

EWWI 2013 – FIRST ANNOUNCEMENT



Second National EW Workshop in India (EWWI 2013)



Date: 29 January to 1 February 2013

Venue:

National Science Seminar Complex (NSSC)
Indian Institute of Science, Bangalore - 560013

www.aoc-india.org

indiacrows@aoc-india.org

Second AOC India Chapter National EW Workshop in India (EWWI 2013):

EWWI 2013 is the Second in the EWWI series of National Level Workshop in India, in the niche and vibrant field of Electronic Warfare, being organised by the Association of Old Crows (AOC) India Chapter, Bangalore. The four day Workshop is designed to impart deep professional knowledge covering highly advanced topics. The Workshop will have an intense and in-depth coverage of several important topics in the field of EW by the Internationally Renowned Expert and Author, Mr Dave Adamy, from Adamy Engineering, USA. The speakers participating in the rest of the Workshop are Very Highly Qualified Experts in the field of EW from the organisations like Elettronica and Agilent Technologies.

Workshop Topics and Speakers:

1. Principles and Advancements in Electronic Warfare



By David L Adamy, President, Adamy Engineering, USA. *Mr Dave Adamy is an Internationally Recognised Expert in Electronic Warfare and teaches EW Courses all over the world. He has a MSEE degree in Communication Theory. He has worked on many EW and Reconnaissance Programs as a Systems Engineer, Technical Director or Program Manager. These Programs include the first Digital Radar Warning Receiver, the Canadian MRD 500 series of Communication band Direction Finders, several satellite payloads, many EW Simulation Programs, and Shipboard and Flight Line Automatic Radar Test Sets. He served as Technical Director of the US Army GUARDRAIL program during the transition into the RC12 aircraft type. He has published more than 200 professional articles on Electronic Warfare, Receiver System Design and closely related subjects. His published books include EW 101, EW 102 and EW 103, Introduction to EW Modelling and Simulation and several others. He also has twelve books in print. He has written the popular EW101 series of tutorial articles in the Journal of Electronic Defense monthly since 1994. Since 1984, he has been president of Adamy Engineering, providing studies and systems engineering services to the US government and military contractors.*

The first three days of the Workshop covered by Dave Adamy is a practical, hands-on course covering the whole field of Electronic Warfare at the Systems and Operational Levels. Lecture and in-class exercises during the course allow attendees to understand basic EW Concepts and Systems and to make important Technical and Operational Calculations.

2. New Generation Self Protection EW Systems, Active Phase Arrays & Digital Receiver Technologies, Shared Aperture Systems Concept, and EW Cyber Warfare Technologies



By Dr Andrea De Martino, CTO, Elettronica, Italy. *Dr Andrea De Martino is a Doctorate in Nuclear Engineering (Electronic Track) and Ph.D. in Automatic Control Systems, both from the University of Rome. He is a Researcher in the field of Large Systems Theory and Automatic Control at the Electronic Engineering Institute of the University of Rome, Radar System Designer and Chief Engineer at Selenia S.p.A – Rome, ranging from surveillance and tracking radars to multifunction phased array radars. Dr De Martino is a patents holder and author of many technical papers in the field of Radar, EW Equipment Techniques and Technologies. He is currently Chief Technical Officer at Elettronica, Rome, Italy.*

The advanced topic covers the most recent R&D aspects of the APA technologies as well as emerging new generation technologies exploiting the Electro Magnetic Spectrum.

3. Two Invited Talks by Experts, on Modern EW Systems, Simulations, & Measurements.



Workshop Schedule

Day 1 – Tuesday, 29 January 2013

Principles and Advancements in Electronic Warfare – Module I to IV by Dave Adamy

08:00 to 08:30 Hrs Registration

08:30 to 09:00 Hrs Inauguration of EWWI-2013

09:00 to 11:00 Hrs Module I - EW Principles and Overview

Coverage: Definitions; Basic Concepts and Strategies in EW (ES, EA and EP); Information Warfare and ISR in Modern Warfare.

11:00 to 11:30 Hrs Tea Break

11:30 to 13:00 Hrs Module II - EW Threats

Coverage: Descriptions of mature and Modern Radar and Communications Devices and Signals; Types of Weapons (Anti-air & Anti-ship), ARMs, including LPI Radars and Communication Signals; Phased Array Radars, SAR and ISAR Threats will be included; ES and EP Challenges.

