



# IEEE

## IEEE South Australia Section Control & Aerospace and Electronic Systems Chapter

### One Day Workshop Introduction to HF Over-the-Horizon Radar (OTHR)

The IEEE South Australia Section and C&AES Chapter invites you to attend a unique one day workshop by **IEEE Distinguished Lecturer Dr Joe Fabrizio - Defence Science and Technology Group**

#### About the workshop:

The workshop introduces the fundamental principles of OTHR design and operation in the challenging HF environment to motivate and explain the architecture and capabilities of modern OTHR systems. It describes conventional and adaptive processing techniques for clutter and interference mitigation as well as emerging applications, including HF passive radar, blind signal separation and multipath-driven geolocation. A highlight of the workshop is the prolific inclusion of experimental results to illustrate the practical application of advanced signal processing to real-world OTHR systems. The workshop is expected to benefit students, researchers, engineers and practitioners working in the OTHR field.



#### About the presenter:

Dr Giuseppe (Joe) Fabrizio has been with the Australian Defence Science and Technology Group since 1994 and currently leads the EW and signal processing section of the HF radar branch. He is a senior member of the IEEE and has authored over 50 peer-reviewed journal and conference publications. He is a co-recipient of the prestigious M. Barry Carlton Award for the best paper published in the IEEE Transactions on Aerospace and Electronic Systems (AES) in 2003 and 2004. In 2007, he received the DSTO Science and Engineering Excellence Award for developing robust adaptive beamforming techniques used in the Jindalee Operational Radar Network (JORN). In 2011, he was granted the IEEE Fred Nathanson Memorial Radar Award for contributions to OTHR and radar signal processing. Dr Fabrizio is a member of the IEEE-AES International Radar Systems Panel (RSP) and currently serves as Vice President of Education on the AES Board. He has presented OTHR tutorials at six IEEE radar conferences and is the author of a recently published text on OTHR, McGraw-Hill, NY, 2013.

**Participants receive the text book "High Frequency Over-the Horizon Radar", McGraw-Hill, NY, 2013**

Time: 9:00 am - 5:00 pm

Date: Friday 27<sup>th</sup> November 2015

Venue: **Technology Park, Innovation House,  
50 Mawson Lakes Boulevard, Mawson Lakes SA 5095**

Registration: Please use the IEEE vTools website for payment and registration (address here)  
**Early bird registration closes 5pm 2 November 2015**

ABN: 96 817 212 761

1 Day Workshop - Introduction to Over-the-Horizon Radar

Sign up for:

	Early Bird	Regular
<input type="checkbox"/> Non-IEEE Member	\$650	\$700
<input type="checkbox"/> IEEE Member*	\$550	\$600
<input type="checkbox"/> Student	\$300	\$350
<input type="checkbox"/> IEEE Student Member*	\$250	\$300

Contact:

XXX

Phone:

Email:

Confirmation of your registration will be e-mailed to you within 10 working days.

Please note that this workshop may be cancelled if an insufficient number of registrations is received by 10 November 2015. No refund is available after 10 November 2015.

\* IEEE membership discount applies to current IEEE members.

\*\* The option to not receive the book in the provided course materials reduces the registration fee by \$100.



## IEEE South Australia Section, C&AES Chapter Introduction to Over-the-Horizon Radar

### Course Content

- Fundamental Principles
- Practical Applications
- Propagation Mechanisms
- System Design
- Nominal Capabilities
- Resource Management
- Signal Environment
- Surface-Wave Radar
- Array Signal Models
- Conventional Processing
- Adaptive Beamforming
- Real-time STAP
- CFAR Detection
- HF Passive Radar
- Blind Signal Separation
- Multipath-Driven Geolocation

### Included Material

- Course notes
- OTHR text (details below)

High Frequency Over-the-Horizon Radar— Fundamental Principles, Signal Processing and Practical Applications Hardcover (June 2013)

Dr. Giuseppe Fabrizio (Author)

★★★★★ 5 customer reviews

<http://www.amazon.com/High-Frequency-Over-Horizon-Radar/dp/007162127X>

#1 Best Seller in Radar Technology

#### Product Details

Hardcover: 944 pages

McGraw-Hill Professional

First edition (June 18, 2013)

Language: English

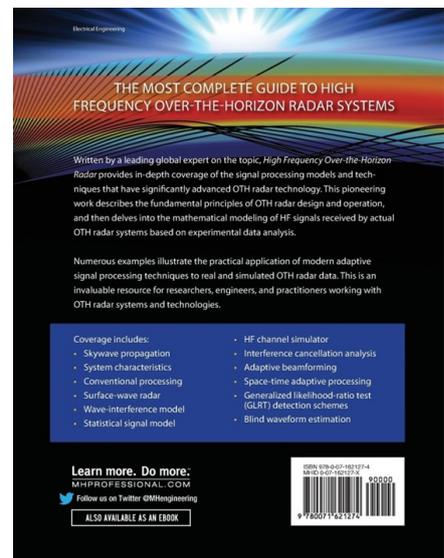
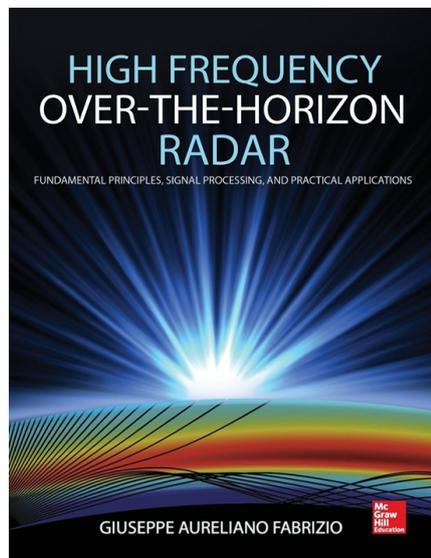
ISBN-10: 0387231900

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Dim: 7.7 x 2.1 x 9.1 inches

Audience: College, Higher Education, General/Trade, Professional and Scholarly





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**Introduction to Over-the-Horizon Radar (OTHR)**

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**Content includes:**

- Fundamental principles and practical applications
- OTHR system design and nominal capabilities
- HF Propagation and radar resource management
- Array signal models and conventional processing
- Robust adaptive processing in space and time
- Includes many real-data processing examples

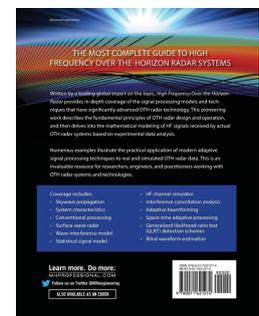
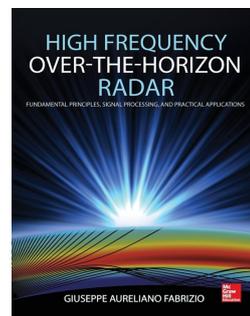
**About the presenter:**

Dr Giuseppe (Joe) Fabrizio has over 20 years experience in adaptive signal processing for OTH radar. Over his career, he has conducted extensive research to develop and implement robust adaptive signal processing algorithms in operational OTHR systems. He is the author of more than 50 publications in this field, including the text *"High Frequency Over-the-Horizon Radar—Fundamental Principles, Signal Processing and Practical Applications."*

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Innovation House  
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Mawson Lakes SA 5095

Participants receive the comprehensive text  
**"High Frequency Over-the-Horizon Radar"**  
(Hardcover, McGraw-Hill Professional, NY, 2013)



**Positions are limited so secure your place by downloading the registration form from**

[ewh.ieee.org/r10/s\\_australia/](http://ewh.ieee.org/r10/s_australia/)

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