

PERSONAL INFORMATION

Fabio Michele Rana



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Sex Male | Date of birth 01/05/1974 | Nationality Italian

PREFERRED JOB

Research and Development in the fields of Remote Sensing and Earth Observation

WORK EXPERIENCE

July 2011 → Present
October 2010 – March 2011

Research Fellow / Researcher

National Research Council of Italy (CNR)

Istituto sull'Inquinamento Atmosferico (IIA), at the Department 'Interateneo di Fisica - M. Merlin', Via G. Amendola, 173, 70126, Bari, Italy, <http://www.iia.cnr.it> and the Institute of Intelligent Systems for Automation (ISSIA), Via G. Amendola, 122/D, 70126, Bari, Italy, <http://www.issia.cnr.it>

Main research activities:

- Development and improvement of the algorithm *SARWIND LG-Mod* for high resolution sea surface wind retrieval (off-shore and coastal) by exploiting new generation SAR data (e.g., Sentinel-1), within the projects *ECOPOTENTIAL: Improving future ecosystem benefits through Earth Observations*, Grant Agreement No. 641762 (<http://www.ecopotential-project.eu/>) and *GEOEssential*, ERA-NET-Cofund Grant, Grant Agreement No. 689443 (<http://www.geoessential.eu/>).
- Design and development of algorithms aimed to retrieve high spatial resolution sea surface wind fields from satellite C- and X-band SAR data (*SARWIND LG-Mod*), in the framework of the project *RITMARE ('Ricerca Italiana per il MARE')*, funded by CNR (National Research Council of Italy).
- Development of innovative SAR interferometric multi-frequency techniques (*MCA, Multi-Chromatic Analysis*) mainly devoted to infer absolute phase and height measurements on the ground, in the framework of the *WiMCA* project (ESA contract 21319/07/NL/HE 'A novel approach for Wide-Band SAR Interferometry') extension, funded by the European Space Agency (ESA).
- Development of algorithms for multi-temporal and multi-frequency analyses of X-band interferometric SAR data, in the framework of the research program 'Valutazione dei dati COSMO-SkyMed in applicazioni di radar-interferometria multi-temporale e multi-cromatica', funded by the Italian Space Agency (ASI).
- Implementation of an interferometric SAR multi-temporal procedure for detection and analysis of Permanent Scatterers, in the framework of the contract between the ISSIA-CNR and the Department 'Interateneo di Fisica - M. Merlin' of Bari.

Business or sector Scientific Research / Software Design

June 2011 – July 2011
June 2008 – August 2010

Contract Researcher (at Department 'Interateneo di Fisica - M. Merlin')

Department 'Interateneo di Fisica - M. Merlin' of Bari and Polytechnic of Bari, Via G. Amendola, 173, 70126, Bari, Italy; Polytechnic of Bari, Via E. Orabona, 4, 70126, Bari, Italy; Geophysical Application Processing - GAP S.r.l., Via Amendola 173, 70126, Bari, Italy, <http://www.gapsrl.eu>

Main research activities:

- Design and development (in Matlab environment and for Windows platform) of algorithms for 'IfSAR-based' geo-referencing to be used as backup to the navigation of a vehicle without a human pilot aboard (UAV/missile) in the case of errors/disturbs to the IMU/GPS system, in the framework of the project *SARINA* ('SAR-based Augmented Integrity Navigation Architecture'), funded by the European Defence Agency (EDA).
- Design and development (in Matlab environment and for Linux platform) of algorithms to optimize InSAR integrated procedures, in the framework of the master course *TESTA* ('Tecnologie Satellitari per il Territorio e per l'Ambiente').
- Generation of deformation maps and detection of terrain slope instability by means of advanced SAR techniques based on satellite data exploitation: Definition of the test site in Daunia area and selection of X- and C-band SAR datasets; Research and development of algorithms for X-band data processing; Generation of the output deformation maps at both C- and X- band; Cross-comparison and validation of the output maps; Integration of maps in a GIS system. All activities were conducted in the framework of the research project '*FRANE PUGLIA*'.
- Research and development (in Matlab environment) regarding the processing of X-band SAR data, in the framework of the '*Test preliminare di elaborazione di coppie interferometriche acquisite dalla costellazione COSMO-SkyMed*'.
- Research and development (in Matlab environment) of procedures to obtain new geocoded products, starting from actual SAR geocoding algorithms.
- Software development (in Matlab environment and for Linux platform) aimed at updating the InSAR chain SPINUA, used by the Remote Sensing group at the Department '*Interateneo di Fisica - M. Merlin*' of Bari, and – in particular – the SAR geocoding algorithms of the processing chain, in the framework of the project '*MORFEO (MONitoraggio e Rischio da Frana mediante dati EO) - Protezione Civile dalle frane*'.
- Design and development (in Matlab environment) of algorithms – based on advanced techniques for SAR geocoding – for high-precision PSC (Persistent Scatterer Candidates) localization, in the framework of the contract between the ISSIA-CNR of Bari and the '*Autorità di Bacino*' of the Puglia region.
- Review of methodologies for high-precision SAR forward and inverse geocoding.

