

# IAVCEI *News* 2018 No: 2

INTERNATIONAL ASSOCIATION OF VOLCANOLOGY AND CHEMISTRY OF THE EARTH'S INTERIOR

## FROM THE PRESIDENT

Dear Colleagues,



*Don Dingwell*  
President of the  
IAVCEI

As the Cities on Volcanoes meeting approaches the excitement is rising for what will undoubtedly be an outstanding display of the progress of modern volcano science and its impact for society. The meeting will also be a commemoration of the spark that ignited this meeting series, in Naples, so many years ago. If you have not yet registered for the meeting please consider doing so. It will be well worth doing so.

I have the pleasure and duty to announce that as of this week a Memorandum of Understanding has been signed between IAVCEI and the Latin American Association of Volcanology (ALVO). The memorandum will be posted on the IAVCEI web site in these days. It is the result of detailed discussions between both parties and careful debate within the IAVCEI Executive Committee. We believe that it will serve the mutual benefit of both organisations in this critical part of the world for the future of volcanology.

The Montreal IUGG Congress program is taking its final form in these weeks. IAVCEI is very well-represented due to the tireless efforts of our secretary-general, executive committee, our commission leaders and further volunteers. The Montreal IUGG meeting will also be the occasion for some IUGG Centennial celebrations which will deal with the past of the IUGG and its

constituent organisations and perspectives for the future of our fields. That will all make the Montreal meeting, in July 2019, a very special one, not to be repeated in any of our lifetimes. So we very much hope to see you there.

Finally, I want to take the opportunity to encourage any and all of the membership to begin to think about how the future leadership of IAVCEI should look. I will be grateful for all input that comes my way in the coming months. We anticipate the election for the IAVCEI offices in the Spring of 2019 and the induction of them at the Montreal meeting. One more reason to attend!

*Don Dingwell*  
Munich 14 July 2018

## CITIES ON VOLCANOES 10 NAPLES, ITALY

The **Cities and Volcanoes Commission of IAVCEI** aims to provide a linkage between the volcanology community and emergency managers, to serve as a conduit for exchange of ideas and experience between “volcano cities”, and to promote multi-disciplinary applied research, involving the collaboration of physical and social scientists and city officials.

The Commission selected Napoli as the venue for the Cities on Volcanoes Conference in 2018. The Istituto Nazionale di Geofisica e Vulcanologia (INGV), in collaboration with the Associazione Italiana di Vulcanologia (AIV), Dipartimento della Protezione Civile (DPC), Parco Nazionale del Vesuvio, Regione Campania, Comune di Napoli and the Università di Napoli Federico II, Dipartimento di Scienze della Terra, dell’Ambiente e delle Risorse (DISTAR), invite to participate at the 10th edition of

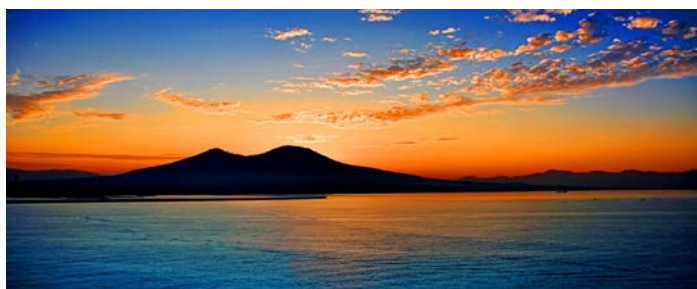
Cities on Volcanoes (CoV10) to be held on 2 – 7 September in the city of Napoli, Italy.

The title of COV 10 is “**Millennia of Stratification between Human Life and Volcanoes: strategies for coexistence**” and intends to focus the attention of the Conference on the inherent resilience of human societies to volcanic risk, as millennia of coexistence with volcanoes prove that volcanic environments are fundamentally perceived as resources. At the same time, building and strengthening this resilience in modern and complex societies exposed to volcanic risk, especially on volcanoes with long periods of dormancy where risk is poorly perceived, is a great challenge.

Please regularly check the website of the conference to see news relevant to the conference via:

<https://www.citiesonvolcanoes10.com/>

We hope to see you in Naples in September 2018!



## **REPORT ON 2ND MEETING OF YOUNG LATIN AMERICAN VOLCANOLOGISTS (JVLA), AREQUIPA, PERU.**

The 1st Meeting of Young Latin American Volcanologists (Jóvenes Volcanólogos Latinoamericanos - JVLA) that took place within the framework of the Cities on Volcanoes conference in 2016, Chile, was followed by extensive work and discussion about our role in the volcanology of the region. As part of that work, we have presented in different regional meetings our goals and mission, with the conviction that regional networks, like JVLA, are important tools to contribute to the development of

volcanology in Latin American countries.



*Opening ceremony: Young volcanologist Ivonne Lazarte (OVI) introducing the local director of INDECI. Photo by Natalia Paniagua.*

Taking advantage of the International Forum about Volcanoes and their Impacts organized in Arequipa by INGEMMET, we organized the 2nd Meeting of Young Latin American Volcanologists. The meeting took place on April 25 and was attended by more than 30 young volcanologists from Argentina, Chile, Colombia, Costa Rica, Ecuador and, of course, Perú.



*Part of the young volcanologists that attended to the meeting at the INDECI headquarters. Photo by Natalia Paniagua.*

The title of the meeting was “Challenges of a young volcanologist: communication, prevention and innovation”, and in this opportunity it was divided in three parts. The first one was held at the headquarters of the Peruvian Civil Defense (INDECI) in Arequipa. As part of the opening ceremony, the local director of INDECI gave some words about the role of this institution in the communication of hazards and development of risk reduction strategies. Also Ivonne Lazarte, from the Observatorio Volcánico INGEMMET (OVI) and member of JVLA, offered a short welcome message to the participants and invited them to a guided tour through a Risk Management Awareness Center hosted at the INDECI’s building. Once the tour was completed, Diana Rodriguez (University of Nariño, Colombia) gave a talk about risk management, opening in this way the discussion about how we can communicate, prevent and innovate in order to reduce volcanic risk. After the talk, the participants were divided in small groups to discuss different ideas to face this problem. Finally, all



the groups shared the result of the discussions in a round table and elaborated a document. Among the main conclusions, it was pointed out the need to focus on the social dimension of vulnerability (e.g., cultural settings, language, access to technology, perception of risk) in order to develop effective communication methodologies to increase people's awareness and confidence in the institutions responsible for risk reduction.



Visit to the Risk Management Awareness Center at the INDECI headquarters, in Arequipa, Perú. Photo taken by Natalia Paniagua.

In the second part, the participants visited the large ignimbrite deposits locally known as “El Sillar” and some panoramic points to see Misti volcano and the city of Arequipa on its foot. The excursion was a great opportunity to discuss about how hazards, together with exposed populations and associated vulnerability, can configure different volcanic risk scenarios.

