



Geological Survey of Japan, AIST
Central 7, Higashi, 1-1-1, Tsukuba, Ibaraki, 305-8567, JAPAN.
Tel: 81-29-861-3912. E-mail: shinohara-h@aist.go.jp

20 December 2018

Prof. Setsuya NAKADA
Chair, Nomination Committee of the IAVCEI Executive Committee

Letter of nomination for Dr. Eisuke Fujita for a member of the 2019-2023 Executive Committee

As the representative of the Japanese Volcanologist Community, I recommend Dr. Eisuke Fujita to the candidate for the member of the 2019-23 IAVCEI Executive Committee.

Dr. Eisuke Fujita is a Principal Senior Researcher of Volcano Disaster Resilience Research Division, and Deputy Director-General of Center for Integrated Volcano Research at National Research Institute for Earth science and Disaster resilience (NIED), Japan, and is an active researcher on volcano monitoring, physical modeling of volcanic processes and planning of volcanic hazard mitigation strategy. He is covering wide areas of volcanology ranging from basic science to hazard mitigation and is also active for international collaboration.

The NIED is a responsible for deploying a basic volcanic observation network in Japan and he has been responsible for monitoring of Fuji, Izu-Oshima, Miyakejima and others. Based on these monitoring data, he developed models of seismic events and deformation processes in particular at Miyakejima and Fuji volcanoes. He conducted lava flow simulation with LavaSIM, and participated in the project “Risk Evaluation, Detection and Simulation to mitigate Effusive Eruption Disasters” by European Cooperation in science & technology (leader: Andrew Harris). His works also cover more practical aspects of volcanology, not only application of the lava flow simulation to actual volcanoes in Japan and Italy, but also application of the Bayesian event tree scheme for stochastic models of long-term eruption forecasting. Based on his wide research activity, he organized international workshops on strategy of volcanic disaster mitigation (operated by NIED) every two years since 2003.

Dr. Fujita was a core member of the steering committee of IAVCEI Scientific Assembly in 2013 at Kagoshima and played important roles for the planning and operation of the meeting. He is also one of the founding members and a secretariat of the Asian Consortium of Volcanology (ACV), which was founded in 2014 to promote volcanology with better communication among Asian countries, such as Indonesia, Philippines, Singapore, China, South Korea, Taiwan and Japan. He already organized three field camps to promote collaboration among young volcanologist from different countries.

With these reasons I suggest Dr. Eisuke Fujita with confidence to the candidate of the member for the IAVCEI Executive Committee.

Sincerely,

A handwritten signature in black ink, appearing to read 'SHINOHARA', written in a cursive style.

Hiroshi SHINOHARA
Chairman of the Volcanological Society of Japan
Prime Senior Researcher
Geological Survey of Japan, AIST

Dear Madams and Sirs,

I agree to be a candidate of Executive Committee Members of IAVCEI (2019-2024)

Sincerely,

Eisuke FUJITA

藤田英輔

Short resume outlining the candidate's position, research interests, and activities related to IAVCEI

Name of candidate: Dr. Eisuke FUJITA

Current Position: Principal Senior Researcher, Project Director, Volcano Disaster Resilience Research Division, National Research Institute for Earth science and Disaster resilience (April 2015 – present)
Deputy Director-General, Center for Integrated Volcano Research, National Research Institute for Earth science and Disaster resilience (April 2016 – present)

Research interest

The candidate obtained a permanent post of researcher at National Research Institute for Earth science and Disaster prevention (NIED) in 1993 and has engaged in the research project about volcanic activity using monitoring network at Fuji, Izu-Oshima, Miyakejima, etc., operated by NIED. The candidate has been operating the observation network and has been mainly studying the seismic, geodetic data. In addition, the candidate has applied numerical simulation to many volcanic phenomena, as lava flow dike intrusion, volcanic tremor by two-phase flow, interaction between earthquake and volcanic eruption, etc. For lava flow, the simulation code LavaSIM has been proposed in 2003 for both scientific and practical use, and the candidate promoted the collaboration with INGV and hotspot-detection & lava flow simulation community organized by EC. In NIED, the candidate has organized the international workshops on strategy of volcanic disaster mitigation with volcanic researchers from the world every 2 years since 2003.

