



**IEEE**

*Geoscience and Remote Sensing South Italy Chapter*



European Space Agency

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# 2008 IEEE GOLD REMOTE SENSING CONFERENCE

22, 23 May 2008

ESA-ESRIN Frascati (Roma), Italy

Magellan room



**FINAL PROGRAMME**

**May 22, 2008**

**10:00-13:30 Welcome addresses/Introductory talks**

Stephen Briggs, ESA

Maurizio Migliaccio, IEEE GRS South Italy Chapter Chairman

Wolfgang Keydel, DLR

Shannon Brown, NASA/JPL

Rodolfo Guzzi, ASI

*During the ceremony the 2007 best Italian remote sensing thesis prizes will be awarded.*

**Alexander Soucek, ESA**

*An ESA-ESRIN establishment visit will be organized before lunch –please register before the opening ceremony.*

**13:45-15:00 Lunch break**

**15:00-17:00 Oral presentations**

**Session 1: Sea – Chairman: J.M. Lopez-Sanchez, Universidad de Alicante**

1	15:00–15:15	R. Sabia et al.	<i>The SMOS mission retrieval scheme: the ocean salinity: error budget</i>	Universitat Politecnica de Catalunya
2	15:15–15:30	F. Nunziata et al.	<i>A new polarimetric filter for SAR oil spill observation</i>	Università di Napoli Parthenope
3	15:30–15:45	C.S.L. Grimaldi et al.	<i>A MODIS robust satellite techniques for near real time monitoring of oil spilled areas</i>	IMAA – CNR
4	15:45–16:00	A. Gambardella et al.	<i>A ship detection filter for full-resolution Synthetic Aperture Radar data</i>	Università di Napoli Parthenope

## **Session 2: Urban – Chairman: A. Iodice, Università di Napoli Federico II**

5	16:00–16:15	C. Aubrecht et al.	<i>Multi-source urban system modeling and the resulting identification of functional spatial patterns</i>	Austrian Research Centers GmbH
6	16:15–16:30	C. Solimini et al.	<i>Wavenumber spectra for VHR urban characterization</i>	EOP-S, ESA/ESRIN
7	16:30–16:45	N. Amoruso et al.	<i>Spatial feature extraction for hierarchical classification of urban areas in high resolution images</i>	ISSIA – CNR

### **16:45-17:00 Coffee break**

### **17:00-19:00 Oral presentations**

## **Session 3: Geology – Chairman: R. Lanari, IREA-CNR**

8	17:00–17:15	S. Marchiotto et al.	<i>Ground-based radar remote sensing of explosive volcanic ash eruptions: a numerical study and Alaska case study analysis</i>	Università di Roma Sapienza
9	17:15–17:30	M. Chini et al.	<i>VHR optical images to detect damage at single building scale: the 2003 Bam earthquake</i>	INGV
10	17:30–17:45	C. Aliano et al.	<i>Robust satellite techniques for monitoring TIR anomalies in earthquake prone areas</i>	Università della Basilicata
11	17:45–18:00	M. Bonano et al.	<i>On the generation of long term ERS/ENVISAT full resolution deformation time-series</i>	IREA – CNR

## **Session 4: Land – Chairman: F.Lombardini, Università di Pisa**

12	18:00–18:15	C. Cammalleri et al.	<i>Soil moisture retrieval using crop water stress indicators</i>	Università di Palermo
13	18:15–18:30	G. Mazzeo et al.	<i>RST (Robust Satellite Technique) for forest fire detection and monitoring</i>	IMAA - CNR
14	18:30–18:45	C. Bignami et al.	<i>Sensitivity of ASAR data to soil moisture and generation of moisture maps: preliminary results of experimental campaigns</i>	Università di Roma Sapienza

**19:00-20:00 Cocktail offered by ESA**

**May 23, 2008**

**9:00-11:00 Oral presentations**

**Session 5: Atmosphere – Chairman: V. Lucarini, Università di Bologna**

15	9:00–9:15	C. Di Biagio et al.	<i>Combination of ground-based and satellite observations for the determination of the aerosol radiative forcing in the Mediterranean</i>	ENEA/ACS
16	9:15–9:30	G. Rivolta et al.	<i>Precipitation nowcasting from geostationary satellite platforms: neural network approaches trained by polar orbiting and ground-based data</i>	Università de L'Aquila
17	9:30–9:45	G. Botta et al.	<i>Microwave polarimetric radar observations of ice particles: backscattering modeling and applications to hydrometeor classification</i>	Università di Roma Sapienza
18	9:45–10:00	E. Bocci et al.	<i>Aerosol optical depth: validation and retrievals during dust outbreaks over the Mediterranean area</i>	Università di Perugia

**Session 6: Sensors – Chairman: E. Cianca, Università di Roma Tor Vergata**

19	10:00–10:15	F. Menichino et al.	<i>The Global Imaging Illumination Space System (GI2S2): improving the resolution of a forward-looking Synthetic Aperture Radar</i>	Università di Napoli Federico II
20	10:15–10:30	F. Vespe et al.	<i>ROSA on board the Indian OCEANSAT-2 satellite mission: an Italian</i>	Università di Roma Sapienza

21	10:30-10:45	M. Pardini et al.	<i>opportunity</i> <i>Multibaseline SAR tomography: the gap filling framework</i>	Università di Pisa
22	10:45-11:00	M. Lavallo	<i>Compact polarimetric SAR interferometry: theory and observations</i>	Università di Roma Tor Vergata
23	11:00-11:15	C. Stallo et al.	<i>FLORAD mission: flower constellation of micro-satellites for millimeter-wave atmospheric remote sensing</i>	Università di Roma Tor Vergata