Business or sector Scientific Research / Software Design

December 2006 – August 2007

IT Consultant (at EDS - Electronic Data Systems - Italia S.p.A., Bitritto (BA), Italy)

Mediatica S.p.A., Via Silvio D'Amico 40, 00145, Rome, Italy

Monitoring of any anomalies or criticalness in the flow of data relating to managed servers and networks, and restoration of proper functionalities of systems by using dedicated software.

Business or sector IT Architectures, systems and services

EDUCATION AND TRAINING

January 2013 – December 2015

Ph.D. in Electrical And Information Engineering - Thesis Title: '*Exploitation of Satellite Synthetic Aperture Radar Data for Geophysical Parameters Retrieval over Land and Ocean*', 28th cycle - academic year 2012/2013 (date: 28/04/2016)

Polytechnic of Bari, Via Amendola 126/B, 70126, Bari, Italy, <http://www.poliba.it>

Main topics of the doctoral research:

1. MCA (*Multi-Chromatic Analysis*) technique mainly devoted to infer absolute phase and height measurements from a wide-band SAR interferometric pair.
2. Sea surface wind field retrieval by means of a single SAR image acquired off-shore or in marine coastal area (*SARWIND LG-Mod*).

- July 2015 **IEEE Geoscience and Remote Sensing Society 2015 Summer School (GR4S) on 'Data Fusion for Risk Mapping'**
University of Pavia (UniPV), Via Adolfo Ferrata 3, 27100, Pavia (PV), Italy
- Lecturers: F. Dell'Acqua (Associate Professor, UniPV), P. Gamba (Associate Professor, UniPV), A. Marinoni (Technician, UniPV), C. López-Martínez (Scientist, UPC - Universitat Politècnica de Catalunya, Barcelona, Spain), S. Atzori (Scientist, INGV - Geophysics and Volcanology National Institute, Rome, Italy), A. Taramelli (Associate Professor, IUSS University, Pavia, Italy), F. Zucca (Scientist, UniPV), F. Bovolo (Scientist, Fondazione Bruno Kessler - FBK, Trento, Italy), Vitor Silva (Global Earthquake Model - GEM Foundation).
- Main Topic: The exploitation of remotely sensed data from different sources for purposes of mapping risk and its components, i.e. hazard, vulnerability, exposure, in a geospatial environment.
- Laboratory: QGIS open-source tools and environment for geospatial information handling. Exercises.
- June 2012 **Course on 'Parallel Computing with MATLAB', delivered by MathWorks Training Services**
Institute of Intelligent Systems for Automation - National Research Council of Italy (ISSIA-CNR), Via G. Amendola, 122/D, 70126, Bari, Italy
- Topics and Labs: Working with a MATLAB pool; Speeding up computations; Task-parallel programming; Working with large data sets; Data-parallel programming; Increasing scale with multiple systems.
- September 2008 **International Summer School (attended as tutor) on 'Applications with the Newest Multi-Spectral Meteorological Satellites', sponsored by Consortium AUSI - Consorzio per la promozione delle Attività Universitarie del Sulcis-Iglesiente, EUMETSAT - European Organisation for the Exploitation of Meteorological Satellites and SSEC - Space Science and Engineering Center**
Consortium AUSI, Villa Bellavista, 09016, Monteponi, Iglesias (CI), Italy
- Lecturers: Paul Menzel (Senior Scientist, SSEC, University of Wisconsin, Madison); Verner Suomi (Professor, Atmospheric and Oceanic Sciences, University of Wisconsin, Madison); Paolo Antonelli (Scientist, Cooperative Institute for Meteorological Satellite Studies, University of Wisconsin, Madison).
- Topics: Radiation and the Radiative Transfer Equation; Spectral signatures from Earth's surface and atmosphere; High resolution sounding using infrared high resolution spectral data; Multi-spectral sensors for imaging RGB image combinations for cloud and severe weather studies; Instrument considerations and Cal/Val.
- Laboratory: Investigation of high spatial resolution visible and infrared data (from MODIS and SEVIRI) and high spectral resolution infrared data (from AIRS and IASI); Group work; Tests.
- January 2007 – June 2008 **University Master (1st level degree) in 'Tecnologie per il Telerilevamento Spaziale' - Thesis Title: 'Progettazione ed Implementazione di una Procedura per la Individuazione di Oggetti in Movimento con Andamento Lineare A Tratti in Algoritmi di Analisi Interferometriche SAR Multi-Temporali' (date: 27/06/2008)**
University of Bari 'Aldo Moro', Piazza Umberto I, 70121, Bari, Italy, <http://www.uniba.it>