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Activities related to IAVCEI

The candidate was the member of the steering committee in IAVCEI 2013 Scientific Assembly held in Kagoshima. In 2015, the candidate started to organize the Asian Consortium of Volcanology as a secretariat, and has made an effort to promote the collaboration between young scientists in Asian countries, Indonesia, Philippines, China, Taiwan, South Korea and Japan, e.g. ACV field camps (1st: at Fuji in 2015, 2nd at Sakurajima in 2017, 3rd at Merapi in 2018).

Curriculum vitae of Eisuke FUJITA

Date of birth: 21 October 1967

Nationality: Japanese

Address:

National Research Institute for Earth Science and Disaster Resilience (NIED), Tennodai 3-1, Tsukuba, Ibaraki (Japan)

e-mail: fujita@bosai.go.jp

tel: +81-29-863-7537

http://www.bosai.go.jp/e/research/dep_kazan.html

<http://vivaweb.bosai.go.jp/kazan/>

Degrees:

- November 1998: Doctor of Science, Geophysics (Univ. of Tokyo)

Work experience:

- 1993 to 2000: Researcher, Earthquake Prediction Research Center, NIED
- 2001 to 2002: Senior Researcher, Solid Earth Research Group, NIED
- 2003 to 2004: Research Planning Team Leader, Planning Division, NIED
- 2005 : Senior Researcher, Solid Earth Research Group, NIED
- 2006 to 2010: Deputy Director, Volcano Research Department, NIED
- 2011 to 2014: Senior Researcher, Earthquake and Volcano Research Unit, NIED
- 2015 : Principal Senior Researcher, Earthquake and Volcano Research Unit, NIED
- 2016 to present: Principal Senior Researcher, Volcanic Disaster Resilience Division, NIED
- Project Director, Volcanic Disaster Resilience Division, NIED
- Deputy Director-General, Center for Integrated Volcano Research, NIED

Current and recent research interests:

- modeling of volcanic earthquakes, volcanic tremor and LP events;
- modeling of volcanic crustal deformation;
- numerical simulation for lava-flow, eruptive processes based on multi-phase physics;
- monitoring and development of volcanic observation network;
- building volcanic hazard mitigation strategy

Selected Papers

- Fujita, E. and Nagai, M. 2016, LavaSIM: its physical basis and applicability, in Detecting, Modelling and Responding to Effusive Eruptions. Geological Society, London, Special Publications, Harris, A. J. L., De Groeve, T., Garel, F.&Carn, S. A. (eds), 426.
- Fujita, E., Kozono, T., Toda, N., Kikuchi, A. and Ida, Y. 2014, Quasi-static stress change around Mount Fuji region due to Tohoku mega-thrust earthquake, *J. of Disast. Res.*, 9, 365-372.
- Garcia-Aristizabal, A., Selva, J. and Fujita, E. 2013, Integration of stochastic models for long-term eruption forecasting into a Bayesian event tree scheme: A basis method to estimate the probability of volcanic unrest, *Bull. Volcanol.*, 75, 2, 1-13.
- Fujita, E., Kozono T., Ueda, H., Kohno, Y., Yoshioka, S. Toda, N., Kikuchi A., and Ida, Y., 2013, Stress field change around the Mount Fuji volcano magma system caused by the Tohoku megathrust earthquake, Japan, *Bull. Volcanol.* 75, 1, 1-14.
- Fujita, E., Araki, K. and Nagano, K., 2011, Volcanic tremor induced by gas-liquid two-phase flow: Implications of density wave oscillation, *J. Geophys. Res.* 116, 10.1029/2010JB008068.
- Proietti, C., Coltelli, M., Marsella, M., and Fujita, E., 2009, A quantitative approach for evaluating lava flow simulation reliability: LavaSIM code applied to the 2001 Etna eruption, *Geochemistry, Geophysics, Geosystems*, 10, Q09003.
- Fujita, E., Hidaka, M., Goto, A., and Umino, S., 2009, Simulations of measure to control lava flows, *Bull. Volcanol.*, 71, 401-408.
- Fujita, E., 2008, Banded tremor at Miyakejima volcano, Japan: Implication for two-phase flow instability, *J. Geophys. Res.*, 113, 10.1029/2006JB004829.

