

International Conference

Synthetic Aperture Sonar and Synthetic Aperture Radar

13th - 14th September 2010 Villa Marigola, Lerici, Italy



Synthetic Aperture Sonar and Radar

MONDAY 13 SEPTEMBER

09:00	Registration and Coffee	12.45	Simultaneous Low Frequency & High Frequency High Resolution SAS and a statistical method of quantifying the resolutions obtained <i>N P Glover, I Campbell (Atlas UK)</i>
09:30	Conference opening	12.55	Simulation of Rippled-Sand Synthetic Aperture Sonar Imagery <i>S F Johnson (Johns Hopkins University APL)</i>
09:40	Keynote Lecture: Optimised Change Detection <i>C J Oliver (Consultant)</i>	13:05	Lunch
10:25	Polarimetrically persistent scatterer based automatic target recognition <i>E Giusti, M Martorella (University of Pisa), A Capria (RaSS Centre, CNIT)</i>	14.05	Processing SAR data with gaps in the aperture: a compressed sensing perspective <i>G Rilling, C Du, M Davies, B Mulgrew (University of Edinburgh)</i>
10:35	Temporal variability of seafloor roughness and its impact on coherent change detection <i>A P Lyons, D C Brown (Penn State University, Applied Research Laboratory)</i>	14.15	Analysis of Shadow Contrast Ratio for Synthetic Aperture Sonar Imagery <i>D A Cook (Georgia Tech), D C Brown (Penn State University, Applied Research Laboratory)</i>
10:45	Estimation of Target Orientation in SAS Images <i>H Midelfart, Ø Mitgaard (FFI, Norway)</i>	14.25	Interferometric Measurements Using Redundant Phase Centers of Synthetic Aperture Sonars <i>J L Prater, J Fernandez, J Stroud, T G-Michael (Naval Surface Warfare Center, USA)</i>
10:55	Coffee	14.35	A comparison between interferometric SAS and interferometric SAR <i>T O Saeboe, R E Hansen (FFI, Norway)</i>
11:25	New SAS classification mode for Mine Countermeasure Vessels <i>N Burtle, M Chabah, E Poirier (Thales Underwater Systems)</i>	14.45	Analysis and comparison of different SAR image speckle reduction techniques applied to SAS <i>O Loopera, R Heremans (RMA, Belgium), A Pizurica (University of Gent), Y Dupont (Ministry of Defence, Belgium)</i>
11:35	Synthetic Aperture Image Reconstruction via Backpropagation using Commodity Graphics Processors <i>D A Cook, D P Campbell (Georgia Tech, USA)</i>	14.55	Correlation-Based Change Detection for Synthetic Aperture Sonar <i>D D Sternlicht, T G-Michael, J K Harbaugh (Naval Surface Warfare Center, USA)</i>
11:45	Autofocus for Circular Synthetic Aperture Imaging <i>H J Callow, R E Hansen, T O Saeboe, SAV Synnes (FFI, Norway)</i>	15.05	Study, design and concept of low frequency SAS <i>Y Pailhas, Y Petillot, C Capus (Heriot-Watt University), R Hollett (NURC), B Mulgrew (University of Edinburgh)</i>
12.05	Kronecker DFT Beamforming Algorithms for Sonar Signal Processing <i>D Rodriguez, A Fuentes (University of Puerto Rico)</i>	15.15	Non-Abelian Computational Signal Processing Methods for Compressed Sensing MIMO SAR Waveform Design <i>D Rodriguez (University of Puerto Rico)</i>
12.15	Automatic Fusion of Multiple Target Views for Enhanced Interpretation <i>E Coiras, J Groen, D Williams (NURC)</i>	15.25	Automatic SAS target recognition using region based features, SVMs and adaptive boosting <i>P Hill, A Achim, D Gibson (University of Bristol)</i>
12.25	Delineating targets in SAR images by parallel simulated annealing <i>P Cooper (Tessella plc), S Potter (MBDA)</i>		
12.35	Detection of Spherical Inclusions Using Active Surfaces <i>D A Cook, F Fedele, A J Yezzi (Georgia Tech)</i>		

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15:35	Coffee
16.05	Characterisation of Modulating Signatures within SAR Imagery <i>D Muff, M Nottingham, D Andre, B Barber, D Blacknell (Dstl), H D Griffiths (University College London)</i>
16.15	A mine-penetration sonar: system concept, design and simulation <i>R D Hollett (NURC)</i>
16.25	Canonical Correlation Analysis for Coherent Change Detection in Sonar Imagery <i>M Tesfaye (Naval Surface Warfare Center, USA)</i>
16.35	Classification using multiple pass fusion <i>A Wilby (Applied Signal Technology)</i>
16.45	Fractal dimension based sand ripple suppression for mine hunting with sidescan sonar <i>J D B Nelson, N G Kingsbury (University of Cambridge)</i>
16.55	Compressive Sensing for Synthetic Aperture Sonar <i>J C Isaacs (Naval Surface Warfare Center, USA)</i>
17.05	Synthetic aperture sonar as a tool for deep ocean surveying <i>A Wilby (Applied Signal Technology)</i>
17.15	Detection of Double Scatterers in Multi-Dimensional SAR Imaging <i>A Pauciullo, A De Maio (University of Napoli)</i>
17:25	Reception and Posters
19:00	Conference dinner