13:00 to 14:00 Hrs Lunch Break

14:00 to 16:00 Hrs Module III - Radio Propagation

Coverage: Formulas, Charts and Nomographs allowing calculation of the performance of Hostile Communication and Radar Systems; Includes practical exercises employing all of the scales on the provided Slide Rule.

16:00 to 16:30 Hrs Tea Break

16:30 to 18:00 Hrs Module IV - Antennas and Receivers

Coverage: Important types of EW Antennas with their applications and performance parameters; Also calculation of antenna parameters using the provided Slide Rule; Important types of EW Receivers (including Digital Receivers) and Receiver Systems along with their specifications, advantages and disadvantages, and typical EW applications; Calculation of Receiver System Sensitivity and Trade-offs with Dynamic Range.

Day 2 – Wednesday, 30 January 2013

Principles and Advancements in Electronic Warfare – Module V to VIII by Dave Adamy

09:00 to 11:00 Hrs Module V - EW Processing and Search

Coverage: Data Capture, Threat Identification, SEI, Man-Machine Interface; Search Concepts and Procedures; Challenges in Modern Signal Processing, particularly against LPI Signals.

11:00 to 11:30 Hrs Tea Break

11:30 to 13:00 Hrs Module VI - Emitter Location

Coverage: Approaches, Techniques, Precision Techniques, Accuracy Achievable, RMS Accuracy, CEP and EEP, and Technical Issues associated with each Technique.

13:00 to 14:00 hrs Lunch Break

14:00 to 16:00 Hrs Module VII - Radar Characteristics

Coverage: Types of Radars, Range and Return Power Equations, Pulse Compression; LPI Radar.

16:00 to 16:30 Hrs Tea Break

16:30 to 18:00 Hrs Module VIII - EA Concepts and Calculations

Coverage: Comm Jamming for Analog and Digital Signals, Radar Jamming (Cover and Deceptive), Self Protection, Stand Off and Stand In Jamming; J/S and Burn Through Equations, Jamming LPI Communication Signals; Modern EA Architectures (including DRFMs), EA against Modern Radar Systems, EA against LPI Signals; DEWs, High Power Lasers and High Power Microwave Techniques.

Day 3 - Thursday, 31 January 2013

Principles and Advancements in Electronic Warfare – Module IX to XII by Dave Adamy

09:00 to 11:00 Hrs Module IX - Jamming Techniques and EP

Coverage: Cover Jamming Techniques; Standard Deceptive Techniques; Techniques against Mono-pulse Radars; EP Techniques in Modern Radars, DRFM and DDS.

11:00 to 11:30 Hrs Tea Break

11:30 to 13:00 Hrs Module X - Chaff and Decoys

Coverage: Active and Passive Decoys; Decoys for various deployment approaches (Expendable, Towed and Manoeuvring), Decoy Equations; Types of Chaff, Properties of Chaff, Chaff application Strategies, UAV Decoys; Radar Cross Section Reduction, Reflectors and Absorbers; Stealth Techniques and impact on Radars and Weapons.

13:00 to 14:00 Hrs Lunch Break

14:00 to 16:00 Hrs Module XI - IR and EO Concepts and Countermeasures

Coverage: EM Spectrum, Black-body Theory, IR Missiles, IRLS ; Imagery; Modern IR Sensors & Countermeasures, Night Vision, IR Jamming Laser Radars, Missile Guidance, Laser Weapons, EO EW Support, IR Electronic Protection; Defence against Missile Systems, Defence of Strike Aircraft, Anti-ship Missile Defence.

16:00 to 16:30 Hrs Tea Break

16:30 to 18:00 Hrs Module XII - Modern Trends in Electronic Warfare / Electronic Combat

Coverage: Threat Trends impacting EA and ES; Technology driven changes in EW, Trends in EW Tactics; Why we can't continue previously successful Tactics.

Day 4: Friday, 1 February 2013

Invited Talks and Concurrent EW Topics

09:00 to 10:00 Hrs Invited Talk 1

10:00 to 11:00 Hrs New Generation Self Protection EW Systems and Shared Aperture Systems Concept –By Dr Andrea De Martino & Experts from Elettronica

11:00 to 11:30 Hrs Tea Break

11:30 to 13:00 Hrs Active Phase Arrays & Digital Receiver Technology
by Dr Andrea De Martino & Experts from Elettronica

13:00 to 14:00 Hrs Lunch Break

14:00 to 15:00 Hrs Invited Talk 2

15:00 to 16:30 Hrs EW Cyber Warfare Technologies
by Dr Andrea De Martino & Experts from Elettronica

16:30 to 17:00 Hrs

Valedictory Function



Who will be benefitted from the Workshop?