The last part of the meeting included a visit to the OVI headquarters, in which young volcanologists working there showed us the different instrumentation and techniques they are using to monitor the active volcanoes located in the south of Peru. The last hour of the meeting was dedicated to discuss how JVLA could develop new strategies to increase the participation of young volcanologist from all around the region. In this context, we brainstormed about new activities that could be carried out in the future and discussed about how they can impact positively on our discipline.

Last, but not least, during this meeting, a new and exciting scholarship opportunity, proposed by JVLA - ALVO and sponsored by IAVCEI, was announced for young volcanologists keen on having an experience in a volcano observatory. A pilot test of this internship program will be carried out at the Observatorio Volcánico de los Andes del Sur (OVDAS), Chile, during the upcoming months of August and September.



Nélida Manrique (OVI-JVLA) explaining the hazards map of Misti volcano. Photo by Natalia Paniagua.

We would like to thank the staff of OVI, INDECI and INGEMMET as well as all the participants that attended to the meeting and have contributed to this project.

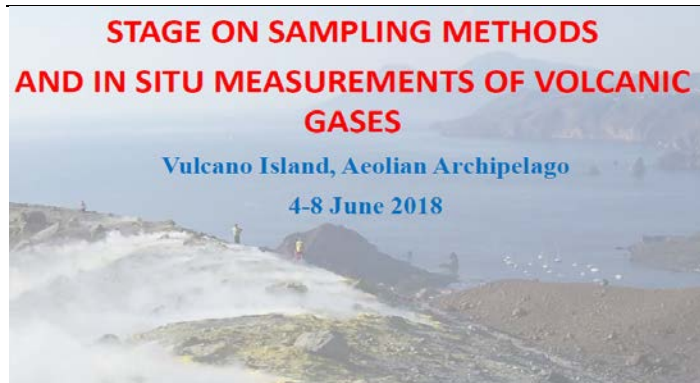
#### **Organizers of the meeting**

(Gino González Ilama, Ivonne Lazarte Zerpa, Pablo Forte, Nélida Manrique, Diana Rodríguez, Monserrat Cascante, Mariana Patricia Jácome Paz, Rayen Gho and Emilce Bustos)

**JVLA E-mail:** [volcajoventes@gmail.com](mailto:volcajoventes@gmail.com)

**Facebook:** <https://www.facebook.com/volcajoventes/>

## **REPORT ON SAMPLING METHODS AND IN SITU MEASUREMENTS OF VOLCANIC GASES**



This Stage, mainly addressed to master and PhD students without any preclusion for young researchers, offered to the participants the opportunity to learn sampling methods of volcanic fluids discharged by fumaroles and different types of emitting sources (e.g. bubbling pools, diffuse degassing from the soil). Different types of water and gas sampling equipments were available, as well as instruments able to measure in situ various geochemical parameters for the evaluation of air contamination related to the volcanogenic emissions. Experiences in the field were carried out at (i) the summit crater, (ii) Vulcano village and (iii) the Levante beach.



## Workshop Program

### 4th June:

Arrival at Vulcano Island. Assignment of the apartments.

4 p.m.: A preliminary meeting at the Carapezza INGV center was carried out to explain to the participants the organization, logistics and strategy of the activities to be developed. The students were subdivided into 5 groups to carry out simultaneously 5 different experiences: 1) sampling of the summit fumaroles (Resp. Dr. Capecchiacci); 2) sampling of gases emitted at Levante Beach (Resp. Prof. Vaselli); 3) air quality measurements (Resp. Dr.ssa Vernturi); 4) water sampling from thermal and cold wells (Resp. Prof. Apollaro); 5) measurements of diffuse fluxes from the soil (Resp. Prof. Cardellini).

6 p.m.: Excursion to Vulcanello (Valle dei Mostri).

### 5th June:

9 a.m. – 6 p.m.: First series of experiences. Groups (1) and (5) carried out their work at the summit crater, whereas the others remained at Vulcano village and surroundings. After lunch, each group changed its experience.

### 6th June:

9 a.m. – 6 p.m.: The simultaneous experiences of the 5 groups continued, following the established program.

### 7th June:

9 a.m. – 6 p.m.: The simultaneous experiences of the 5 groups continued, following the established program. At the Carapezza center, the Certificates of Attendance (official sponsor the Italian Association of Volcanology, AIV) were delivered.

### 8th June:

9 - 11 a.m.: Final meeting: comments and evaluation of the experiences carried out.

11 a.m. – 6 p.m.: Departures.

### Equipment and instrumentation

Devices for the direct sampling of gases from fumaroles, bubbling pools and well waters. Instrument for the measurement of gas fluxes from fumaroles and the soil, remote sensing apparatus (e.g. miniDOAS); MULTIGAS; alkaline traps; solid traps; instruments for the measurement of contaminants in air (H<sub>2</sub>S-SO<sub>2</sub>, CO<sub>2</sub>-CH<sub>4</sub>, Rn, Hg<sup>0</sup>).

## List of the professors

|    | Docenti                   | provenienza  |
|----|---------------------------|--------------|
| 1  | Vetuschi Zuccolini Marino | UNIGE        |
| 2  | Belmonte Donato           | UNIGE        |
| 3  | Tamburello Giancarlo      | INGV-Bologna |
| 4  | Calabrese Sergio          | UNIPA        |
| 5  | Pecoraino Giovannella     | INGV-Palermo |
| 6  | Inguaggiato Salvatore     | INGV-Palermo |
| 7  | Vaselli Orlando           | UNIFI        |
| 8  | Cardellini Carlo          | UNIPG        |
| 9  | Apollaro Carmine          | UNICAL       |
| 10 | Capecchiacci Francesco    | UNIFI        |
| 11 | Venturi Stefania          | UNIFI        |
| 12 | Franco Tassi              | UNIFI        |
| 13 | Daniele Cinti             | INGV-Roma    |
| 14 | Vita Fabio                | INGV-Palermo |
| 15 | Diliberto Serena          | INGV-Palermo |
| 16 | Christopher Thomas        | MVO          |