Singapore, December 19th 2018

RE: Support Letter for Dr. Eisuke Fujita for the Executive Committee of IAVCEI

Dear committee,

It is my pleasure to write a support letter for Fujita-San to be candidate for the Executive Committee of IAVCEI. I have known Eisuke for about 4 years. Our interactions have occurred during several activities of the Asian Consortium of Volcanology, and we have also a common research grant between Japan and Singapore (JSPS-NRF).

I think the most salient aspect of Eisuke's activity in the volcanological community is that he spearheaded the creation of the Asian Consortium of Volcanology in 2014. Such consortium includes Japan, Singapore, Indonesia, Philippines, Taiwan, South Korea and China. The idea is to incentivize exchanges of between young scientists and observatory staff around a range of volcanological topics. The main activity of the consortium has been to organize a yearly one-week field camp with lectures, exercises, posters presentations, and a one-day field trip. In 2018 it was the third time it was held (in Jogjakarta), and I can attest that it has been very successful for forging links between different countries and between young researchers working with basic research (PhD/Masters), and observatory staff working with more applied problems. Such consortium and activities would have not occurred if it was not for the tenacity of Eisuke in getting everybody on board, and securing a budget for the participants. It demonstrates Eisuke's capacity, initiative, and interest to serve as a member of volcanological community at large.

Dr. Fujita is currently Deputy Director of National Research Institute for Earth Science and Disaster Resilience (NIED). He has a lot of experience in volcano disasters and mitigation of hazards. He also has in depth knowledge of seismic and deformation monitoring of active volcanoes and modeling. He has also published a significant number of impactful papers of modeling of lava flows.

In summary, I think Eisuke would be a great member of the Committee. He has already shown his vision and willingness to contribute with new initiatives to the volcanological community. This, combined with his experience and background on geophysics of active volcanoes make him an ideal candidate.

Best regards,

A handwritten signature in blue ink, appearing to read 'Fidel Costa', with a stylized flourish at the end.

Fidel Costa
Associate Professor
Associate Chair (Faculty)
Asian School of the Environment (ASE)
University Scholars Fellow
Earth Observatory of Singapore
Nanyang Technological University
email: fcosta@ntu.edu.sg



4 January 2019, Taupo, New Zealand

To Whom It May Concern,

I would like to support the nomination of Dr Eisuke Fujita for a position on the IAVCEI Executive Committee. Eisuke has, to my opinion, a very interesting and relevant profile for the Executive Committee, with a great balance of experience, expertise, network and personality.

Eisuke has a strong experience in understanding and modelling geophysical data from active volcanoes, which is an important expertise to bring to the Executive Committee, especially as a range of committees have developed around geophysical techniques (e.g., most recently geodesy). He is well respected by his peers not only for the quality and breadth of his research, but also for the way he constructively interacts with the community. He always has a positive attitude and favours a collegial approach to discussions and decision making, which would be very well suited to the committee.

Beside his research credentials and his experience, Eisuke would also be a fantastic representative for the greater asian region. He is extremely well regarded in Japan as the Project Director of the Volcanic Disaster Resilience Division at NIED, but is also actively involved in a range of initiatives in the immediate region as secretary of the Asian Consortium of Volcanology, and beyond (e.g., with New Zealand a little while ago while looking at the vulnerability of nuclear facilities to caldera activity). Because Eisuke is very open to the international research community, I strongly believe he would be a great advocate and conduit for building bridges across the different regions hosting IAVCEI members.