The Workshop is useful to all those Personnel working in the field of Electronic Warfare and Information Operations and Related Fields, right from Operators of the Equipments at grounds level in Tri-Services to the EW Strategists. The Workshop will be immensely useful to R&D Professionals from DRDO, ADA and Manufactures like Defence PSUs and Indian Private EW Industry. The Workshop is also useful to Students and Academics of Electronic Warfare, Avionics and Aeronautics.

Registration:

The Registration Fee is Rs 8,000 per Head for the 4 day Workshop. A 20% concession is offered to AOC India Chapter Members (membership taken before 15 September 2012). The Fee includes Course Material, Delegation Kit, Working Lunch and Snacks and does NOT include Accommodation, Transport or any Other Expenditure. The Registration Fee also includes an EW Pocket Guide and a Special Antenna and Propagation Slide Rule. The Course Material also contains the Work Sheets for Hands-on Exercises during the Workshop. Delegates/Attendees need to bring a Scientific Calculator to Work on Hands-on Exercise Problems.

Technical Exposition:

A limited Exhibition Area (about 10 Booths of 3m x3m Shell Type Cubicle) is provided to Sponsors to Display their Products. EW Organisations who are interested in sponsoring the Event may contact the Conference Coordinator, EWWI 2013, AOC India Chapter as early as possible, as Available Booths are very limited. The Workshop Sponsorship that entitles a Booth space is charged with a Fee of Rs 2,00,000. No TDS required as AOC India Chapter is a not-for-profit Association of EW Professionals.

Note: Technical Display will be open for all Delegates throughout the Workshop.

Proceedings:

The Detailed Material of the Workshop will be provided in the Form of Hardcopy - Proceedings, as well as in a CD. The Electronic Pocket Guide provided to all participants is a Handy Booklet containing 38 pages of important Formulas, Charts and Nomographs prepared by the much Experienced Author – Mr Dave Adamy.

Mode of Payment:

All Payments are to be made by Demand Draft or Cheque drawn in favour of "Association of Old Crows, India Chapter". The last date for the realisation of payment is 10 January 2013. The Completed Registration Form available on our Web Site may be emailed to indiacrows@aoc-india.org or mailed to Workshop Coordinator at AOC India Chapter's address. For details regarding Electronic Transfer Mode of Payment please contact the Workshop Coordinator.

On the Spot registration is subject to availability of Delegate positions and is with prior intimation and confirmation from the Workshop Coordinator. Therefore please register sufficiently in advance to avoid Disappointment. No Tax to be Deducted at Source on any payments made to the AOC India Chapter as it is a not-for-profit Association of EW Professionals.

Workshop Organising Committee

Dr U K Revankar

Former Director, DARE, Bangalore and President, AOC India Chapter, *Workshop Advisor*

Mr T N Yadgiri Rao

Associate Director, DLRL and Vice President, AOC India Chapter

Mr H V Harish

CEO, Spur India, Bangalore, Secretary, AOC India Chapter and *Workshop Coordinator*

Mr N Chandrasekaran

Scientist F, DARE, Bangalore and Treasurer, AOC India Chapter

Mr J Shanker Rao

Scientist G, DLRL, Hyderabad and Director, AOC India Chapter

Mr Umesha K P

Scientist F, DARE, Bangalore and Director, AOC India Chapter

Mr Philip Jacob

General Manager (Central-D&E), BEL, Bangalore, and Director, AOC India Chapter

Mr M V Gowtama

General Manager (MILCOM), BEL, Bangalore and Director, AOC India Chapter

Wg Cdr V B Atmaram (Retd)

CEO, AEDS Pvt Ltd., Bangalore, ED, ADTL, Bangalore and Director, AOC India Chapter

Further Information:

All the details regarding EWWI 2013 will be available in the Chapter's web site.
For further information and Sponsorship/Advertisement enquiries
please contact the Workshop Coordinator.

EWWI 2013

Workshop Coordinator

#414, Church Street, New Tippasandra Post,

HAL III Stage, Bangalore – 560075, India

Telefax: +91 80 25287813,

Web: www.aoc-india.org,

Email: indiacrows@aoc-india.org