



مدينة الملك عبدالعزيز
للعلوم والتقنية KACST



رؤية
VISION
2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

THE MINISTRY OF DEFENSE AND
KING ABDULAZIZ CITY FOR SCIENCE AND TECHNOLOGY (KACST)
JOINTLY ORGANIZE

THE 5TH INTERNATIONAL CONFERENCE FOR
ELECTRONIC WARFARE
TECHNOLOGY



12TH - 13TH DECEMBER, 2017

KACST Headquarters
Conference Hall, Building 36
King Abdullah Road, Riyadh - Saudi Arabia

CONFERENCE MAGAZINE ▶

DAY 1 TUESDAY - DECEMBER 12, 2017

Registration

08:00 - 09:00



Official Opening Ceremony

09:00 - 09:30

Holy Quran

Short Video about National Centre for Sensors and Defence Systems Technologies (NCS DST)

Dr. Sultan Almorqi - Director of the National Centre for Sensors and Defense Systems Technologies, President of the AOC Saudi Chapter, Chairman of the Executive Committee on the 5th International Conference on Electronic Warfare and Radar, KACST, KSA

Dr. Susan Robertson - International Region 1 Director, AOC, UK

General Abdulrahman bin Saleh al Bunaian - Chief of Staff, Ministry of Defence, KSA

H.H. Dr. Turki Bin Saud Bin Mohammad Al Saud - President of KACST, KSA

Awards Ceremony - In appreciation of sponsors and supporters



Official Exhibition Opening

09:30 - 10:25

Opening of the Exhibition & Ribbon Cutting

Official VIP Walk Around to visit each exhibiting company



Panel Session: Vision 2030 – The Localisation of Technologies (Opportunities & Challenges)

10:30 - 11:40

Panel Moderator - Air Marshal Philip Sturley CB, MBE, BSc, FRAeS, RAF (Retd), UK

Gen. Dr. Eng. Adel Al Rumaih - Director of the Department of Science and Technology, Ministry of Defense, KSA

Professor Hatim Behairy - Director at Communication & Information Technology Research Institute, KACST, KSA

Dr. Mohammed Alqahtani - Military Industry Expert, Member of the Establishment Team of the Saudi Arabian Military Industries Company (SAMI), KSA

Dr. Sami Alhumaidi - Director, Prince Sultan Advanced Technology Research Institute (PSATRI), KSA

Dr. Faik Eken - President and CEO, ASELSAN, Turkey

Major Gen. Re. Hamad AlYousufi, Chief Executive Officer, DST, KSA

Pray & Lunch

11:40 - 12:40

DAY 1**TUESDAY - DECEMBER 12, 2017**

	▶ Session 1 – Towards a Strong and Sustainable Advanced National Military Sensor Capability	12:40 - 13:40
SESSION 1	Session Chairman – Prof. Talal Omar Halawani - KACST, KSA	
	1.1 Localisation of Radar & EW Technologies Zekeriya Aksoy - Executive Vice President & Chief Operating Officer, Saudi Defence Electronics Company, KSA	12:40 - 13:00
	1.2 Importance of Building National EW Industry Mohammed AIKhatib - Military Industries Corporation, KSA	13:00 - 13:20
	1.3 Innovation and Localisation of Advanced Military Technology Abdulrahman AlBakr - CEO, QDM, KSA	13:20 – 13:40
	▶ Session 2 (Radar) – Advances in Radar Technologies Radar Development in Ballistic Missile Defence	13:40 - 14:40
SESSION 2	Session Chairman– Prof. Talal Omar Halawani - KACST, KSA	
	2.1 Future Radar Technologies for Ballistic Missile Defence in Europe: Exploiting Synergies with SST (Space Surveillance & Tracking) Radar Development Javier Egido - Manager, Defence & Security, Indra, Spain	13:40 – 14:00
	2.2 Pushing Circuit to the Limit: Fully Integrated mmWave & THz Radars & 2-D Phased Arrays on Silicon Prof. Ehsan Afshari - Associate Prof. of Electrical Engineering & Computer Science, University of Michigan, USA	14:00 – 14:20
	2.3 Eyes on the Sea: Advances in Radar Technology for Coastal & Naval Applications Guerino Giancola - Land and Naval Campaign Manager, Leonardo, Italy	14:20 – 14:40
	Refreshment Break	14:40 – 15:10
	▶ Session 3 (EW) – Artificial Intelligence Machine Learning Advances in DRFM Technology	15:10 - 15:50
SESSION 3 & 4	Session Chairman – Dr. Mohammed Aseeri, Assistant Professor, KACST, KSA	
	3.1 The Use of Artificial Intelligence & Machine Learning to Identify Threats in the Electro-Magnetic Spectrum Paul Bradbeer - EWOS Technical Sales Manager, MASS, UK	15:10 - 15:30
	3.2 Advantage of DRFM in Electronic Attack (EA) Against the Evolving Radar Threat Klasie Olivier - Product Manager - Radar ESM, GEW Technologies, South Africa	15:30 - 15:50
	Session 4 (Radar) – Advances in Tiled Arrays Stealth Technology using Radar Absorbing Materials	15:50 - 16:30
	Session Chairman – Dr. Mohammed Aseeri, Assistant Professor, KACST, KSA	
	4.1 Use of Phased Arrays in Tactical Missions Prof. Mohammad S. Sharawi - King Fahd University of Petroleum and Minerals (KFUPM), KSA	15:50 – 16:10
	4.2 Rotationally Tiled Arrays – Higher Bandwidth with Lower Cost Abdullah S. Alshammary - KACST, KSA	16:10 – 16:30
	Chairman Remarks and Conference Close	