## List of the students

| Studenti | provenienza                             | Studenti    | provenienza |                      |        |
|----------|---|-------------|-------------|----------------------|--------|
| 1        | Belzer Luca                             | UNIGE       | 42          | Boschi Gabriele      | UNIFI  |
| 2        | Cervetto Daniele                        | UNIGE       | 43          | Fradeani Demetra     | UNIFI  |
| 3        | Del Seno Nicola                         | UNIGE       | 44          | Meloni Federica      | UNIFI  |
| 4        | Giordan Valeria                         | UNIGE       | 45          | Sanginesi Francesco  | UNIFI  |
| 5        | Lelli Luigi                             | UNIGE       | 46          | Dani Giuditta        | UNIFI  |
| 6        | Rivara Mattia                           | UNIGE       | 47          | De Pascale Pierluigi | UNIFI  |
| 7        | Stevanato Irene                         | UNIGE       | 48          | santi Riccardo       | UNIFI  |
| 8        | Ghiorzo Samuel                          | UNIGE       | 49          | Monnanni Alessio     | UNIFI  |
| 9        | Nitini Luca                             | UNIGE       | 50          | Chillieri Emanuele   | UNIFI  |
| 10       | Di Raimondo Alex                        | UNIGE       | 51          | Millacci Giulia      | UNIFI  |
| 11       | Leoncini Matteo                         | UNIGE       | 52          | Pierozzi Andrea      | UNIFI  |
| 12       | Silvia Messina                          | UNIBAS      | 53          | Nerozzi Alice        | UNIFI  |
| 13       | Pace Letizia                            | UNIBAS      | 54          | Maccelli Chiara      | UNIFI  |
| 14       | Lucente Salvatore                       | UNIBAS      | 55          | Ciarpaglini Alessio  | UNIFI  |
| 15       | Palese Mariana                          | UNIBAS      | 56          | Perissi Carlotta     | UNIFI  |
| 16       | Donatucci Alessia                       | UNIROMA3    | 57          | Gambacciani Giada    | UNIFI  |
| 17       | Salari Giulia                           | UNIROMA1    | 58          | Maoli Giulia         | UNIFI  |
| 18       | Presa Jimena                            | Rio Negro   | 59          | Fantini Leonardo     | UNIFI  |
| 19       | Inostroza Manuel                        | Antofagasta | 60          | Savia Lorenzo        | UNIFI  |
| 22       | Inguaggiato Claudio                     | CICESE      | 61          | Siciliano Matteo     | UNIFI  |
| 23       | Sanchez Avila Juan Ignacio              | CICESE      | 62          | Batistoni Nicolò     | UNIFI  |
| 24       | Igniquez Enrique                        | CICESE      | 63          | Nathalie Hasselle    | UNIPA  |
| 25       | Felipe Martinez Blanca Xochil           | UNAM        | 64          | Fuoco Ilaria         | UNICAL |
| 26       | Sanchez Cordova Maria del Mar           | UNAM        | 65          | Minniti Marta        | UNICAL |
| 27       | Rodriguez Salazar Maria Teresa de Jesus | UNAM        | 66          | Pappaterra Sabrina   | UNICAL |
| 28       | Landa Arreguin Jorge Federico           | UNAM        | 67          | Zumpano Patrizia     | UNICAL |
| 29       | Amato Gabriele                          | UNIPG       | 68          | D'Elia Flavia        | UNICAL |
| 30       | Mazzeo Andrea                           | UNIPG       | 69          | Caruso Andrea        | UNIPA  |
| 32       | Palmucci Lorenzo                        | UNIPG       | 70          | Amato Giuseppa       | UNIPA  |
| 33       | Rosiello Angelo                         | UNIPG       | 71          | Ioppolo Anselmo      | UNIPA  |
| 34       | Beddini Giulio                          | UNIPG       | 72          | Raimondi Daniele     | UNIPA  |
| 35       | Rossi Stefano                           | UNIPG       |             |                      |        |
| 36       | Codognotto Laura                        | UNIPA       |             |                      |        |
| 37       | Brugnone Filippo                        | UNIPA       |             |                      |        |
| 38       | Romeo Noemi                             | UNIPA       |             |                      |        |
| 39       | Li Vigni Lorenza                        | UNIPA       |             |                      |        |
| 40       | Rubino Cosimo                           | UNIPA       |             |                      |        |
| 41       | Vitrano Andrea                          | UNIPA       |             |                      |        |

The workshop was supported by the following Institutes:





## CONFERENCE REPORT

### 7th International Maar Conference

#### Olot, Catalonia, Spain

The 7th International Maar Conference was held between 21 to 25 May, 2018 in Olot, Catalonia. The maar conference series started in year 2000 in Daun, Germany. Since then the maar conference has been held regularly in various places (Hungary, Argentina, New Zealand, Mexico, China) and this year in Europe, in Catalonia.

Since the first International Maar Conference, these meetings have become one of the most successful discussion forums in volcanology, mainly because they provide a unique opportunity to bring together researchers from many different volcanological fields (physical volcanologists, sedimentologists, modellers, geophysicists, petrologists, etc.) and environmental and post-volcanic subjects. The 7IMC was supported by the IAVCEI and IAS to represent the importance of maar systems for both the volcanologist and sedimentologist community.

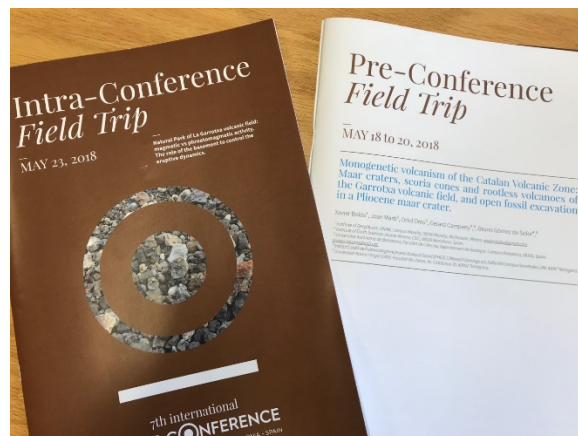


*From the left to the right: Dr. Xavier Bolós, Chairman of the 7IMC, Dr. Roberto Sulpizio, GS of IAVCEI, and Mr. Coma as local authority of Olot opened the conference in Olot.*

The city of Olot, known as the city of volcanoes, is located at the foot of the Pyrenees Range, close to Barcelona. This volcanic region provides a unique location for hosting this multidisciplinary volcanological forum because it offers all logistic facilities for the participants. In Olot and its surroundings, volcanoes are very important so they are present in many aspects of the society, as its cultural heritage, local history, architecture, or even in the excellent cuisine.

The 7IMC was hosted in the middle of a volcanic region called La Garrotxa volcanic field that contain the youngest and best-preserved volcanic edifices in the whole Iberian Peninsula. Over 50 volcanic cones are recognizable and can be grouped into two discrete areas, a northern sector corresponding to the upper basin of the river Fluvià and a southern sector located in the middle reaches of the basin of the river Ter (Bolós et al., 2014a). The main concentration of volcanic cones and edifices lies in the northern sector, which corresponds to La Garrotxa Volcanic Zone Natural Park that was visited during the Intra-conference field trip, while the southern sector holds far fewer but larger cones

visited during the Pre-conference field trip. Volcanism in La Garrotxa Volcanic Field is characterised by the presence of small cinder cones constructed during short-lived monogenetic eruptions associated with widely dispersed fractures of short lateral extent (Martí et al., 2011; Bolós et al., 2015). The total volume of extruded magma in each eruption was small (0.01–0.2 km<sup>3</sup> DRE), suggesting that the amount of magma available to feed each eruption was very limited (Bolós et al., 2014a). Strombolian and phreatomagmatic episodes alternated in most of these eruptions and gave rise to complex stratigraphic sequences composed of a wide range of pyroclastic deposits (Martí et al., 2011).