TUESDAY 14 SEPTEMBER

09:00	Keynote Lecture: Review of papers from EuSAR 2010 <i>M Weiss (FHR, Germany)</i>
09:45	Data fusion in a multistatic radar system (invited) <i>P Stinco, M Greco, F Gini (University of Pisa), A Farina (SELEX Sistemi Integrati)</i>
10:05	Inverse Forward Scatter SAR (invited) <i>M Cherniakov (University of Birmingham)</i>
10:25	Robust synthetic aperture sonar for autonomous underwater vehicles (invited) <i>R E Hansen, H J Callow, T O Saeboe, SAV Synnes (FFI, Norway)</i>
10:45	A correlated K-distributed model for seabed reverberation using imaging sonar (invited) <i>S Dugelay (Dstl), V Myers (DRDC, Canada)</i>
11:05	Coffee
11:35	Pareto-Optimal Radar Waveform design (invited) <i>A De Maio (University of Napoli)</i>
11:55	GB-SAR and MIMO radars: alternative ways of forming a synthetic aperture (invited) <i>P F Sarmartino, D Tarchi, F Oliveri (ISPRA)</i>
12:15	Target and image statistics for a short-range Synthetic Aperture Sonar (invited) <i>P T Gough, M P Hayes (University of Canterbury, New Zealand)</i>
12:35	Constant envelope waveform design techniques for closely-spaced MIMO radar (invited) <i>S Ahmed, J S Thompson, B Mulgrew (University of Edinburgh), Y Petillot (Heriot-Watt University)</i>
12:55	Lunch
14:00	Keynote Lecture: Progress in autonomy- towards a new partnership of man and machine <i>W S Bardo (Director, Systems Engineering for Autonomous Systems Defence Technology Centre)</i>
14:45	Some open issues in synthetic aperture sonar (invited) <i>M Pinto (NURC)</i>
15:05	Target detection and identification in Synthetic Aperture Sonar using AUVs (invited) <i>Y Petillot, Y Pailhas, J Sawas, N Valeyrie (Heriot-Watt University)</i>
15:25	Coherent Change Detection over Mountainous Terrain (invited) <i>D Blacknell (Dstl)</i>
15:00	Close

REGISTRATION FORM

Synthetic Aperture Sonar and Radar – 13-14 September 2010

Name:	<input type="text"/>		
Business:	<input type="text"/>		
Address:	<input type="text"/>		
	<input type="text"/>		
Postcode:	<input type="text"/>	E-mail:	<input type="text"/>
Telephone:	<input type="text"/>	Fax:	<input type="text"/>

Please register me for the conference:

All prices inclusive of VAT

Delegate Fees: (covers the conference, CD Proceedings, refreshments and lunch on two days and Conference Dinner on Monday)

- | | |
|--|---------|
| <input type="checkbox"/> Fee for speakers | £246.00 |
| <input type="checkbox"/> Fee for IOA & IEEE Members | £487.00 |
| <input type="checkbox"/> Fee for Non Members | £552.00 |
| <input type="checkbox"/> Fee for Students (in full time education) | £130.00 |
| <input type="checkbox"/> I would like vegetarian meals | |

Exhibition Fee:

Exhibition Fee covers exhibition space and one person registered as a delegate. Additional exhibitors should register at member's rate.

- | | |
|---|---------|
| <input type="checkbox"/> Exhibitor rate includes lunch and £ refreshments | £500.00 |
|---|---------|

Accommodation:

Accommodation has been reserved at two hotels.

The Doria Park info@doriaparkhotel.it

The Europa Hotel info@europahotel.it

Bookings should be made direct with the hotel by email. Please quote "Synthetic Aperture Sonar Conference" on the subject heading. Room rates will vary but sea view rooms start at 95-105 Euros. More details available on the IOA website events page www.ioa.org.uk

Proceedings:

- | | |
|--|---|
| <input type="checkbox"/> I am unable to attend the conference. Please send me a copy of the Conference CD proceedings. | |
| <input type="checkbox"/> Members £20.00 | <input type="checkbox"/> Non-Members £30.00 |

Payment instructions:

Total: £

There are four ways to pay. Please indicate your chosen method: (CANCELLATIONS ARE NOT REFUNDABLE)

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|---|--|
| <input type="checkbox"/> 1. Cheques: | Payable to "Institute of Acoustics" (in £ Sterling drawn on UK bank account) |
| <input type="checkbox"/> 2. Direct to Bank: | BACS: Account No: 00375204 Sort Code: 30 94 81 |
| Bank Transfer: | SWIFT LOYDGB21024 IBAN GB27LOYD30948100375204 |
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