DAY 2**WEDNESDAY - DECEMBER 13, 2017**

Registration		08:00 - 08:20
▶▶	Chairman's Introduction - Air Marshal Philip Sturley CB, MBE, BSc, FRAeS, RAF (Retd), UK	08:20 - 08:30
▶▶	Session 5 (Radar) – The Future of Ground Based Radar Advances in Phased Array Technology	08:30 - 09:30
Session Chairman - Dr. Hatim Bukhari - Assistant Professor, KACST, KSA		
SESSION 5	5.1 Advancements in Radar and EW Systems and the Impact on Mission Effectiveness Joseph Burgio - Manager, Business Development, Northrop Grumman, USA	08:30 – 08:50
	5.2 A Fast Polarization Agile FMCW Radar at 230 GHz for Study of Traffic Scenes Dr. Waleed Alomar - KACST, KSA	08:50 – 09:10
	5.3 Command & Control Warfare Eng. Abdullah Alhawas - King Abdulaziz City for Science & Technology, KSA	09:10 – 09:30
	▶▶ Session 6 (EW) – Evolution, Training, Challenges and Data Analytics of Military ISR	
Session Chairman - Dr. Hatim Bukhari - Assistant Professor, KACST, KSA		
SESSION 6	6.1 Evolution from JEWIC to JEWISRC Jean-Michel Eustache - ISR/EW Operational Expert & Marketing Manager, Thales Group, France Yves Le Thiec - Adviser, Thales Group, France	09:30 – 09:50
	6.2 C4ISR Training Requirements & Challenges RSAF Retired Colonel Ali Menbet - Joint EW School, KSA	09:50 – 10:10
	6.3 Challenges of Global C2ISR Philip Nettleship - Airborne ISR Technical Lead, Raytheon, UK	10:10 - 10:30
	Refreshment Break	
▶▶	Panel Session: Synchronization between EW & Cyber Warfare (Compatibility & Difference)	10:50 - 12:00
Panel Moderator – Professor Fahad T. bin Muhaya - Information Security Advisor Supervisor of Prince Muqrin Chair for Information Security Technology, King Saud University, KSA		
<ul style="list-style-type: none"> • Peter Grogan - Key Account Manager, Joint Forces Command, Airbus (Defence and Space), Regional Sales, UK • Dr. Basel Alomair - Director of the National Center for Cybersecurity Technologies, KACST, KSA • Eng. Abdullah Alomari - Executive General Manager, Security & Privacy, Etihad Etisalat Co. (Mobily), KSA • Rt. Maj. Gen. Abdullah Alzahrani - Former Head of the Communications, Security and Information Technology Commission of the Armed Forces, Ministry of Defense, KSA • Lieutenant Colonel Bader Abdullah Alhugbani - Ministry of Defense, KSA 		
Pray & Lunch		12:00 – 13:00