*Intra-conference and Pre-conference guidebooks available online on: <http://maar2018.com/field-trips/>*

The 7IMC Chairman, Dr. Xavier Bolós accompanied by Prof. Joan Martí from Barcelona provided a complete summary of recent volcanism in the territory of Catalonia and pointed out that the volcanoes of La Garrotxa region offer the opportunity to conduct different case studies demonstrating how complex monogenetic basaltic volcanism may ensue in even a relatively small area if erupting magmas interact with the groundwater. The large diversity of eruption sequences deduced from the volcanoes in La Garrotxa reveal that most of the variables that have controlled them depend on local geology rather than on the magma, which can be considered as constant.

The 7IMC followed the same structure that previous IMC events followed, offering four days of scientific sessions, which was combined with keynote speakers, oral presentations and posters. Three field trips were scheduled during this meeting, which allowed the participants to explore the diversity of volcanic landforms of this area focusing on monogenetic volcanism and its phreatomagmatism.

The conference offered three invited talks. Dr. Gabor Kereszturi gave new insights about eruptive and erosional features of monogenetic scoria cones. Dr. Giovanni Sosa a summary of the geochemical aspect on magma evolution in monogenetic volcanic fields. Dr. Dmitri Rouwet reviewed volcanic lakes in Europe.

#### **Scientific sessions were divided in five groups:**

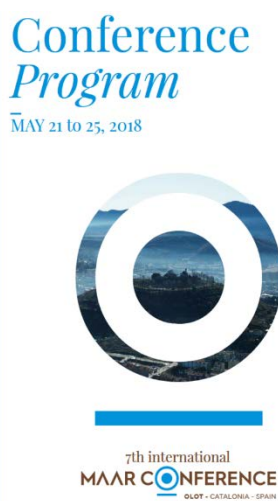
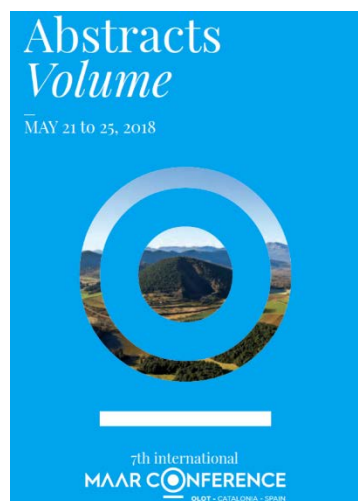
- Session 1. Monogenetic volcanoes: eruption dynamics, growth, structure and physical modeling
- Session 2. Geochemistry and petrology of monogenetic volcanism related magmas

Session 3. Lakes in maar volcanoes: the sedimentary record of paleontology, climate change and hydrochemistry  
 Session 4. Volcanic hazard and risk assessment in monogenetic volcanic fields  
 Session 5. Natural resources and geotourism development in volcanic areas



The participants of the Pre-conference field trip visiting the open fossil excavation of the Camp dels Ninots Pliocene maar crater.

Each session started with keynote lectures such as a summary of each subject. The keynotes of the session 1 were: Dra. Alison Graettinger, Dr. Michael Ort, and Dr. Károly Németh. The keynotes of the session 2 were: Dr. Ian Smith and Dr. Szabolcs Harangi. For the session 3 was Dr. Oriol Oms. For the session 4 and 5 were: Dr. Joan Martí and Dr. Pierre-Simon Ross, respectively.



Abstracts volume of the 7IMC available on:  
<http://maar2018.com/wp-content/uploads/2018/06/Abstracts-Volume-A4.pdf> and Conference program available on:  
<http://maar2018.com/wp-content/uploads/2018/06/Program.pdf>

The conference had a total of about 110 participants from 27 countries of the 5 continents.



Catalan human tower during the cultural dinner to the left, and gala dinner of the 7IMC.

The 2018 Jim Lurh Awards were given to Dr. Károly Németh, Massey University, New Zealand and Dr. Joan Martí, Spanish Research Council (ICTJA - CSIC). The Award was given during the relevant International Maar Conference and based on Nominations and Associated Supporting Letters after the decision of the Scientific Committee.



Winners of the Jim Lurh Award 2018 during the gala dinner of the 7IMC.

The conference organization was excellent thanks to the logistical support of Fundació d'Estudis Superiors d'Olot and its team composed by Jordi Calabuig, Marta Fontaniol, Marta Figueres, Joel Masegur. I particularly, want to thank Dr. Joan Martí, Dr. Oriol Oms, Dr. José Luis Macias, Giovanni Sosa-Ceballos and Dr. Dario Pedrazzi for their help during the conference.

During the 7IMC, the Organizing Committee, the IAVCEI Commission on Monogenetic Volcanism and the IAVCEI Commission on Volcanic Lakes decided the location of the 8IMC. The 8IMC will be held in Kamchatka, Russia in 2018.

**Xavier Bolós**  
 Chairman of the 7th International Maar Conference  
 UNAM, Morelia



**5<sup>TH</sup> INTERNATIONAL VOLCANO  
GEOLOGY WORKSHOP**  
**Palmerston North and Ruapehu/Tongariro Volcano**  
**New Zealand**  
**25 February – 3 March 2019**

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**AN IAVCEI Workshop for IAVCEI Members supported by**

IAVCEI Commission on Volcanic Geology



IAVCEI Commission on Monogenetic Volcanism



IAVCEI Commission on Volcanogenic Sediments

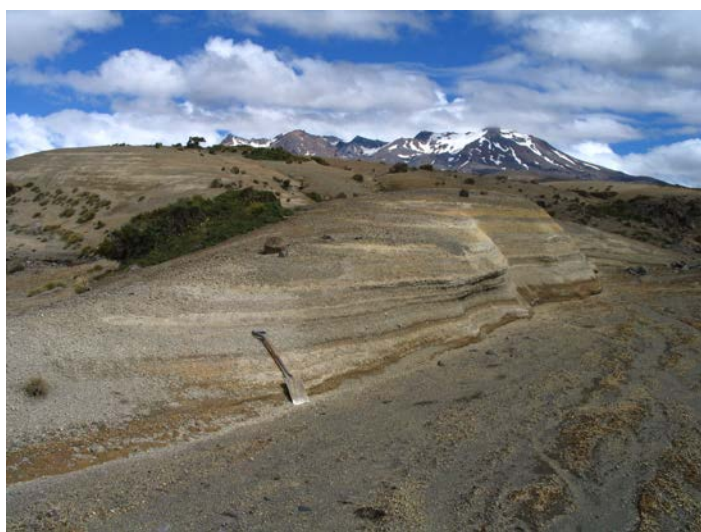


**Organizers**

A/Prof Karoly Nemeth [Massey University]  
Prof Shane Cronin [The University of Auckland]  
A/Prof Jon Procter [Massey University]

**Scientific Advisory Board**

Dr Nobuo Geshi [AIST, Japan Geological Survey, Tsukuba]  
Prof Alexandru Szakacs [Sapientia University, Cluj, Romania]  
Prof Joan Marti [Inst Earth Sci Jaume Almera, Barcelona, Spain]  
Prof Gianluca Gropelli [Univeristy of Milan, Italy]  
Dr Natalia Pardo [Universidad de Los Andes, Bogota, Colombia]  
Prof Roberto Sulpizio [University of Bari, Italy]  
Prof José Luis Macias [Instituto de Geofísica, UNAM, Morelia]



