

PERSONAL

Born: Isernia, Italy, March 11, 1981; Italian citizen

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RESEARCH INTERESTS

I'm currently interested in study of fragmentation dynamics of phreatic eruptions. As well as I worked and I'm interested on: slope failures resulting from instability of volcanic edifices and related debris avalanches deposits; settling dynamics of ash aggregates; facies analyses, stratigraphy and survey of volcanic areas, particularly on pyroclastic deposits from hydromagmatic eruptions; evolution of hydromagmatic volcanic landforms through geomorphologic analysis; physical processes associated with basaltic volcanism, particularly on conduit dynamic processes of strombolian activity; seafloor mapping and interpretation of volcanic areas.

EDUCATION

M.Sc. Geophysical and structural geology, 2008

University of Rome "La Sapienza", Rome, Italy

Thesis Title: "Survey and characterization of volcanic rocks in the area between Bracciano lake and the via Cassia (Sabatini Volcanic District)"

Advisor: Danilo Mauro Palladino

APPOINTMENTS

Marie Curie Research Fellowship at LMU Munich: August 2012-present

Ludwig Maximilian University of Munich (LMU), Germany

PhD position in experimental volcanology

Advisor: Bettina Scheu

Employment contract: July 2011 – June 2012

FUGRO Oceansismica S.p.A. Roma

Geophysicist

Occasional collaboration: February-July 2011

Geoteam S.r.l. Roma

Geophysical data processor

Research grant: April 2010 - January 2011

IGAG - CNR Rome, Italy

"Multibeam echo-sounders Data Processing"

Refinement grant: July 2009 - December 2009

Geophysical Institute, University of Alaska, Fairbanks, AK, USA

"Research project on submerged debris avalanches in the Bering Sea and around Augustine Volcano"

Research grant: June 2008 - June 2009

IGAG - CNR Rome, Italy

"Integrated analysis of echometric (multibeam), sonar and seismic data for marine geo-hazard" related MaGIC Project (Marine Geohazard along the Italian Coasts), in collaboration with "Dipartimento della Protezione Civile Italiana"

Scholarship: May - November 2007

Paleontology Museum (Earth Science) at the University of Rome "La Sapienza"

WORK EXPERIENCES

Trans Adriatic Pipeline - TAP - project (M/V Keli): 21 Sept-17 Nov 2011

Seman area – Fier (Albania)

Preliminary study of a pipeline landfalls and shore approaches

BEZEQ Cruise (R/V Explora): 24 Feb-29 March 2011

Chief Scientist: Riccardo Codiglia; Central-Eastern Mediterranean Sea, Italy, Greece, Turkey, Israel

Cone penetration test and collection of coring sample, seismic, side scan sonar and bathymetric data for a preliminary cable route related BIOS Submarine cable system “Tel Aviv to Bari Project”

MAGIC IGAG 12/10 Scientific Cruise (R/V Minerva Uno): 06-16 December 2010

Chief Scientist: Alessandro Bosman; Southern Tyrrhenian Sea - Mediterranean Sea, Italy

Collection of bathymetric and seismic data related MaGIC Project (Marine Geohazard along the Italian Coasts)

MAGIC IGAG 11/10 Cruise (R/V Mariagrazia): 03-16 November 2010

Chief Scientist: Alessandro Bosman; Southern Tyrrhenian Sea - Mediterranean Sea, Italy

Collection of bathymetric data related MaGIC Project (Marine Geohazard along the Italian Coasts)

Geoteam S.r.l. Roma - OLT (Offshore LNG Toscana): 13-17 September 2010

Processing of bathymetric data related Golar LNG - Livorno project

EOLARC 2010 Scientific Cruise (R/V Urania): 16 February-01 March 2010

Chief Scientist: Francesco Latino Chiocci; Aeolian Arc - Tyrrhenian Sea, Italy

Collection of coring sample, seismic and bathymetric data

MAGIC UniRoma1 06/09 Cruise (R/V Universitatis) 08-14 June 2009

Chief Scientist: Alessandro Bosman; Strait of Messina - Mediterranean Sea, Italy

Collection of bathymetric data related MaGIC Project (Marine Geohazard along the Italian Coasts)

PASSITO 2008 Scientific Cruise (R/V Urania) 25 November-11 December 2008

Chief Scientist: Francesco Latino Chiocci; Channel of Sicily - Mediterranean Sea, Italy

Collection of coring sample, seismic and bathymetric data

LAZIO 08 Cruise (M/N Coopernaut Franca - Nautilus) 08-20 September 2008

Chief Scientist: Francesco Falese; Anzio - Tyrrhenian Sea, Italy

Studies of some wreckage sandy deposits found on the continental regional shelf with definition of their seismostratigraphic and granulometric characteristics, and considerations on sediment belong to some stretch of sand

SKILLS

Languages:

ITALIAN (native), ENGLISH (good in reading, writing, speaking and listening)

Computer:

O.S.: Microsoft Windows XP, VISTA, 7

Word processing, spreadsheet program and multimedia presentation: Microsoft Office Suite 2007; OpenOffice Suite 3.x; ULTRA Edit (IDM computer solution), Golden Software-Grapher

Graphic processing: Adobe-Photoshop; Adobe-Illustrator; CorelDRAW Graphic Suite

CAD and GIS: Global Mapper; Golden Software-Surfer; fundamental of Autodesk-Autocad MAP 2009

Acquisition, Processing & Interpretation: CARIS HIPS & SIPS; SMT Kingdom 8.5; Fledermaus V7; CODA Octopus-CODA Geosurvey; CommTec-Swampro; DMNG-Seisee; Reson-PDS2000; ImageJ; Eject!

