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S01.40 - Advanced Processing Techniques for Geophysical Signals Recorded at Active Volcanoes

| Time | ID | Title | Author Name | Affiliations | Presenter Name |
|---------------|-----|---|--|--|-----------------------|
| 8.30 - 8.45 | 333 | Integrating time-dependent data at Mount St. Helens (2004-2008) using physics-based conduit models | Ying-Qi Wong (1) Paul Segall (1) | (1) Stanford University | Ying-Qi Wong |
| 8.45 - 9.00 | 490 | Linking volcano infrasound observations with source processes: comparing analytical models with computational fluid dynamics simulations | Leighton Watson (1) Eric Dunham (1,2) | (1) Department of Geophysics, Stanford University (2) Institute of Computational and Mathematical Engineering, Stanford University | Leighton Watson |
| 9.00 - 9.15 | 681 | Towards remote estimation of volcanic plume source parameters from regional infrasound arrays | Anna Perttu (1) B. Taisne (1,2) D. Tailpied (1) D. Whilldin (1) D. Hidayat (1) D. Basuki (3) A. Kristianto (3) H. Triastuty(3) | (1) Earth Observatory of Singapore, Nanyang Technological University (2) Asian School of the Environment, Nanyang Technological University (3) Center for Volcanology and Geological Hazard Mitigation, Bandung, Indonesia | Anna Perttu |
| 9.15 - 9.30 | 798 | Decoupling the volcano infrasound source from the crater acoustic response | Jeffrey Johnson (1) Marco Almeida (2) Jacob Anderson (1) Julien Barrière (3) Andrea Cannata (4) Nicolas d'Oreye (3) Eric Dunham (5) Bruce Houghton (6) Francois Kervyn (7) Keehoon Kim (8) Daniele Morgavi (4) Hugo Ortiz (9) Adrien Oth (3) Jose Palma (10) Patricio Ramon (2) Mario Ruiz (2) Benoit Smets (7) Laura Spina (4) Nicolas Turner (6) Guillermo Viracucha (2) Leighton Watson (5) | (1) Boise State University (US) (2) Instituto Geofísico Escuela Politécnica Nacional (Ecuador) (3) European Center for Geophysics and Seismology (Luxembourg) (4) Università di Perugia (Italy) (5) Stanford University (US) (6) University of Hawaii Manoa (US) (7) Royal Museum for Central Africa (Belgium) (8) Lawrence Livermore National Laboratory (US) (9) Pontificia Universidad Católica (Ecuador) (10) Universidad de Concepción (Chile) | Jeffrey B Johnson |
| 9.30 - 9.45 | 373 | The VULCAN.ears project: an Esperanto for the volcano-seismic event recognition as a portable tool for real-time monitoring and eruption forecasting | Guillermo Cortés (1) Philippe Lesage (2) Roberto Carniel (1) Javier Almendros (3) Carmen Benítez (4) Raúl Arámbula-Mendoza (5) | (1) Dipartimento Politecnico di Ingegneria e Architettura, Università degli Studi di Udine, Udine, Italy. (2) Université Grenoble Alpes, Université Savoie Mont Blanc, CNRS, IRD, IFSTTAR, ISTerre, 38000 Grenoble, France. (3) Instituto Andaluz de Geofísica y Prevención de Desastres Sísmicos, Universidad de Granada, Granada, Spain. (4) Departamento de Teoría de la Señal, Telemática y Comunicaciones, E. T. S. de Ingenierías Informática y de Telecomunicación. Universidad de Granada, Granada, Spain. (5) Centro Universitario de Estudios e Investigaciones en Vulcanología, Colima, Mexico. | Guillermo Cortés |
| 9.45 - 10.00 | 461 | Recurrent Neural Networks as Automatic Volcano-Seismic Recognition Systems in real-time | M. Titos A. Bueno L. García I. Álvarez S. Mota J. Ibáñez M.C. Benítez | Universidad de Granada Universidad de Granada Universidad de Granada Universidad de Granada Universidad de Granada Universidad de Granada | Manuel Titos |
| 10.00 - 10.15 | 467 | Automatic Classification of Volcano-Seismic Events with Convolutional Neural Networks "This session is also sponsored by the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement No 798480" | Angel Bueno Rodriguez (1) Manuel Titos Luzon (1) Alejandro Diaz Moreno (2) Silvio De Angelis (2) Luciano Zuccarello (1) Luz Garcia (1) Carmen Benitez (1) Jesús M. Ibáñez (3) | (1) Department of Signal Theory, Telematic and Communications, Granada, Spain (2) Department of Earth, Ocean and Ecological Sciences, University of Liverpool, Liverpool, UK (3) Instituto Andaluz de Geofísica, Granada, Spain | Angel Bueno Rodriguez |
| 10.15 - 10.30 | 843 | Application of Machine Learning Techniques to distinguish and classify Low Frequency events during the 2015 Cotopaxi Volcano reawakening | Juan Anzieta (1) Mario Ruiz (2) Hugo Ortiz (1) | (1) Pontificia Universidad Católica del Ecuador, Quito - Ecuador (2) Instituto Geofísico de la Escuela Politécnica Nacional, Quito - Ecuador | Juan Anzieta |