### **11:15-11:30 Coffee break**

### **11:30-13:45 Oral presentations**

#### **Session 7: Ground Penetrating Radar – Chairman: L. Crocco, IREA-CNR**

24	11:30-11:45	S. Meschino et al.	<i>Detection and localization of subsurface two-dimensional metallic objects</i>	University of Roma TRE
25	11:45-12:00	I. Catapano et al.	<i>A feasibility study of a non-linear imaging method for GPR monitoring</i>	IREA - CNR
26	12:00-12:15	R. Castaldo et al.	<i>Microwave tomography for GPR data in archaeological prospecting</i>	Università di Napoli Federico II

#### **Session 8: Radio Occultation & Models - Chairman: P. Lecomte, ESA**

27	12:15-12:30	M. Petitta et al.	<i>Comparison of Lidar and cosmic radio occultation temperature profiles at high latitude</i>	Università di Roma Sapienza
28	12:30-12:45	D. Paris et al.	<i>GPS radio occultation experiment on-board the OCEANSAT-2 mission: ROSA-</i>	Politecnico di Torino

29 12:45-13:00 M. Gonzini et al. *ROSSA software development*  
*Physical optics solutions for scattering from fractal surfaces* Università di Napoli  
Federico II

## **Session 9: Sea & Optical Sensors – Chairman: F. Marzano, Università di Roma Sapienza**

30 13:00-13:15 F. Carneseccchi et al. *Analysis of total remote sensing reflectance in ocean color applications* Università di Pisa

31 13:15-13:30 M. Adamo et al. *Wind fields retrieval by means of remote sensing techniques on coastal zones* ISSIA - CNR

32 13:30-13:45 F. Pieralice et al. *A new rigorous model for stereopairs orientation: application with IKONOS, EROS A and QuickBird* Università di Roma Sapienza

### **13:45-15:00 Lunch break**

### **15:00-16:45 Remote Sensing Companies Round table**

Maurizio Migliaccio, IEEE GRS South Italy Chapter Chairman  
Stefano Bruzzi, ESA  
Enrico Saggese, Finmeccanica  
Leonardo Borgarelli, Thales Alenia Spazio  
Francesco Perillo, Telespazio  
Iwona Maciejewska, Aurensis

### **16:45-17:00 Coffee break**

## **17:00-19:00 Interactive session – Chairman: M. Migliaccio, Università di Napoli Parthenope**

### **James Cook room**

- |    |                      |   |                                  |
|----|----------------------|---|----------------------------------|
| 33 | C. Oliviero et al.   | <i>Ortho-rectification of Ikonos panchromatic images using detailed maps</i>  | Università di Napoli Parthenope  |
| 34 | D. Gioia et al.      | <i>Assessing the morphotectonic evolution in the axial zone of the southern Apennines, Italy, using SRTM topographic data</i>   | Università della Basilicata      |
| 35 | A. Buonanno et al.   | <i>3-D imaging of small metallic spheres by linear <sup>TM</sup>-approach</i>   | Seconda Università di Napoli     |
| 36 | S. Mori et al.       | <i>Precipitation retrieval from satellite synthetic aperture radar measurements: numerical modeling and preliminary applications</i>                                    | Università di Roma La Sapienza   |
| 37 | M. Faruolo et al.    | <i>Near real time flood monitoring by AVHRR data during the August 2002 Europe flood</i>  | IMAA - CNR                       |
| 38 | G. Bernanrdi et al.  | <i>Fractal based modeling of altimeter data</i>   | Università di Napoli Federico II |
| 39 | M. Bavusi            | <i>Microwave tomography and classical processing comparison for fracture detection and characterisation in the building of the Prefecture of Chania (Crete, Greece)</i> | IMAA - CNR                       |
| 40 | C. Cammalleri et al. | <i>An automatic system for water quality assessment through MODIS L1B images</i>  | Università di Palermo            |
| 41 | C. Cammalleri et al. | <i>Effects of morphology on watershed actual evapo-transpiration estimation by means of SEBAL model</i>   | Università di Palermo            |
| 42 | G. Di Martino et al. | <i>A novel model for the images of fractal profiles</i>   | Università di Napoli Federico II |
| 43 | F. Pelliccia et al.  | <i>Development of neural networks for tropospheric</i>  | Università di Perugia            |



- profiling from cosmic gps radio occultation*
- 44 P. Imperatore et al. *Modeling of electromagnetic radiation scattered by slightly-rough-interfaces layered media* Università di Napoli Federico II
- 45 R. Guida et al. *New models for the analysis of high resolution SAR images of urban areas* Università di Napoli Federico II
- 46 M. Crespi et al. *Orientation and DEM Extraction of Cartosat-1 stereo imagery* Università di Roma Sapienza
- 47 C. Di Dio et al. *A multi-bistatic stepped frequency radar: experimental localization of PEC cylinders* Seconda Università di Napoli
- 48 G. Tortorelli et al. *A Study on river discharges impact on marine ecology in the Southern Tyrrhenian Sea by means of MODIS data* Università di Napoli Parthenope
- 49 L.M. Losco et al. *A MATLAB training tool for SAR sea oil spill detection* Università di Napoli Parthenope
- 50 S. Sicari *A power conservative underwater localization algorithm* Università dell'Insubria
- 51 R. Montella et al. *A grid computing based virtual laboratory for remote sensed environmental data acquisition, processing, modeling and distribution* Università di Napoli Parthenope

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