Theory: Earth Observation (EO) programs; Infra-Red (IR) and Microwave (MW) Remote Sensing; Remote Sensing by means of SAR systems; Orbitography; Reference Systems and Cartography; GPS Fundamentals; Probability and Statistics; Stochastic Processes; Segmentation and Classification of 'optical' images; Information Theory and Coding; Digital Signal Processing (DSP); Digital Image Processing (DIP); SAR Systems; SAR Interferometry (InSAR); Differential SAR Interferometry (DInSAR); Persistent Scatterers techniques.

Laboratory: Linux and bash scripting; MATLAB and its use for 'optical' and SAR image processing; IDL; DORIS interferometric tool and its use for SAR image processing; GIS Systems; Satellite Tool Kit (STK) software; ENVI and remote-sensed image processing.

Six-Month Training: Design and development of a procedure for the detection of targets on the ground characterised by piecewise linear movements to be integrated in multi-temporal interferometric SAR algorithms.

June 2007 **International Summer School (attended as student) on 'Applications with the Newest Multi-Spectral Meteorological Satellites'**

Mediterranean Agency for Remote Sensing and environmental control (MARSec), Via Perlingieri 1, 82100, Benevento, Italy

Lecturers: Paul Menzel (Senior Scientist, SSEC, University of Wisconsin, Madison); Kathy Strabala (Scientist, SSEC, University of Wisconsin, Madison), Liam Gumley (Scientist, SSEC, University of Wisconsin, Madison); Paolo Antonelli (Scientist, Cooperative Institute for Meteorological Satellite Studies, University of Wisconsin, Madison).

Topics: Radiation and the Radiative Transfer Equation; Spectral signatures from Earth's surface and atmosphere; High resolution sounding using infrared high resolution spectral data; Multi-spectral sensors for imaging; Instrument considerations and Cal/Val; Evolving to the Future Global Observing System.

Laboratory: Using HYDRA (a JAVA based freeware tool) to manipulate multi-spectral data; Staging, Viewing, Interrogating MODIS, AIRS, MSG Data; Group work; Tests; Final presentation.

June 2006 **Professional Engineer License, Member of 'Ordine degli Ingegneri della Provincia di Bari' (date: 20/06/2006)**

Polytechnic of Bari, Via Amendola 126/B, 70126, Bari, Italy

September 1993 – March 2006 **Laurea Degree in Electrical And Information Engineering - Thesis Title: 'Geocoding di immagini SAR' (date: 20/03/2006)**

Polytechnic of Bari, Via Amendola 126/B, 70126, Bari, Italy

Subjects included: Mathematics, Geometry and Algebra, Physics, Chemistry, Computational Science, Mathematical Methods for Engineers, Information Technology, Information Systems, Operating Systems, Calculators, Telecommunication Networks, Systems Theory, Electrical Communications, Signal Processing, Digital Signal Processing, Electrical Network, Electronic Devices, Analog and Digital Electronics, Electrical Measurements, Electromagnetic Fields, Electromagnetic Compatibility, Antennas, Economics Fundamentals.

Thesis Topic: Design and implementation of an algorithm (C code in Linux environment) for high precision geocoding of focused SAR images.

Mark Grade: 103/110.

