

# Program

Date: 7 August 2014  
Place: SAAB, Centurion

12h30 - 13h00	Registration and light lunch	All
13h00 - 13h10	Welcome & Opening	Christo Cloete &
13h10 - 13h50	Information brief on the SA Air Force Planning environment	Col Ian v Vuuren
13h50 - 14h30	Defence Review 2014	Mr Molahlegi Moloape
14h30 - 15h10	Design Challenges of Wide Frequency Range RF Receivers for Electronic Warfare	Dr Cornell v Niekerk
15h10 - 15h30	Break	All
15h30 - 16h10	Saab's recent Missile Approach Warner field tests	Mr Harry Schulz
16h10 - 16h50	Saab Grintek Defence Portfolio and Roadmap	Mr Arno Böhmer
16h50 - 17h00	Closing	Christo Cloete
17h00 - 19h00	Informal function and networking	All

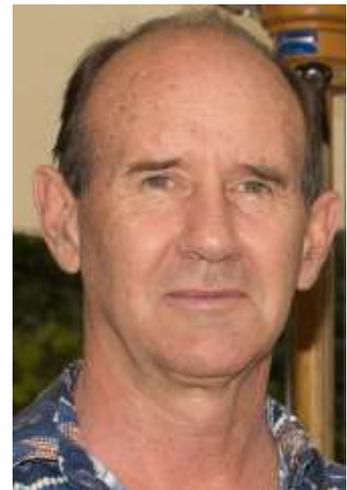
## SPEAKERS:

Speaker: Col Ian van Vuuren

Topic: Information brief on the SA Air Force Planning environment

Abstract: The SAAF receives its mandate from the military strategy and it entails primarily the function of providing for Air Defence. The SAAF is structuring itself to be an air force that inspires confidence. To this end planning constraints need to be taken into account and long term planning is necessary to guide acquisition and procurement activities to benefit the force design and force structure..

Bio: Col van Vuuren joined the SA Force in 1974 as a pupil pilot and obtained wings in 1975. He then went on to become a flying instructor at CFS Dunnottar and AFB Langebaanweg flying Harvards and Impalas. After completing a number of tours as a pilot attack instructor at 6 Sqn he completed a B Eng degree at Stellenbosch University in 2005. He completed a tour at 2 Sqn and then entered the domain of acquisition primarily in the domain of air to air missiles leading the development of the V4 BVR missile and the joint development of A-Darter with the Brazilian Air Force. He has recently completed a tour at the planning division and is back at acquisition as SSO Air Systems.



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Speaker: Mr Molahlegi Molo

Topic: Defence Review 2014

Abstract: Molahlegi will talk about Defence Review 2014 and its impact on the defence industry with the main focus on Radar and EW companies.

Bio: Molahlegi Molo has a BSc in Electrical Engineering (LC), MBL and ENSP. He has been involved with the defence industry since 1999 and joined Armscor in 2006 managing EW and IW projects. He is the acting Radar & EW Divisional Head at Armscor since February 2013.

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Speaker: Dr Cornell van Niekerk

Topic: Design Challenges of Wide Frequency Range RF Receivers for Electronic Warfare

Abstract: This paper provides a short overview of the design challenges faced when developing RF receivers for communications intelligence (COMINT) applications. These receivers must be able to tune over very wide frequency ranges, provide wideband monitoring capabilities with good sensitivity, all while maintaining very high linearity specifications and very good image rejection capabilities.

RF receivers form a core component of many electronic warfare systems and RF receivers build for communications electronic warfare applications face the problem of having to deal with a wide variety of signal types and signal amplitudes simultaneously. It is easy to understand that the range of direction finding (DF) systems is a function of the receiver specifications, but the reality is that even the range of responsive electronic attack systems are defined by the RF receiver. If a responsive jammer cannot see a signal, then it cannot react to it.



While all modern receivers fall into the class of software defined radios (SDR), they are a lot more than an antenna connected to a high speed analog to digital converter (ADC). This paper will provide an overview of the design requirements of such receivers and the difficulties faced by developers.

**Bio:** Cornell van Niekerk received the M.Eng and Ph.D.(Eng) degrees in 1996 and 1999 from the University of Stellenbosch. In 1998 he joined the staff at the Department of Electrical and Electronic Engineering, University of Stellenbosch. In 2008 he joined Grintek Ewation, now GEW Technologies. At GEW, he is a principal engineer involved with the design of electronic attack systems..

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**Speaker:** Cobus van der Merwe

**Topic:** Benefits of Advanced Softkill in Land Warfare

**Abstract:** Advances in threat guidance technology and wider exploitation of the electromagnetic spectrum led to the recent operational deployment of multiband seekers for terminal guidance of the armour munitions. The addition of substantially higher levels of protection through passive armour is not an option due to vehicle design limitations and exponential increase in operating cost associated when design parameters are exceeded. Enhanced survivability can also be achieved by the addition of advanced Softkill technologies to existing vehicles. In order to do so a thorough understanding of threat evolution and response options is required. Saab Grintek Defence recently launched its LEDS 50 MK 2 advanced Softkill solution specifically aimed at enhancing survivability without adding substantial mass to the platform. This paper intends to address the subject matter as follow:



- Recent threat targeting advances.
- Detection options.
- Response options.
- LEDS-50 MK2 Advanced Softkill in action.

**Bio:** Cobus van der Merwe joined the South African Army in Jan 1975 and was trained in mechanised warfare (cavalry, armour and specialised infantry). His training also included Soviet block platoon weapons and MBT's.

He served on active duty in African conventional warfare, counter-insurgency warfare, peace support and stability operations. He served in a number of systems and technology related staff positions. Most notably of these were Armour R&D Wing commander, PM for the ROOIKAT Wheeled Combat Vehicle program, PM for SA Army Vehicle Simulators and Senior Staff Officer Armour R&D for the South African Army. From 1999 until his retirement from Regular Service in 2001, he was User System responsible for SA Army vehicle technology programs including programs like active protection, electric drive vehicles and signature management. He was awarded the Military Merit Medal and also holds three campaign medals.

He joined Saab Grintek Defense in 2001 and was employed in a range of positions including program manager, system engineer, product manager and marketing executive. He is currently employed at Saab as Executive Manager Business Development and is responsible for Land Self-Protection business development on the global market. He is consulted by Government and Industry as subject matter expert on Armour User System issues and military technology matters. He is a frequent speaker at international events on protection related subjects. In 2010 he won the Saab Corporate Innovator of the Year Award.

He is married to Brita and they have two sons. His interests are wildlife conservation, military and business strategy, combat vehicle technology and wildlife photography.

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Speaker: Arno Böhmer

Topic: Saab Grintek Defense EW Portfolio and Roadmap

Abstract: This paper will introduce the Saab Grintek Defense range of products in the Electronic Warfare portfolio and give a glimpse of the future roadmap of electronic warfare in SGD.

Bio: Arno Böhmer received a BSC degree from the University of Pretoria in 1986. Shortly afterwards he joined Infoplan (part of Armscor) and worked in the Comms EW area.



In 1991 he joined Grintek Avitronics and worked on the Cheetah EW system. Arno has been part of the development of the Integrated Defensive Aides Suite (IDAS), Maritime ESM system (U/SME) and the Land Electronic Defense System (LEDS).

For the last 7 years he has been working in Product Management and is currently head of Product Management at Saab Grintek Defence.

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