Finally, Eisuke is no stranger to the IAVCEI, having been on the steering committee of the very successful 2013 Kagoshima IAVCEI Scientific Assembly. He has been an active member of the organisation for years and is well acquainted with its functioning.

For all the reasons above, I have no doubt he would be a great addition to the team, and I can only strongly support his nomination for the Executive Committee.

Kind regards,

Nico Fournier
Head of Department, Volcanology
GNS Science
Taupo, New Zealand

56126 Pisa
Via della Faggiola, 32
Tel: (0039) 0508311920
Fax: (0039) 0508311942
URL: www.pi.ingv.it
AOO Pisa: aoo.pisa@pec.ingv.it
augusto.neri@ingv.it



Istituto Nazionale di
Geofisica e Vulcanologia

Sezione di Pisa

Pisa, January 6th 2019

Dr. Augusto Neri
Director of Volcanoes Department of INGV

To: IAVCEI Committee Members for the
selection of the new IAVCEI Executive
Committee

Re: Letter of support for Dr. Eisuke Fujita.

Dear Committee Members,

I am writing this letter to strongly recommend Dr. Eisuke Fujita as candidate for the new Executive Committee of IAVCEI because of his special contributions to volcanology and volcanic hazards in the last 25 years as well as for his remarkable engagement in community services including IAVCEI.

I am strongly supporting the candidature of Dr. Fujita because I have had the pleasure to know him personally. I first met Eisuke in 2003 at the IUGG Conference in Sapporo, although I knew him through some of his many publications. In particular I was aware of his pioneering work on lava flow modelling and simulation through the development of the LavaSIM code. This code was the basis of a long-lasting scientific cooperation between NIED and INGV colleagues with specific application to lava flows of Mt. Etna (Italy).

The above is just an example of the several innovative and diverse contributions Dr. Fujita gave to volcanological research and community. Dr. Fujita has led a variety of research efforts at the national and international levels including the development of complementary and multidisciplinary methods aimed to the understanding of volcano dynamics. Some of this include: development of volcanic monitoring network, particularly seismic and geodetic; modeling of volcanic earthquakes, volcanic tremor and LP events; modeling of volcanic crustal deformation; numerical simulation for lava-flow and eruptive processes based on multi-phase physics; building of volcanic hazard mitigation strategy. These studies represent important contributions to present volcanology and make of Dr. Fujita one of the Japanese scientists that most influenced the progress of this science in the last decades.

Dr. Fujita's research work on eruption dynamics cannot obscure his equally important contributions to the assessment of volcanic hazards and mitigation of volcanic risk. In particular, he remarkably contributed to the assessment of volcanic hazard at Mount Fuji, Izu-Oshima, Miyakejima and several other Japanese and abroad volcanoes.

I wish also to mention the professionalism and enthusiasm that Dr. Fujita always had for the service to the volcanological community, therefore representing an ideal collaborator and guide for many colleagues, students and Institutions who had the pleasure to work with him. In particular I wish to mention the series of international workshops he organized since 2003, every two years, at Mt. Fuji focused on strategies for mitigation of volcanic risk, the organization of the IAVCEI 2013 General Assembly at Kagoshima and the new Asian Consortium for Volcanology promoted by Dr. Fujita to network young generations of volcanologists in the Asian continent.

Based on my personal direct experience, as well as on an objective evaluation of his scientific contributions, I can state that Dr. Fujita is certainly one of the Japanese scientists that most contributed to the development of modern volcanological investigations and, particularly, to the birth of a quantitative multidisciplinary volcanological science based on the integration of observational and numerical investigations.

In summary, I think that Dr. Eisuke Fujita's career and scientific achievements, as well as his remarkable contributions to volcanological community and services, make him an ideal candidate for the new IAVCEI Executive Committee. I strongly support his candidature.

Sincerely Yours,

Augusto Neri, PhD