September 1988 – July 1993 **Certificate of Secondary Education**

Liceo Scientifico Statale 'Cassano delle Murge', Via Abbruzzese, 38, 70020, Bitetto (BA), Italy

Subjects included: Mathematics, Physics, Chemistry, Biology, Geography, Astronomy, Italian Language, Italian Literature, Latin Language, Latin Literature, History, Philosophy, English.

Mark Grade: 60/60.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

- Excellent written communication skills acquired from writing technical reports and publications
- Confident and professional speaking abilities gained through my experience as speaker at a number of International workshops and conferences
- Excellent verbal communication skills derived from weekly English lessons

Organisational skills

- Strong organizational skills derived from the ability to manage my activities through wise planning (specific tasks), time optimization, detail orientation and prioritization as demonstrated in all projects I was involved

Job-related skills

- Skilled at working as a team member as well as independently
- Strong problem-solving and analytical skills; Great ability at interpreting data
- Skilled at working efficiently under pressure
- Self-motivated, hard-working individual

Computer skills

- Excellent knowledge of Operating Systems MS Windows, GNU/Linux, Apple MacOS
- Excellent knowledge of most MS Office and Apache OpenOffice applications
- 10 years of experience with MATLAB programming
- Good knowledge of programming languages FORTRAN, IDL, C/C++ and Python
- Good knowledge of software STK, HDFLook, HYDRA, ENVI, BEST/NEST, SNAP, DORIS, ArcGIS/QGIS, Anaconda

Technical skills

- 10 years of experience in the field of Earth Observation
- Research and Development in the field of Satellite Remote Sensing
- Synthetic Aperture Radar (SAR) specialist
- Knowledge of Spacecraft Systems

Other skills

- A genuine desire to achieve, excel and evolve
- Excellent common sense, judgment, and decision-making abilities

Hobbies

- Caving; Paragliding; Climbing; Football; Listening to music; Watching movies; Reading books; Astronomy

Driving licence

- Class B

ADDITIONAL INFORMATION

Publications

Papers on Journals

[5] Rana, F. M., Adamo, M., Lucas, R., & Blonda, P. (2019). Sea surface wind retrieval in coastal areas by means of Sentinel-1 and numerical weather prediction model data. *Remote Sensing of Environment*, 225, 379-391. DOI:10.1016/j.rse.2019.03.019.

[4] Fabio M. Rana, Maria Adamo, Guido Pasquariello, Giacomo De Carolis, and Sandra Morelli, *LG-Mod: A Modified Local Gradient (LG) Method to Retrieve SAR Sea Surface Wind Directions in Marine Coastal Areas*, Journal of Sensors, vol. 2016, Article ID 9565208, 7 pages, 2016. DOI:10.1155/2016/9565208.

[3] Adamo, M., Rana, F.M., De Carolis, G. and Pasquariello, G. *Assessing the Bayesian inversion technique of C-band synthetic aperture radar data for the retrieval of wind fields in marine coastal areas*. Journal of Applied Remote Sensing 8(1), 083531, Nov 06, 2014. DOI:10.1117/1.JRS.8.083531.

[2] Bovenga, F.; Derauw, D.; Rana, F.M.; Barbier, C.; Refice, A.; Veneziani, N.; Vitulli, R. *Multi-Chromatic Analysis of SAR Images for Coherent Target Detection*. Remote Sensing. 2014, 6, 8822-8843. DOI:10.3390/rs6098822. ISSN:2072-4292.

[1] Bovenga, F.; Rana, F.M.; Refice, A; Veneziani, N. *Multichromatic Analysis of Satellite Wideband SAR Data*, Geoscience and Remote Sensing Letters, IEEE , vol.11, no.10, pp.1767,1771, Oct. 2014. DOI:10.1109/LGRS.2014.2308420. ISSN:1545-598X.

Conference Proceedings

[13] Rana, F. M., Adamo, M., & Blanda, P. (2018, July). LG-Mod Multi-Scale Approach for SAR Sea Surface Wind Directions Retrieval. In *IGARSS 2018-2018 IEEE International Geoscience and Remote Sensing Symposium* (pp. 3216-3219). IEEE. DOI: 10.1109/IGARSS.2018.8518224.

[12] F.M. Rana, M. Adamo, G. Pasquariello, G. De Carolis, S. Morelli and F. Bovenga: *A simplified Local Gradient method for the retrieval of SAR-derived sea surface wind directions*. In Proceedings of EUSAR 2014, 10th European Conference on Synthetic Aperture Radar, Berlin, Germany, 03 - 05 June 2014. ISBN:978-3-8007-3607-2.