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S01.38 - The contribution of experimental and numerical investigations of eruptive processes for improving hazard assessment at volcanoes

| Time | ID | Title | Author Name | Affiliations | Presenter Name |
|---------------|------|--|--|--|--------------------------------|
| 14.30 - 14.45 | 1079 | Clinopyroxene sector zoning revisited: magma mixing vs. kinetic effects | Teresa Ubide (1) Silvio Mollo (2,3) Jonathan D. Blundy (4) Jian-xin Zhao (1) Manuela Nazzari (3) Piergiorgio Scarlato (3) | (1) The University of Queensland (2) Sapienza University of Rome (3) INGV Rome (4) University of Bristol | Teresa Ubide |
| 14.45 - 15.00 | 902 | Constraining thermo-rheological properties of lava: from lab and field experiments to applications for modeling | Magdalena Oryaëlle Chevrel (1) Andrew Harris (1) Mike James (2) Harry Pinkerton (2) Scott Rowland (3) Lucia Gurioli (1) Laura Calabro (1) Jérémie Labroquère (4) | (1) Université Clermont Auvergne, CNRS, IRD, OPGC, Laboratoire Magmas et Volcans, F-63000 Clermont-Ferrand, France (2) Lancaster Environment Centre, Lancaster University, Lancaster LA1 4YQ, United Kingdom (3) Department of Geology and Geophysics, University of Hawai'i at Manoa, Honolulu, HI, USA (4) Private Work. Formally Working at THALES SERVICES SAS, 290 Allée du Lac, 31670 Labège, France | Magdalena Chevrel (Invited) |
| 15.00 - 15.15 | 687 | Pores vs. bubbles: a rheological study | Stefania Sicola (1) Alessandro Vona (1) Claudia Romano (1) Amy G. Ryan (2) James K. Russell (2) | (1) Sezione di Scienze Geologiche, Università "Roma Tre", Largo S. Leonardo Murialdo 1, 00146, Roma, Italy (2) Earth, Ocean and Atmospheric Sciences, University of British Columbia, Vancouver, Canada | Stefania Sicola |
| 15.15 - 15.30 | 295 | The integration of fieldwork, experiments and modelling towards the next generation of volcanic hazard quantification tools | Fabio Dioguardi (1) Pierfrancesco Dellino (2) Daniela Mele (2) Domenico Maria Doronzo (3) | (1) British Geological Survey, The Lyell Centre, Edinburgh, United Kingdom (2) Università degli Studi di Bari "Aldo Moro", Dipartimento di Scienze della Terra e Geoambientali, Bari, Italy (3) Institut de Ciències de la Terra Jaume Almera, Barcelona, Spain | Fabio Dioguardi (Invited) |
| 15.30 - 15.45 | 1036 | Shock-tube investigation on jet development and pyroclast acceleration during transient explosive eruptions. | Jacopo Taddeucci (1) Valentino Salvatore (2) Valeria Cigala (3) Damien Gaudin (3) Juan José Peña-Fernandez (4) Alejandra Arciniega-Ceballos (5) Ulrich Kueppers (3) Danilo M. Palladino (2) Joern Sesterhenn (4) | (1) Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy (2) "Sapienza" Università di Roma, Rome, Italy (3) Ludwig-Maximilians-Universität München (LMU), Munich, Germany (4) Technical University, Berlin, Germany (5) Universidad Autónoma de Mexico, Mexico City, Mexico | Jacopo Taddeucci |
| 15.45 - 16.00 | 143 | Thermal regime of column collapses and controls on initial temperature of pyroclastic density currents | Matteo Trolese (1) Matteo Cerminara (2) Tomaso Esposti Ongaro (2) Guido Giordano (1) | (1) Dipartimento di Scienze, Sezione di Geologia, Università degli Studi Roma Tre, L.go S. Leonardo Murialdo 1, 00146 Roma, Italy (2) Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Pisa, Via della Faggiola 32, 56126 Pisa, Italy | Matteo Trolese |
| 16.00 - 16.15 | 886 | Rates of volcanic ash production in pyroclastic density currents | Raffaello Cioni (1) Caludia d'Oriano (2) Filippo Mundula (3) Antonella Bertagnini (2) | (1) Dipartimento Scienze Terra, Università di Firenze, Italy (2) Istituto Nazionale di Geofisica e Vulcanologia, sez. Pisa, Italy (3) Dip.to Scienze Chimiche e Geologiche, Università di Cagliari, Italy | Raffaello Cioni |
| 16.15 - 16.30 | 480 | Death by a thousand perils - spontaneous oscillations in pyroclastic surges control their hazard impact and sedimentation dynamics | Ermanno Brosch (1) Gert Lube (1) Matteo Cerminara (2) Eric Breard (3) Tomaso Esposti Ongaro (2) | (1) Volcanic Risk Solutions, Massey University, Palmerston North, New Zealand (2) Istituto Nazionale di Geofisica e Vulcanologia, Section of Pisa, Pisa, Italy (3) Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA, USA | Ermanno Brosch |