Field Work:

Volcanological Survey:

- *reconstruction of eruptive scenarios and mechanisms of transport and deposition of pyroclastic flow*
- *energetic parameterization of hydromagmatic centers and quantity study by means of ballistic lithic deposits*
- *definition of the spatial and temporal evolution of the hydromagmatic centres via intersection, erosion and continuity of craters edges*

Marine geophysical surveys:

- High Resolution Seismic Data Acquisitions (*Communication Technology SWAN-PRO*)
- Morphobathymetry Data Acquisitions (*Multibeam Reson Sebat and Simrad system; Navigation and processing: RESON PDS 2000*)
- Side scan sonar Data Acquisitions (*Communication Technology SWAN-PRO*)

Lab Work:

Analysis of high-speed imaging of mafic explosive volcanism and subaerial tephra from volcanic plume:

- *conduit process, mass flow, granulometric analysis*
- *ash particles and aggregates settling dynamics*

Interpretation of bathymetric, acoustic and seismic (single and multichannel) data

Integrated analysis of digital topography and geophysical data from volcanic island-arc area:

- *seafloor mapping of volcanic landform*
- *mapping of landslide deposits and their possible source*
- *thickness and volume estimation of the landslide deposits*
- *landslide hazard evaluation*

Multibeam and backscatter data processing using Caris Hips (Hydrographic Information Processing) and Sips Professional vers. 6.1:

- *Production of high/very high resolution digital elevation models (DEMs) and backscatter mosaic for mapping and interpretation of the seabed morphology concerning the identification of areas of potential geo-hazard*

PAPERS

J. Taddeucci, P. Scarlato, C. Montanaro, C. Cimarelli, E. Del Bello, C. Freda, D. Andronico, M. Tumi Gudmundsson, D.B. Dingwell. *Aggregation-dominated ash settling from the Eyjafjallajökull volcanic cloud illuminated by field and laboratory high-speed imaging. Geology; September 2011; v. 39; no. 9; p. 891-894; DOI: 10.1130/G32016.1*

C. Montanaro and J. Beget. *Volcano collapse along the Aleutian Ridge (western Aleutian Arc), Nat. Hazards Earth Syst. Sci., 11, 715–730, 2011, doi:10.5194/nhess-11-715-2011*

A. Bosman, D. Casalbore, D. Ridente, C. Montanaro, F. L. Chiocchi. *MAGIC: conoscere i mari italiani e individuarne i geo-rischi. Geomedia, Vol.2, 2010*

ABSTARCTS

J. Taddeucci, P. Scarlato, C. Montanaro, C. Cimarelli, E. Del Bello, et al., *Aggregation impacts on the Eyjafjallajökull ash fallout illuminated by field and laboratory high-speed imaging. General Assembly IUGG, Melbourne, 28 June-8 July 2011*

J. Taddeucci, P. Scarlato, M. Alatorre-Ibargüengoitia, C. Acerra, A. Capponi, C. Cimarelli, E. Del Bello, D.B. Dingwell, U. Küppers, C. Montanaro, M. Moroni, S. Müller, L. Tornetta. *How much? How deep? How often? Parameterizing explosive gas release during Strombolian activity. Geophysical Research Abstracts Vol. 13, EGU2011-6225, 2011. EGU General Assembly 2011*

J. Taddeucci, P. Scarlato, C. Montanaro, C. Cimorelli, E. Del Bello, C. Freda, D. Andronico, M. Tumi Gudmundsson, D.B. Dingwell. *Aggregation control on ash sedimentation from the Eyjafjallajökull volcanic cloud: insights from field and laboratory high-speed imaging*, *Geophysical Research Abstracts*, Vol. 13, EGU2011-5990, 201, EGU General Assembly 2011

D. Andronico, P. Scarlato, J. Taddeucci, C. Cimorelli, E. Del Bello, C. Freda, V. Misiti, C. Montanaro, *Sedimentation and physical-chemical features of volcanic ash from the last days of the Eyjafjallajökull eruption*, Abstract presented at 2011 Soufrière Hills Volcano 15 Years On Conference, MVO, Montserrat, W.I., 4-8 April, 2011

P. Scarlato, J. Taddeucci, C. Montanaro, E. Del Bello, C. Cimorelli, C. Freda, D. Andronico (2010), *Settling dynamics of ash aggregates from the Eyjafjallajökull (Iceland) eruption plume illuminated by high-speed video analysis*. American Geophysical Union, Fall Meeting 2010, abstract #V41E-2314 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.

