4 to 12.

AeSSA and Aerosud had a stand in the entrance of the Sci-Bono discovery centre manned daily by Aerosud employees and AeSSA members to interact with the learners. They presented an overview of aerospace manufacturing in South Africa, the career opportunities available in the South African aviation industry as well as personal insights on their individual career paths. Aerosud's Heinrich Torlage explained, "The aim of the interaction was to overcome barriers so that learners and teachers understand and become familiar with the aviation industry and the possibilities that exist for them. Opportunity was also given for questions and answers to each of the groups."



AeSSA has been an active participant at the Sci-Bono discovery centre for many years, contributing through lectures, support, and, in partnership with Aerosud, donation of hardware as well. In October 2016, Aerosud donated an A400M wingtip to Sci-Bono as an example of locally manufactured aviation equipment and a showpiece of the potential that can be achieved in the South African aviation manufacturing industry. Heinrich said, “We hope to inspire interest and participation in aviation by learners and visitors to the Sci-Bono Discovery Centre.”



President of AeSSA, Dr Glen Snedden, notes, “A special word of thanks to all the Aerosud employees and AeSSA members involved and to the Sci-Bono team that made it possible.”

## Announcement: AeSSA Annual Event

### Date and renaming of annual AeSSA flagship event

The annual AeSSA event in the second half of the year will be held on 25 and 26 October, 2017, at the CSIR International Convention Centre. The event will now be known as the Aeronautical Society of South Africa Annual Conference.

The Council decided on a naming convention that would link the name of the Society to the event; the term, conference, was chosen as the descriptor that best captures the nature of the annual gathering of specialists, students, invited speakers and other interested parties.

AeSSA President Glen Snedden says, "The new name makes a lot of sense and allows us to promote the Society." **The former name of the event, International Aerospace Symposium of South Africa (IASSA), will therefore no longer be in use.**

To keep members and other interested parties informed of dates and developments regarding the AeSSA Annual Conference, the Society will use a range of promotional mechanisms:

- The AeSSA website [www.aessa.org.za](http://www.aessa.org.za)  
A page will be created on this platform to host information about the AeSSA 2017 Annual Conference as well as functionality for registration.
- Twitter's online news and social networking service: please follow [@AeroSouthAfrica](https://twitter.com/AeroSouthAfrica)  
Tweets will be used to disseminate information on the AeSSA 2017 Annual Conference.
- Join the LinkedIn group, [Aeronautical Society of South Africa](#), and read the latest posts.
- Flyers and posters (printed and electronic) will be produced and disseminated.

Please note the following:

- The Facebook page [International Aerospace Symposium of SA](#) will be deactivated.
- The Twitter handle, IASSA @IASSA\_Karen, will be discontinued over time.

For more information or comments, please contact [admin@aessa.org.za](mailto:admin@aessa.org.za)