	Session 7 (EW) – Military Cyber Strategies Towards Cyber and EW Synchronisation	13:00 - 14:00
	Session Chairman – Dr. Hussein Shaman - Associate Professor, KACST, KSA	
SESSION 7	7.1 The Importance of National Cyber Security Strategy (Proposal with Implementation Mechanisms) Dr. Nafel Alotaibi - MOD, KSA	13:00 – 13:20
	7.2 Open Source Intelligence and Heterogeneous Data Analytics for ISR Activity Dr. Graziano Lubello - Corporate Marketing, Sales & Strategy, Elettronica S.P.A., Italy	13:20 – 13:40
	7.3 Synchronization Between Cyber Security & Electronic Warfare Dr. Esa Alotaibi - Director of Security Communications & Networks Department in RSADF, MOD, KSA	13:40 – 14:00
	Session 8 (Radar) – Tactical Phased Array Missions Advances in Passive Radar Land Mine Detection using SAR Technology	14:00 - 15:00
	Session Chairman – Dr. Hussein Shaman - Associate Professor, KACST, KSA	
SESSION 8	8.1 Radar Absorbing Materials for Stealth Technology Dr. Hatem Rmili - Faculty of Engineering, King Abdulaziz University, KSA	14:00 – 14:20
	8.2 Target Detection By Using Passive Radar Dr. Faisal Alquaied - KACST, KSA	14:20 – 14:40
	8.3 Tomographic Synthetic Aperture Radar for Landmine Detection Dr. Muhannad Almundaha - Chief Technology Officer, Warning and Defense for Electronics Industries Company, KSA	14:40 – 15:00
	Refreshment Break	15:00 – 15:10
	Session 9 (EW) – EW Low Intensity Operations EW and Nano Technology DRFM Radar Environment Simulation Techniques	15:10 - 16:10
	Session Chairman – Dr. Waleed Alomar - Assistant Professor, KACST, KSA	
SESSION 9	9.1 EW in Low Intensity Operations Hamoud Ayed Al Ruwais - Brigadier (Retired), Ministry of Defense, KSA	15:10 – 15:30
	9.2 Nanotechnology and its Effect on Electronic Warfare Badran Salem Alghamdi - Technical Institute of Naval Studies, KSA	15:30 – 15:50
	9.3 Hardware in the Loop Radar Environment Simulation on Digital Radio Frequency Memories for Test & Evaluation Anton van der Merwe - Research Group Leader: EW Technology Demonstrator, CSIR, South Africa	15:50 – 16:10
	Session 10 - Advanced Research Program Goals Between KACST and Lockheed Martin	16:10 - 16:30
	Session Chairman – Dr. Waleed Alomar - Assistant Professor, KACST, KSA	
SESSION 10	10.1 Overview of the University Research Program between KACST & Lockheed Martin Dr. Amr Alasaad - KACST, KSA	
	Chairman Remarks - Conference Close	



King Abdulaziz City for Science & Technology (KACST)...

King Abdulaziz City for Science and Technology (KACST) is both the Saudi Arabian national science agency and its national R&D laboratories. KACST plays a key role in science and technology policy making, related data collection, funding of external research, and other related services such as scientific publishing and managing the patent office.

Main Responsibilities include:

Proposing a national policy for the development of science and technology and relevant strategies; Supporting scientific research and technology development; Conducting applied research advising government; Fostering national innovation and technology transfer between research institutes and the industry; Fostering international cooperation in science and technology.

National Centre for Sensors and Defence Systems Technologies (NCS DST)

NCS DST is a research center at King Abdulaziz City for Science and Technology that aims to be a world class R&D organization in advanced sensors and electronic defense. It will support Saudi Defense and Security organizations in achieving self-reliance in these fields through transferring and localization of selected advanced technologies as well as developing innovative products and capabilities.

Strategic Goals:

- Acquisition of high value added technologies.
- Establishment of engineering advanced infrastructure.
- Building the capability to initiate and perform flagship technology through effective technology partnership with leading organizations.
- Achieving and maintaining excellence in engineering research, system engineering, research methodology, and project management.
- Attracting, developing and retaining talented research and development professionals.