*Bullet Formation, N Ruapehu (Photo: K Nemeth)*

**Concept**

The IAVCEI 5th Volcanic Geology Workshop follows the

footsteps of the previous meetings on this emerging science in the volcanology community. The workshop series started in Madeira, 7-11 July 2014 as the 1VWG marked the event to establish the IAVCEI Commission on Volcanic Geology. This meeting provided the basis to call experts to “rejuvenate” traditional volcanic geology researches in the volcanic community and provide a platform to exchange ideas of people working on various volcanic terrains, commonly with geological mapping purposes. The workshop got a great attention, and the initial momentum culminated in the organisation of the Second Volcanic Geology Workshop in Prague, Czech Republic in conjunction of the IUGG General Assembly. The Third Volcanic Geology Workshop take the participants to an active volcanic region where various type of volcanoes actively forming the landscape through various eruptions styles feeding terrestrial and marine volcanoclastic sedimentary successions in the Etna and Aeolian Islands region in Italy. This workshop provided an excellent insight to modern volcanic settings in the world probably best studied regions. This workshop however outlined several issues associated with volcanic geology applications mostly in regard to geological mappings on volcanic terrains that need to be discussed. Particularly the problem to apply actual geological concepts to ancient volcanic terrains and utilizing their values for geological mappings in various scales concluded to be major knowledge gaps in volcanology. As a result of this discussion the Fourth Volcanic Geology Workshop took the participants to the Eastern Carpathian Miocene to Pleistocene arc-volcanic regions where geological mappings are hindered not only by the ancient nature of exposed and preserved volcanic formations but also their general poor exposure level under heavy vegetation cover. This workshop was an eye-opener to many that ancient and modern volcanic systems need to be understand and link better to be able to generate sensible geological maps to various scales. On the basis of this outcome the current Fifth Volcanic Geology Workshop provides field based experience to the participants to see the volcanic facies architecture of active but long-lived intermediate composite to silicic caldera volcanoes in an atypical arc setting along the Taupo Volcanic Zone in New Zealand. This workshop will take the participants to iconic locations from where basic concepts in volcanology emerged such as ignimbrite depositions, volcanoclastic sedimentary respond to major volcanic eruptions, ring plain concepts of stratovolcanoes, volcano collapses and their landscape modifying effects, small volume monogenetic volcanism associated with central volcanoes and application of tephrastratigraphy and chronology in development of mapping units, just few key areas New Zealand volcanic geology science is famous for. We hope that this workshop will provide an excellent opportunity to exchange experiences of people working on ancient terrains and those more associated with active volcanism. The workshop also intends to provide platform for experts to share their view in a relaxed way rarely meet from seemingly far sub-disciplines.



*Central Volcanic Plateau (Photo: K Nemeth)*

**Tentative Program**

Monday, February 25

Participants should arrive on this day.

4.00 PM Welcome “Hangi” [traditional New Zealand Māori method of cooking food using heated rocks buried in a pit oven]

and drink at the Wharerata at Massey University's Turitea Campus, Palmerston North

Participants need to find their own accommodation in Palmerston North

#### Tuesday, February 26

Campus Workshop hosted in the New Zealand Rugby and Sport Institute at Massey University, Turitea Campus, Palmerston North  
9.00 Welcome light breakfast and opening of the workshop  
10.00 Volcanic Geology of Ancient [pre-Pliocene] Terrains – Plenary Talk [30 minutes]

10.30 Volcanic Geology of Ancient [pre-Pliocene] Terrains – 5 minutes - 2 slides introduction to presentations [max 12 presentations]

11.30 Individual Presentations and discussions in own screens with coffee and light lunch

13.00 Volcanic Geology of Modern (post-Pliocene) and active settings – Plenary Talk [30 minutes]

13.30 Volcanic Geology of Modern (post-Pliocene) and active settings – 5 minutes - 2 slides introduction to presentations [max 12 presentations]

14.30 Individual Presentations and discussions in own screens with coffee and light snack

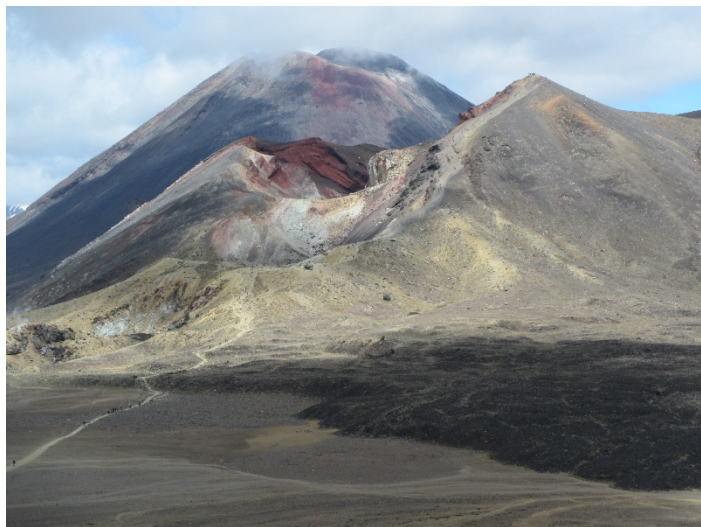
16.00 Volcanic Geology and Geological Mapping– Plenary Talk [30 minutes]

16.30 - Volcanic Geology and Geological Mapping - 5 minutes - 2 slides introduction to presentations [max 12 presentations]

17.30 - Individual Presentations and discussions in own screens with coffee and light snack

19.30 – Dinner at Wharerata

Participants need to find their own accommodation in Palmerston North



*Red Crater, Tongariro (Photo K Nemeth)*

#### Wednesday, February 27

Fieldtrip start at The Square 10.00 AM [meeting points will be specified in due course]

Southern Ring Plain of Ruapehu

Ohakune Craters

Tangiwai Disaster Site

Accommodation in Ohakune, The Hobbit Lodge

#### Thursday, February 28

Field excursion to the Ruapehu eastern ring plain sections

Departing from Breakfast place at Ohakune 9.30

Returning by 18.00

Packed Lunch

20,30 Dinner

Accommodation in Ohakune, The Hobbit Lodge

#### Friday, March 1

Field excursion to the Ruapehu – Tongariro western ring plain

Departing from Breakfast place at Ohakune 9.30

Returning by 18.00

Packed Lunch

20,30 Dinner

Accommodation in Ohakune, The Hobbit Lodge

#### Saturday, March 2

Field excursion to the Taupo Volcanic Zone silicic calderas and lava dome fields

Departing from Breakfast place at Ohakune 9.30

Returning by 18.00

Packed Lunch

20,30 Dinner

Accommodation in Ohakune, The Hobbit Lodge



*Motuoapa Peninsula, Lake Taupo (Photo: K Nemeth)*

#### Sunday, March 3

Fieldtrip to the northern side of the Taranaki Volcano.