[11] F. Bovenga, D. Derauw, C. Barbier, F.M. Rana, A. Refice, N. Veneziani, R. Vitulli: *Multi-chromatic analysis of SAR images for target analysis*. Proc. SPIE 8891, SAR Image Analysis, Modeling, and Techniques XIII, 889104 (October 17, 2013). DOI:10.1117/12.2028962.

[10] M. Adamo, G. De Carolis, S. Morelli, G. Pasquariello and F.M. Rana: *Quantitative analysis of Bora events in the Adriatic sea by means of SAR-based techniques and the ETA model*. In Proceedings of IGARSS 2013, Melbourne, Australia, 21 - 26 July 2013. DOI:10.1109/IGARSS.2013.6723009. ISSN:2153-6996. ISBN:978-1-4799-1114-1.

[9] F. Bovenga, F. Rana, A. Refice, D.O. Nitti, N. Veneziani: *Frequency coherent vs. temporally coherent targets*. In Proceedings of IGARSS 2013, Melbourne, Australia, 21 - 26 July 2013. DOI:10.1109/IGARSS.2013.6721103. ISSN:2153-6996. ISBN:978-1-4799-1113-4.

[8] D.O. Nitti, F. Bovenga, A. Morea, F.M. Rana, L. Guerriero, M. Greco, G. Pinelli: *On the use of SAR interferometry to aid navigation of UAV*. In Proceedings of SPIE 8532, Remote Sensing of the Ocean, Sea Ice, Coastal Waters, and Large Water Regions 2012, Edinburgh, United Kingdom, 24 - 27 September 2012. DOI:10.1117/12.974563. ISSN:0277-786X. ISBN:9780819492722.

[7] F. Bovenga, F. Rana, A. Refice, D.O. Nitti, N. Veneziani: *Interferometric Multi-Chromatic Analysis of COSMO-SkyMed data for height retrieval*. In Proceedings of IGARSS 2012, Munich, Germany, 22 - 27 July 2012. DOI:10.1109/IGARSS.2012.6350579. ISSN:2153-6996. E-ISBN:978-1-4673-1158-8. Print ISBN:978-1-4673-1160-1.

[6] D.O. Nitti, F. Rana, F. Bovenga, R. Nutricato, M. Tragni, M.T. Chiaradia, G. Ober, L. Candela: *Analisi del sisma del 6 Aprile 2009 in Abruzzo con tecniche di Interferometria SAR differenziale*. Atti 13^a Conferenza Nazionale ASITA, Fiera del Levante - Bari, Italia, 1 - 4 Dicembre 2009. ISBN:978-88-903132-2-6.

Publications

[5] F. Agliardi, F. Bovenga, L. Candela, M.T. Chiaradia, G.B. Crosta, C. D'Aprile, G. Fornaro, P. Frattini, M. Gilardoni, F. Guzzetti, R. Lanari, D.O. Nitti, R. Nutricato, G. Ober, F. Rana, G. Venuti, G. Zeni: *Attività di elaborazione di dati EO SAR su aree in frana nell'ambito del progetto ASI MORFEO*. Atti 13^a Conferenza Nazionale ASITA, Fiera del Levante - Bari, Italia, 1 - 4 Dicembre 2009. ISBN:978-88-903132-2-6.

[4] R. Nutricato, D.O. Nitti, F. Bovenga, F. Rana, C. D'Aprile, P. Frattini, G. Crosta, G. Venuti, M.T. Chiaradia, G. Ober, L. Candela: *MORFEO PROJECT: C- and X-Band SAR interferometric analysis over Alpine regions (Italy)*. In Proceedings of FRINGE 2009 - Advances in the Science and Applications of SAR Interferometry, ESA/ESRIN, Frascati, Italy, 30 November - 4 December 2009. ISBN:978-92-9221-241-4. ISSN:1609-042X.

[3] D.O. Nitti, F. Bovenga, F. Rana, R. Nutricato, M. Tragni, M.T. Chiaradia, G. Ober, L. Candela: *On the use of C- and X-band SAR data for studying the ground deformations induced by the April 6th, 2009 Earthquake in Abruzzo*. In Proceedings of FRINGE 2009 - Advances in the Science and Applications of SAR Interferometry, ESA/ESRIN, Frascati, Italy, 30 November - 4 December 2009. ISBN:978-92-9221-241-4. ISSN:1609-042X.