J. Taddeucci, P. Scarlato, C. Montanaro, C. Cimorelli, E. Del Bello, C. Freda, D. Andronico, M.T. Gudmundsson, D.B. Dingwell, *Aggregation-dominated ash settling from the Eyjafjallajökull volcanic cloud illuminated by field and laboratory high-speed imaging*. INGV (Istituto Nazionale di Geofisica e Vulcanologia) 2010 Annual Report: HP-HT Laboratory of Experimental Volcanology and Geophysics Department of Seismology and Tectonophysics

J. Taddeucci, P. Scarlato, M. Alatorre-Ibargüengoitia, A. Capponi, C. Acerra, C. Cimorelli, E. Del Bello, D.B. Dingwell, U. Küppers, C. Montanaro, M. Moroni, S. Müller, L. Tornetta, *A model for the pressure and depth of gas release during Strombolian activity at Stromboli volcano, Italy*. INGV (Istituto Nazionale di Geofisica e Vulcanologia) 2010 Annual Report: HP-HT Laboratory of Experimental Volcanology and Geophysics Department of Seismology and Tectonophysics

J. E. Beget, C. Montanaro, T. Trainor, K. Bull., (2009), *Large scale edifice collapse at Redoubt Volcano, Alaska*, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract #V43A-2223

J. Taddeucci, P. Scarlato, C. Freda, C. Acerra, C. Cimorelli, F. Di Traglia, C. Montanaro, D.M. Palladino, and P. Russo. *High-speed imaging of explosive activity at Stromboli Volcano, Italy*. *Geophysical Research Abstracts*, Vol. 11, EGU2009-0, 2009

REPORTS

Reports realized in collaboration with the Marine Geology workgroup at “La Sapienza” University of Rome, and at FUGRO Oceansisimica:

- Acquisition of multibeam data for seafloor mapping and interpretation in relation to the identification of areas with potential geohazards along the Calabria coast (Tyrrhenian and Ionian side)
- Report about knowledge and expectations of the research in order to find submarine sandy workings able to beach nourishment on Tyrrhenian continental shelf
- Integration of geological and geophysical data to study the coastal slope instability processes along the Tyrrhenian side of Calabria
- Seafloor sampling of Lipari, Vulcano, Salina and Panarea islands, from coast down to 1000 m depth, for a mineralogical-petrographic characterization of the volcanic centres and for sedimentological studies of canyons and channels systems affecting the surrounding areas
- Marine geophysical and geological survey of Pantelleria Island (Strait of Sicily)
- Processing and interpretation of multibeam and side scan sonar data for geohazards assessment in the East Aberdeen basin
- Processing and interpretation of multibeam, side scan sonar, seismic and magnetometer data for a preliminary study of a pipeline landfalls and shore approaches (Albania-Italy)
- Interpretation of Multichannel seismic data for shallow gas assessment in the Nile Delta area

A. Bosman, E. Martorelli, C. Montanaro (2010). *Report on the Multibeam survey during Cruise MAGIC IGAG 12/10 aboard R/V Minerva Uno, CNR - IGAG Roma*

A. Bosman, E. Martorelli, C. Montanaro (2010). *Report on the Multibeam survey during Cruise MAGIC IGAG 11/10 aboard R/V Mariagrazia, CNR - IGAG Roma*

A. Bosman, D. Casalbore, C. Montanaro (2010). *Report on the Multibeam survey during Cruise MAGIC IGAG 06/09 aboard R/V Universitatis, CNR - IGAG Roma*

F.L. Chiocci, E. Sallusti, A. Sposato, A.M. Conte, V. Zanon, A. Bosman, E. Martorelli, M. Macelloni, M. Puleio, C. Montanaro, M.V. Lodi, M. Ingrassia, M. Pierdomenico, M. Calarco, D. Cavallaro, G. Petroni. *Report on the Seismic, Morphobathymetric, and coring investigations during Cruise PASSITO 2008 aboard R/V Urania, CNR - IGAG Roma*

CONFERENCES AND PRESENTATION

J. Taddeucci *et al.* *Bubble and Slug Oscillations: Imaging and analogue modeling. The Physics of Fluid Oscillations in Volcanic Systems II (FOVSys II) Waikoloa, Big Island of Hawaii, February 23-25, 2010*

Participation at the “International Conference on Seafloor Mapping for Geohazard Assessment” - Forio d’Ischia (NA) - Italy, 11-13 May 2009

COURSES

Interpretation of three-dimensional seismic data: 19-23 March 2012

Conference Hall, “Hotel Le Capannelle”, Rome, Italy

Teacher: Alistair R. Brown

OTHER INTERESTS

Activities and Sports:

mountain trekking, hiking, swimming, jogging, playing soccer, kick boxing

Hobbies:

technical and artistic design, photography, traveling, listening to and playing (guitar) music, reading (from classical lecture to fantasy and science fiction), picture, draw comics

“Willing to travel and to relocate”