Departing from Breakfast place at Ohakune 9.30

Arriving to New Plymouth by 18.00

Packed Lunch

20,30 Dinner

Accommodation in New Plymouth

#### Monday, March 4

Fieldtrip to the Taranaki southern ring plain

Departing from Breakfast place at New Plymouth 9.30

Arriving to Palmerston North by 18.00

Packed Lunch

Participants need to find their own accommodation in Palmerston North [see recommended list]

#### Tuesday, March 5

Departure of participants from Palmerston North – airport transfers to Palmerston north Airport will be arranged upon requests.

#### **Registration fee**

1400 New Zealand Dollars [approximately 800 Euro]



## Includes

Welcome Hangi and drink on the 25 February afternoon  
Coffee, snack and lunch on 26 February workshop day  
Dinner on the 26 February workshop day  
Fieldtrip starting from the morning 27 February and returning to Palmerston North on the 4 March evening, including transportation;  
accommodation in Ohakune and New Plymouth [on the basis of 2, 3 and 4 person shared apartments];  
breakfast on the 28 Feb, 1 March, 2 March, 3 March and 4 March;  
packed lunch on the 27 Feb, 28 Feb, 1 March, 2 March, 3 March and 4 March;  
dinner [a choice of 2 meals] on the 27 Feb, 28 Feb, 1 March, 2 March and 3 March  
Hotel transfer [limited and requested basis] on the 26 Feb Workshop Day  
Palmerston North Airport transfer on the 5 March  
Printed Conference Abstract Volume and Field Guide [electronic version of the volume will also be distributed to the participants]



*Mangatawai Tephra, north of Ruapehu (Photo: K Nemeth)*

**Please note, the registration to the 5VGW open ONLY for IAVCEI Members. The maximum number of overseas registrants will be accepted is 50 due to logistical issues.**

**Registration Deadline:** 1 November 2018

**Abstract Submission Deadline:** 1 December 2018

If you have any questions you can contact

**Karoly Nemeth** ([k.nemeth@massey.ac.nz](mailto:k.nemeth@massey.ac.nz))

**Shane Cronin** ([s.cronin@auckland.ac.nz](mailto:s.cronin@auckland.ac.nz))

Chairmen of the IAVCEI 5VGW

**Website:** <http://www.massey.ac.nz/IAVCEI2019>

**Website and Registration in Open NOW**

## IAVCEI-COMMISSION ON VOLCANIC LAKES CVL 10 Workshop, New Zealand 17-26 March 2019

On behalf of the International Association of Volcanology and Chemistry of the Earth's Interior, its Commission on Volcanic Lakes and GNS Science, we are pleased to invite you to the 10th Volcanic Lakes Workshop to be held in New Zealand in March 17-26, 2019.

The meeting aims to bring together volcano scientists from a wide range of sub-disciplines, including physical volcanology, hydrology, limnology, biochemistry, geochemistry and geophysics, all with a view toward establishing broad communication amongst the disciplines and development of holistic models of volcanic lake environments. The goals of the workshop are to provide ample opportunity for exchange of ideas around data collection and monitoring methodologies in volcanic lake environments, hazard recognition and mitigation, and copious discussion of conceptual models for wet volcanic systems.

As for previous workshops, CVL10 is designed around both formal scientific sessions and field visits to several of the well-studied magmatic-hydrothermal environments in New Zealand, including Mt. Ruapehu, Waimangu, Lake Rotomahana and Whakaari (White Island). Dependent on states of unrest, we will endeavour to provide sampling opportunities / data collection from these sites. Water column sampling will be possible from Lake Rotomahana, whereas lakeshore and/or spring sampling opportunities will be available from Ruapehu, White Island and selected thermal areas at Waimangu.

### Themes for the Conference

We anticipate that the formal sessions (up to 3 days of oral and poster sessions) will be thematic, and we invite ideas and/or proposals for up to 5 symposia. A theme of particular interest from the NZ perspective is "Eruption Hazards from Wet Volcanic Systems", and we are pleased to invite papers around this topic, with submissions ranging from monitoring to modelling, and everything in between. Please submit proposals for additional workshop symposia by May 31st, and these will be disseminated in the second circular which will be out in early August, 2018.

### FOR FURTHER INFORMATION

**Bruce Christenson:** [B.Christenson@gns.cri.nz](mailto:B.Christenson@gns.cri.nz)

<https://iavceicvl.files.wordpress.com/2018/06/cvl10-new-zealand-1st-circular.pdf>

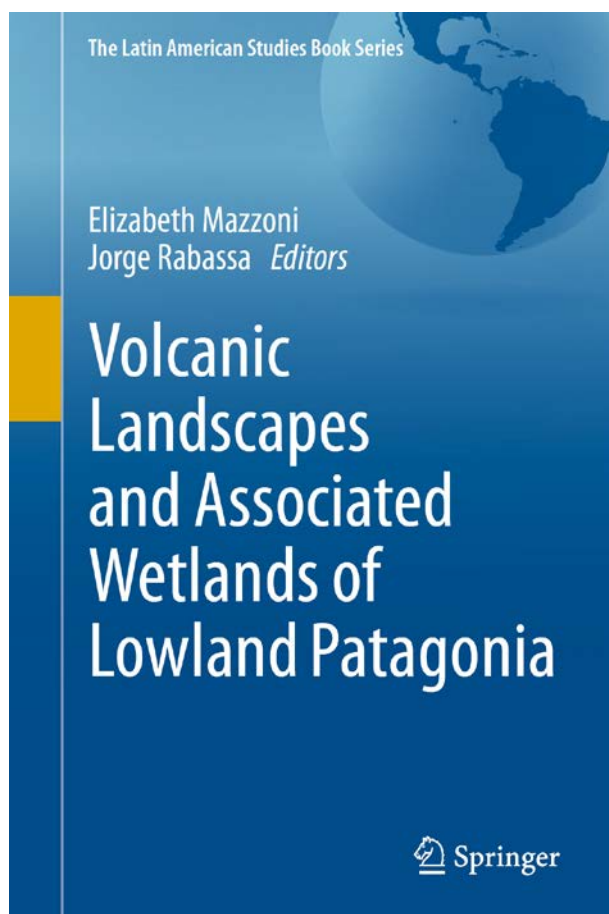
**Volcanic Landscapes and Associated Wetlands of Lowland Patagonia [2018]**

**Editors**

**Elizabeth Mazzoni & Jorge Rabassa**

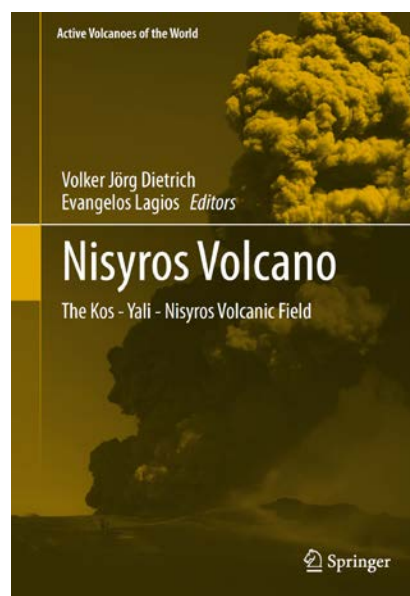
**Print ISBN 978-3-319-71920-7**

**Online ISBN 978-3-319-71921-4**



This book presents the most relevant basaltic plateau exposures in the provinces of Neuquén (northern Patagonia) and Santa Cruz (southern Patagonia), and analyzes their geomorphological and morphometric characteristics. The existence of wetland ecosystems near the volcanic plateaus is quantified, thus providing indexes that describe the quantitative relationships between these landscape features. These indexes also make it possible to estimate the development of these wetlands in non-surveyed areas, opening the door for studying remote, isolated areas by means of remote sensing images. In turn, the book proposes a numerical classification system for this type of landscape that summarizes the main geomorphological and hydrological characteristics.

