Paolo Trivero

PERSONAL DATA

Born in Biella on July 6, 1948

BIO AND EDUCATION

Graduated in Physics (Turin University – 1981) with full marks and honour.

UNIVERSITY CAREER

2006-	Full Professor, Università del Piemonte Orientale
1993-2006	Associate Professor, Università del Piemonte Orientale
1992-1993	Associate Professor, Università "Federico II" di Napoli
1984-1992	Researcher, Università di Torino
1971-1984	Technician, Università di Torino

UNIVERSITY POSITIONS

2016-	Member (on behalf of University) of the steering committee of "Fondazione ITS Professionalità"

SCIENTIFIC POSITIONS

2008-	Member (on behalf of University) of the board of directors of CINFAI consortium

MAIN FIELDS OF INTEREST

1. Remote sensing
2. Synthetic Aperture Radar (SAR)
3. Satellite monitoring
4. Renewable energies
5. Energy storage

CURRENT ISSUES OF RESEARCH

1. Microwave Radio-oceanography and SAR image interpretation (sea surface)

Interpretation of Synthetic Aperture Radar (SAR) images of sea surface (relation between surface wind stress and gravito-capillary waves in Bragg resonance). With this methodology it is possible

to measure sea surface roughness, to estimate surface wind field, to detect surface pollutants (e.g. oil spills).

2. Models and indices to assess "environmental health"

Development and use of an innovative methodology to monitor and assess air quality and impact at local scale, based on remote sensing systems (such as a specially designed RASS) and numerical models, to design decision support systems for environmental friendly scenarios. Those techniques can be also applied to investigate diffusion of asbestos fibers in air.

3. Particulate matter characterisation to find fibrous mineralogic phases

Morphologic, chemical and mineralogical characterisation of air particulate inorganic components, by means of Micro-Raman spectroscopy and scanning electron microscopy VP-SEM-EDS. The methodology, developed in cooperation with mineralogy research group, allows to distinguish between the natural background and anthropic sources.

4. Innovative methodologies to exploit renewable energies

Theoretical and operational studies on energy efficiency issues, applied to various fields (residential, automotive). Prototypes have been assembled and tested (high efficiency renewable energy production, active and passive energy-efficient storage systems based on positive change eutectic materials for heating/cooling. A patent has been registered.

CURRENT FUNDED PROJECTS

PROGRAMME	FUNDED PROJECT
MIUR (Italian ministry for education and research)	RITMARE – "Ricerca Italiana per il mare" http://www.ritmare.it/ *The aim of RITMARE is to implement an integrated maritime and marine policy in order to "enhance Europe's capacity to face the challenges of globalisation and competitiveness, climate change, degradation of the marine environment, maritime safety and security, and energy security and sustainability" (European commission Blue paper COM2007/575 of October 10th 2007)*

TOP FIVE PAPERS

1. Bonino G., P.P. Lombardini, A. Longhetto, TRIVERO P (1981). Radio acoustic measurement of fog-capping thermal inversions. NATURE, vol. 5802, p. 121-123, ISSN: 0028-0836
2. Fiscella B, Giancaspro A, Nirchio F, Pavese P, Trivero P (2000). Oil spill detection using marine SAR images. INTERNATIONAL JOURNAL OF REMOTE SENSING, vol. 21, p. 3561-3566, ISSN: 0143-1161, doi: 10.1080/014311600750037589

3. Loglisci N, Qian MW, Rachev N, Cassardo C, Longhetto A, Purini R, Trivero P, Ferrarese S, Giraud C (2004). Development of an atmosphere-ocean coupled model and its application over the Adriatic Sea during a severe weather event of Bora wind. JOURNAL OF GEOPHYSICAL RESEARCH. ATMOSPHERES, vol. 109, p. D01102 1-D01102 14, ISSN: 0148-0227, doi: 10.1029/2003JD003956

4. Nirchio F, Sorgente M, Giancaspro A, Biamino W, Parisato E, Ravera R, Trivero P (2005). Automatic detection of oil spills from SAR images. INTERNATIONAL JOURNAL OF REMOTE SENSING, vol. 26, p. 1157-1174, ISSN: 0143-1161, doi: 10.1080/01431160512331326558

5. Trivero, P., Adamo, M., Biamino, W., Borasi, M., Cavagnero, M., De Carolis, G., ... & Tataranni, F. (2016). Automatic oil slick detection from SAR images: Results and improvements in the framework of the PRIMI pilot project. Deep Sea Research Part II: Topical Studies in Oceanography. Available online 17 March 2016, ISSN 0967-0645, doi: 10.1016/j.dsr2.2016.03.003

AWARDS

Prize for Physics laureates, awarded by SIF (Società Italiana di Fisica - Italian Physics Society)