[2] D.O. Nitti, F. Bovenga, R. Nutricato, F. Rana, C. D'Aprile, P. Frattini, G.B. Crosta, M.T. Chiaradia, G. Ober, L. Candela: *C- and X-band multi-pass InSAR analysis over Alpine areas (ITALY)*. In Proceedings of SPIE Europe Remote Sensing, Berliner Congress Centre - Berlin, Germany, 31 August - 3 September 2009. DOI:10.1117/12.849210. ISBN:9780819477828.

[1] D.O. Nitti, R. Nutricato, F. Bovenga, F. Rana, D. Conte, G. Milillo, L. Guerriero: *Quantitative Analysis of Stripmap And Spotlight SAR Interferometry with Cosmo-SkyMed constellation*. In Proceedings of IGARSS 2009, Cape Town, South Africa, July 13 - 17 2009. DOI:10.1109/IGARSS.2009.5418249. E-ISBN:978-1-4244-3395-7. Print ISBN:978-1-4244-3394-0.

Abstracts

[7] G. Pasquariello, F.M. Rana, M. Adamo, F. Bovenga and G. De Carolis: *Sviluppo della componente SAR del sistema osservativo satellitare - Sottosistema Vento*. Workshop RITMARE, Bologna, 14-15 Aprile, 2104.

[6] F.M. Rana, M. Adamo, G. Pasquariello, G. De Carolis, S. Morelli and F. Bovenga: *Assessment of methods for the retrieval of sea surface wind directions using X-band TerraSAR-X data*. Abstracts of 5th TerraSAR-X / 4th TanDEM-X Science Team Meeting, DLR – Oberpfaffenhofen, Germany, 10 - 14 June 2013.

[5] F. Bovenga, F. Rana, A. Refice, N. Veneziani, R. Vitulli: *Multi-chromatic analysis of SAR images for target analysis and absolute ranging*. Abstracts of 5th TerraSAR-X / 4th TanDEM-X Science Team Meeting, DLR – Oberpfaffenhofen, Germany, 10 - 14 June 2013.

[4] M. Adamo, G. De Carolis, S. Morelli and F. Rana: *Combined observations of a Bora event in the Adriatic Sea by means of ETA model and SAR data*. Geophysical Research Abstracts Vol. 15, EGU2013-5062, 2013 EGU General Assembly, Vienna, Austria, 7 - 12 April 2013. eISSN:1029-7006.

[3] F. Bovenga, F.M. Rana, A. Refice, N. Veneziani: *Multi-chromatic analysis of high resolution X-band SAR data*. Atti VII Riunione Annuale CeTeM-AIT, Villa Larocca – Bari, Italy, 4 - 5 Dicembre 2012.

[2] J. Wasowski, C. Lamanna, D. Casarano, F. Bovenga, D.O. Nitti, R. Nutricato, F. Rana, G. Colangelo: *Interpreting very slow surface movements on slopes detected by PS interferometry and GPS surveying: case study from the Southern Apennines, Italy*. Geophysical Research Abstracts Vol. 12, EGU2010-15380-1, 2010 EGU General Assembly, Vienna, Austria, 2 - 7 May 2010. eISSN:1607-7962.

[1] Guzzetti F., Mondini A., Candela L., Ober G., the MORFEO team (F. Rana): *Results of the MORFEO project: Exploiting remote sensing technology to detect, map, monitor, and forecast slope failures*. Geophysical Research Abstracts Vol. 12, EGU2010-11871, 2010 EGU General Assembly, Vienna, Austria, 2 - 7 May 2010. eISSN:1607-7962.

Technical Reports

[1] F. M. Rana, M. Adamo, Algoritmi sottosistema vento – release 1, Deliverable SP5_WP1_AZ2_D01, RITMARE La Ricerca Italiana per il MARE, 2014.

[2] F. Bovenga, F. M. Rana, A. Refice, N. Veneziani, Final Report: Del. 1 “Dataset description document”; Del. 2 “Technical note on PS detection and comparison with PSI technique”, Ref WiMCA_CCN_ISSIA_FinalReport, WiMCA CCN 1 Project Extension (ESA contract No 21319/07/NL/HE “A novel approach for Wide-Band SAR Interferometry”), March 29, 2013.

Date
Signature

30/07/2019