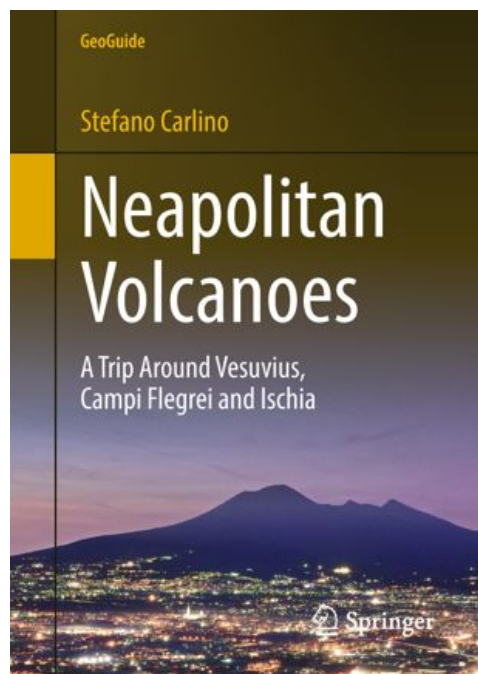
**Nisyros Volcano**  
**The Kos - Yali - Nisyros Volcanic Field**  
**Print ISBN 978-3-319-55458-7**  
**Online ISBN 978-3-319-55460-0**



This book presents the first compilation of scientific research on the island of Nisyros, involving various geoscientific disciplines. Presenting a wealth of illustrations and maps, including a geological map of the volcano, it also provides valuable insights into the geothermal potential of Greece. The island of Nisyros is a Quaternary volcano located at the easternmost end of the South Aegean Volcanic Arc. The island is nearly circular, with an average diameter of 8 km, and covers an area of approximately 42 km<sup>2</sup>. It lies above a base of Mesozoic limestone and a thin crust, with the mantle-crust transition located at a depth of approximately 27 km. The volcanic edifice of Nisyros comprises a succession of calc-alkaline lavas and pyroclastic rocks, as well as a summit caldera with an average diameter of 4 km. Nisyros marks the most recent volcano in the large prehistoric volcanic field between Kos-Yali-Strongyli-Pyrgousa-Pachia-Nisyros, where the largest eruption (“Kos Plateau Tuff”) in the history of the eastern Mediterranean devastated the Dodecanese islands 161,000 years ago. Although the last volcanic activity on Nisyros dates back at least 20,000 to 25,000 years, it encompasses an active hydrothermal system underneath the volcano with temperatures of roughly 100°C at the Lakki plain, the present-day caldera floor and 350°C at a depth of 1,550 m. A high level of seismic unrest, thermal waters and fumarolic gases bear testament to its continuous activity, which is due to a large volume of hot rocks and magma batches at greater depths, between 3,000 and 8,000 m. Violent hydrothermal eruptions accompanied by major earthquakes occurred in 1873 and 1888 and left behind large, “world-wide unique” explosion craters in the old caldera. Through diffuse soil degassing, the discharge of all hydrothermal craters in the Lakki plain releases 68 tons of hydrothermal-volcanic derived CO<sub>2</sub> and 42 MW of thermal energy per day. This unique volcanic and hydrothermal environment is visited daily by hundreds of tourists.



**Neapolitan Volcanoes**  
**A Trip Around Vesuvius, Campi Flegrei and Ischia [2019]**  
**Stefano Carlino**  
**Print ISBN 978-3-319-92876-0**  
**Online ISBN 978-3-319-92877-7**



This book serves as a guide to discovering the most interesting volcano sites in Italy. Accompanied by some extraordinary contemporary images of active Neapolitan volcanoes, it explains the main volcanic processes that have been shaping the landscape of the Campania region and influencing human settlements in this area since Greek and Roman times and that have prompted leading international scientists to visit and study this natural volcanology laboratory. While volcanology is the central topic, the book also addresses other aspects related to the area's volcanism and is divided into three sections:

- 1) Neapolitan volcanic activity and processes (with a general introduction to volcanology and its development around Naples together with descriptions of the landscape and the main sites worth visiting);
- 2) Volcanoes and their interactions with local human settlements since the Bronze Age, recent population growth and the transformation of the territory;
- 3) The risks posed by Neapolitan Volcanoes, their recent activity and the problem of forecasting any future eruption.

**Volcanic Ash [1st Edition]**  
**Hazard Observation**

**Editors: Shona Mackie Katharine Cashman Hugo Ricketts Alison Rust Matt Watson**  
**eBook ISBN: 9780081004241**  
**Paperback ISBN: 9780081004050**  
**Imprint: Elsevier**  
**Published Date: 27th May 2016**  
**Page Count: 300**



Volcanic Ash: Hazard Observation presents an introduction followed by four sections, each on a separate topic and each containing chapters from an internationally renowned pool of authors. The introduction provides a volcanological context for ash generation that sets the stage for the development and interpretation of techniques presented in subsequent sections. The book begins with an examination of the methods to characterize ash deposits on the ground, as ash deposits on the ground have generally experienced some atmospheric transport. This section will also cover basic information on ash morphology, density, and refractive index, all parameters required to understand and analyze assumptions made for both in situ measurements and remote sensing ash inversion techniques. Sections two, three, and four focus on methods for observing volcanic ash in the atmosphere using ground-based, airborne, and spaceborne instruments respectively. Throughout the book, the editors showcase not only the interdisciplinary nature of the volcanic ash problem, but also the challenges and rewards of interdisciplinary endeavors. Additionally, by bringing together a broad perspective on volcanic ash studies, the book not only ties together ground-, air-, academic, and applied approaches to the volcanic ash problem, but also engages with other scientific communities interested in particulate transport.