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S01.22 - Mapping volcanoes for hazard assessment, resource-management, and building cultural value of the territory

| Time | ID | Title | Author Name | Affiliations | Presenter Name |
|---------------|------|---|---|---|-----------------------------|
| 17.00 - 17.15 | 1179 | Mapping of long dormant volcanoes for hazard and environmental management, risk mitigation, landcare, geo-cultural heritage, and sustainable development: the Colli Albani case study | Guido Giordano (1) | (1) Università Roma Tre | Guido Giordano (Invited) |
| 17.15 - 17.30 | 698 | Contribution of Geological Survey of Italy to Cartography of Volcanic Areas | Letizia Vita (1) | (1) ISPRA - Geological Survey of Italy Department | Letizia Vita |
| 17.30 - 17.45 | 141 | The areal, thickness and densities distributions of Campanian Ignimbrite, Campi Flegrei, Italy | Aurora Silleni (1) Guido Giordano (1) Roberto Isaia (2) Michael Ort (3) | (1) Dipartimento di Scienze Geologiche, Università di Roma Tre, Largo S. Leonardo Murialdo 1, 00154, Rome, Italy (2) Istituto Nazionale di Geofisica e Vulcanologia, Osservatorio Vesuviano, Via Diocleziano 328, 80124 Naples, Italy (3) Center for Environmental Sciences and Education and Department of Geology, P.O. Box 4099, Northern Arizona University, Flagstaff, AZ 86011-4099, USA | Aurora Silleni |
| 17.45 - 18.00 | 551 | Mapping primary lahars at Cotopaxi volcano with NIR and visible imagery obtained with a UAV: preliminary results | S. Daniel Andrade (1) Sebastián Cruz (1) Emilia Saltos (1) Jenni Barclay (2) Gareth Lee (2) Xavier Zapata (3) Francisco Vásconez (1) Anais Vásconez (4) | (1) Instituto Geofísico, Escuela Politécnica Nacional (2) School of Environmental Sciences, University of East Anglia (3) Facultad de Ingeniería Civil y Ambiental, Escuela Politécnica Nacional (4) Albert Ludwigs Universität Freiburg | S. Daniel Andrade |
| 18.00 - 18.15 | 449 | Under the radar: New activity beneath the "Roof of Patagonia", Domuyo volcano, Argentina | Paul Lundgren (1) Tárilo Girona (1) Sergey Samsonov (2) Vincent Realmuto (1) Cunren Liang (3) | (1) Jet Propulsion Laboratory, California Institute of Technology (2) Canada Centre for Mapping and Earth Observation, Natural Resources Canada (3) Division of Geology and Planetary Science, California Institute of Technology | Paul Lundgren |
| 18.15 - 18.30 | 712 | Geological map of the volcanically active western Zacapu lacustrine basin area (Michoacán, México) and its usefulness for archaeology and hazard assessment | Claus Siebe (1) Nanci Reyes-Guzmán (1) Ahmed Nasser Mahgoub (2) Sergio Salinas (3) Harald Boehnel (2) Marie-Noelle Guilbaud (1) Oryaelle Chevrel (4) Paul Layer (5) Gregory Pereira (6) Véronique Darras (6) Antoine Dorison (6) Osiris Quezada (7) | (1) Departamento de Vulcanología, Instituto de Geofísica, Universidad Nacional Autónoma de México, CP 04510 Coyoacán, D.F., México (2) Centro de Geociencias, UNAM, Juriquilla, Querétaro, México (3) División de Ingeniería en Ciencias de la Tierra, Facultad de Ingeniería, Universidad Nacional Autónoma de México, CP 04510 Coyoacán, D.F., México (4) Université Clermont Auvergne, CNRS, IRDM OPGC, Laboratoire Magmas et Volcans, 63000 Clermont-Ferrand, France (5) Department of Geology and Geophysics, University of Alaska, Fairbanks, AK, USA (6) Archéologie des Amériques, UMR 8096 – CNRS and Université Paris 1, France (7) Posgrado en Estudios Mesoamericanos, UNAM, Coyoacán, 04510 México, D.F., México | Claus Siebe (Invited) |
| 18.30 - 18.45 | 764 | Our landmark: Introducing the Pirongia Volcano as a significant geoheritage site of New Zealand Pleistocene volcanism | Oliver McLeod (1) Adrian Pittari (1) Marco Brenna (2) Roger Briggs (1) David Lowe (1) | (1) University of Waikato, New Zealand (2) Otago University, New Zealand | Oliver McLeod |
| 18.45 - 19.00 | 880 | Volcano Geology Commission: geological maps and their applications. A short overview | Gianluca Groppelli (1) Joan Martí Molist (2) | (1) CNR - Istituto per la Dinamica dei Processi Ambientali, sezione di Milano, Italy (2) Institute of Earth Sciences Jaume Almera, CSIC, Barcelona, Spain | Gianluca Groppelli |