**Read the book via:**

<https://www.elsevier.com/books/volcanic-ash/mackie/978-0-08-100405-0#>

**Volcanic and Igneous Plumbing Systems  
[1st Edition]**

**Understanding Magma Transport, Storage, and Evolution  
in the Earth's Crust**

**Authors: Steffi Burchardt**

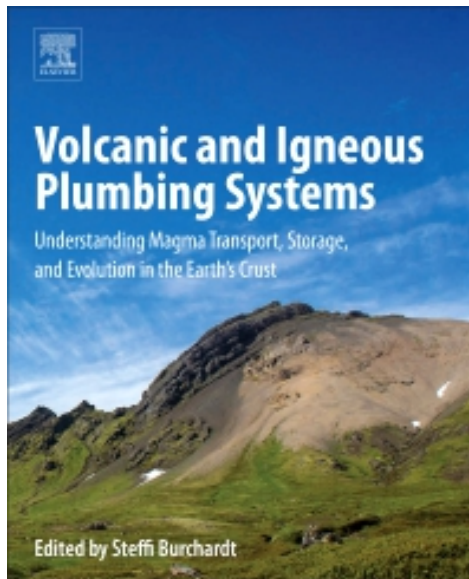
**eBook ISBN: 9780128097502**

**Paperback ISBN: 9780128097496**

**Imprint: Elsevier**

**Published Date: 12th May 2018**

**Page Count: 356**



Volcanic and Igneous Plumbing Systems: Understanding Magma Transport, Storage, and Evolution in the Earth's Crust synthesizes research from various geoscience disciplines to examine volcanic and igneous plumbing systems (VIPS) in-depth. VIPS comprise a network of magma transport and storage features in the Earth's crust. These features include dykes, sills and larger magma bodies that form the pathway and supply system of magma beneath active volcanoes. Combining basic principles with world-class research and informative illustrations, this unique reference presents a holistic view of each topic covered, including magma transport, magma chambers, tectonics and volcanism. Addressing a variety of approaches to these topics, this book offers researchers and academics in the Earth Science fields, such as geophysics, volcanology and igneous petrology the information they need to apply the information to their own disciplines.

**Read the book via:**

<https://www.elsevier.com/books/volcanic-and-igneous-plumbing-systems/burchardt/978-0-12-809749-6>

**Dynamic Mars [1st Edition]**

**Recent and Current Landscape Evolution of the Red Planet**

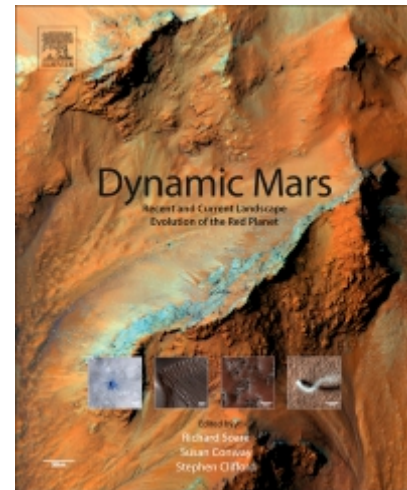
**Editors: Richard Soare Susan Conway Stephen Clifford**

**Paperback ISBN: 9780128130186**

**Imprint: Elsevier**

**Published Date: 31st July 2018**

**Page Count: 464**



Dynamic Mars: Recent Landscape Evolution of the Red Planet presents the latest developments in understanding the geological history of Mars. Presenting observational data and tightly-linked scientific hypotheses across a broad swath of landscapes, latitudes and geological contexts, as well as an examination of the impact of climate change mitigated by multiple geomorphological agents, the book covers a diverse array of themes and subjects. This highly illustrated book includes data from recent missions, and will be of interest to all levels of research in the geological history of Mars, as well as other terrestrial planets.

For years after the first detailed orbital and ground images of Mars were taken, it was thought that the red planet could have been wetter and warmer in its deep past than today. However, as the book demonstrates, the possible involvement of water in recent, if not contemporary, gully-like flows and slope streaks (i.e. recurring slope lineae), as well as the identification of a suite of geomorphological agents (i.e. glacial, periglacial, aeolian, meteorological, volcanic and meteoric) associated with surface and near-surface changes on a local to regional scale, suggest the history of the red planet may be much more dynamic than previously thought.

**Read the book via:**

<https://www.elsevier.com/books/dynamic-mars/soare/978-0-12-813018-6>



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## FUTURE EVENTS

### for IAVCEI member's interest

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#### 20th International Sedimentological Congress (ISC)

**Date:** August 13 to 17, 2018

**Where:** Québec City

**Link:** <http://www.isc2018.org/abstract-guidelines-paper-submission>

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#### Cities on Volcanoes 10

**Date:** 2-7 September 2018

**Location:** Naples, Italy

**Link:** <https://www.citiesonvolcanoes10.com/>

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#### XXI International Congress of the Carpathian-Balkan Geological Association

**Date:** 10 - 13 September, 2018,

**Location:** Salzburg, Austria

**Link:** <http://cbga.sbg.ac.at/>

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#### The 7th Workshop on Collapse Caldera

**Date:** 21st - 27th September, 2018,

**Location:** at Toba Caldera, Sumatra, Indonesia

Supported by the IAVCEI Commission on Collapse Calderas

**Link:** <https://staff.aist.go.jp/geshi-nob/CCC/webs/main.htm>

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#### IAVCEI 5th Volcanic Geology Workshop

**Location:** Palmerston North and Ohakune, New Zealand

**Date:** 25 February – 4 March 2019

**Info:** <http://www.massey.ac.nz/IAVCEI2019>

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#### IAVCEI-COMMISSION ON VOLCANIC LAKES

CVL 10 Workshop, New Zealand

**Date:** 17-26 March 2019

**Contact:** Bruce Christenson: [B.Christenson@gns.cri.nz](mailto:B.Christenson@gns.cri.nz)

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#### 27th IUGG General Assembly

**8 – 18 July 2019**

MONTREAL, CANADA

Info: <http://iugg2019montreal.com/>



#### Soufrière Hills Volcano 25 Years On Conference

**Location:** Montserrat, West Indies

**Date:** 20-24 July, 2020

**Contact:** Victoria Miller

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Next Issue of the **IAVCEI News** will be published on **15<sup>th</sup> October 2018**. Articles, notes, news or any items relevant to the IAVCEI community must be submitted by **5<sup>th</sup> October 2018** to be published in the next Issue.

\*\*\*\*\*

*Editor-in-Chief*

*Károly Németh*

*Massey University, Palmerston North*

*Any correspondence, news items could be sent to:*

*[k.nemeth@massey.ac.nz](mailto:k.nemeth@massey.ac.nz)*

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**vHub Coordinator:** *Greg Valentine* (SUNY, Buffalo)

Any correspondence, news items could be sent to

[gav4@buffalo.edu](mailto:gav4@buffalo.edu)

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**IAVCEI Web-site Coordinator** (University of Bari)

*Eugenio Nicotra* – email: [eugenio.nicotra@unict.it](mailto:eugenio.nicotra@unict.it)

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**If you have any idea or plan to have IAVCEI involved in the IUGG Outreach Program, please contact Karoly Németh via [k.nemeth@massey.ac.nz](mailto:k.nemeth@massey.ac.nz)**

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