NEWS No. 3

September 2023

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

IAVCEI

This Newsletter is intended to keep IAVCEI Members and individual scientists informed about the activities of the Association and its bodies, and the actions of the IAVCEI Executive Committee. Past issues are posted on the IAVCEI website. Your comments are welcome. The IAVCEI Newsletter may be forwarded to non-members who may benefit from the information.

IAVCEI – The Past, The Present and The Future

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SECTION 1. IAVCEI – THE PAST, THE PRESENT AND THE FUTURE

1.1 Out-Going President's Statement

Please join me in welcoming our new President, Costanza Bonadonna, and the new Executive Committee elected for the 2023-2027 period. Costanza and her team are well prepared and motivated to promote the best for IAVCEI in the next 4 years, in particular by attracting new young Earth scientists, improving inclusion, reinforcing our international outreach, and promoting our potential at mitigating volcanic risk that includes a variety of actions such as the rejuvenation of the WOVO network.

Please also join me in thanking all of those who, in the past 4 years, have provided key willingness and time to the tasks IAVCEI has had to face under the especially challenging circumstances of the Covid-19 pandemic. Specifically, many thanks to all members of the Executive Committee, among whom Roberto Sulpizio, our Secretary-General, who held on hard to the steering wheel of the truck, and my past-president, Don Dingwell, the members of our Awards committee and Elections Oversight Committee, the leaders of our disciplinary Commissions and Networks, the Editorial team of *Bulletin of Volcanology*, our new Communication team, and Denisa Svatkova for her very efficient secretariat through our partnership with Guarant International in Praga. Due to the service and efforts of all of them IAVCEI has been growing as a vibrant Association and will continue to be in very good hands.

Finally, let me highlight a few issues I retain important for IAVCEI in the coming years. In the context of global policies for disaster risk reduction and sustainable development, we, as volcanologists and the IAVCEI, shall be increasingly requested to demonstrate our professional value in the scientific understanding of how volcanoes work, but also in our capabilities to forecast eruptions and help reducing volcanic risks. The expected involvement of IAVCEI into the UN's Initiative on 'Global Early Warning Systems' (Sendai Framework for Disaster Risk Reduction 2015-2030), coordinated by WMO, is one important milestone. Other international actions are planned by our new President. In that framework, IAVCEI must continue to grow significantly if one wishes to reinforce its bearing with respect to other Associations within IUGG and other bigger Organisations on the international scene. Despite its substantial increase, our total membership (2497 in June 2023) still comprises only a half of members (1278) with due paid fee. This hampers our financial capability to support our Commissions' activities, workshops, travel grants, etc. and hence our influence. Therefore, in addition to attracting new members, each of us needs to strongly motivate many of our close colleagues to pay their IAVCEI membership fee. A last issue regards our participation to the IUGG General Assemblies, during which we hold our own IAVCEI General Assembly (GA). It is a matter of fact that much less IAVCEI members attend IUGG GAs than our own Scientific Assemblies, especially when the hosting city is not in a volcanic country! This has two regrettable consequences: i) Volcanology tends to be less represented than other areas of Earth sciences in the scientific symposia, and ii) the IUGG's quadrennial dotation to IAVCEI (rated to the number of members attending GAs) is exposed to reduction. We'll thus have to think about how to increase our participation to IUGG General Assemblies (IUGG2027 will occur in South Korea), in particular through our joint (inter-Associations) Commissions.

My best wishes to each of you.

Patrick Allard
IAVCEI Past-President

Patrick giving his out-going speech at the IAVCEI GA held as part of IUGG – 2023 (Berlin)

1.2 In-Coming President's Statement

Dear IAVCEI Members,

I hope this message finds you all in high spirits! I am honored to address you as the incoming President of IAVCEI. It is with great enthusiasm and a deep sense of responsibility that I accept this role and I am committed to furthering the incredible work that has been done by my predecessors.

I want to extend my heartfelt appreciation to past-president Patrick Allard, past-Secretary General Roberto Sulpizio and the whole past IAVCEI Executive Committee for their dedication, hard work and commitment during their mandate. Regardless of the challenges posed by the COVID-19 pandemic, their efforts have undoubtedly contributed to the advancement of our community, and I am excited to build upon the foundation they have laid.

As we look ahead, I am filled with excitement about the opportunities and challenges that lie before us. IAVCEI has always been at the forefront of scientific discovery, collaboration, and knowledge dissemination, and I am committed to nurturing and developing further all these values. One of my foremost objectives is to ensure that our association remains a thriving hub of global collaboration and knowledge exchange. Volcanology is a multidisciplinary field that requires diverse perspectives and expertise, and I am dedicated to fostering an environment where researchers from around the world can come together to share experiences, ideas, and insights.

I am also thrilled to be supported by, and working together with, a fantastic and diverse newly elected Executive Committee, including Marta Calvache and Andrew Harris as Vice Presidents, Ulrich Kueppers as Secretary General, Joa Paredes as Early-Career Researcher representative and Alessandro Aiuppa, Alvaro Amigo, Alessandro Bonforte and Nobuo Geshi as Councillors.

Some of the new Executive Committee on-stage at the IAVCEI GA (IUGG – 2023, Berlin). Left to right: Costanza, Ulli, Andy, Sandro and Nobuo.

In the coming months and years, our focus will be on several key areas that align with the IAVCEI mission, which includes: (i) developing a better understanding of how volcanoes erupt and of their impacts on society, (ii) promoting international research and cooperation to be disseminated at conferences, workshops and through the Bulletin of Volcanology journal, (iii) engaging with stakeholders in order to facilitate a positive impact on society, and (iv) supporting the development and dissemination of guideline and protocols to practice socially responsible volcanology.

We will work especially towards:

i. supporting key IAVCEI activities including networks, commissions and partnerships to strengthen volcanology and related disciplines, multi-disciplinary research and mitigation of volcanic disasters,
ii. optimizing the community effort in order for IAVCEI to step up in its governance role and strive for excellence with an effective societal impact, and
iii. endorsing inclusion that naturally builds on the diversity of our community in order for IAVCEI to both be truly representative of our community and to benefit from the expertise and knowledge that have been historically underrepresented.

It is key for IAVCEI to increase our interaction with non-academic stakeholders. This will allow us to make a more significant impact on society and expand our boundaries even further to include pressing global challenges such as energy transition from greenhouse gas emitters to clean energy, global population growth in volcanic regions, geo-heritage and tourism, and inclusion of STEM – science, technology, engineering and mathematics – in primary and secondary schools.

A clearer and more active endorsement of Equality, Diversity and Inclusion principles in IAVCEI will also create an inspiring environment where the youngest generations can more easily develop and expand. An effort towards updating the existing IAVCEI Statutes and By-Laws to best reflect the IAVCEI mission and vision has already been initiated thanks to the effort of a newly formed dedicated working group. IAVCEI members will be invited to vote on our new proposition in the coming months.

It is my firm belief that the success of IAVCEI relies on the active participation of each member. I am dedicated to creating open lines of communication and I will ensure that every IAVCEI member feels heard, valued, and empowered. I encourage all of you to share your thoughts, suggestions, and concerns with any members of the newly elected Executive Committee so that we can work together to make meaningful and positive changes. I also encourage you to engage with our community through the activities of the commissions and networks, contribute your expertise to IAVCEI conferences and workshops, share your science through the Bulletin of Volcanology journal and collaborate on projects that can drive our field forward. Your perspectives are invaluable, and together, we can push the boundaries of knowledge in volcanology and of volcanic risk reduction strategies.

I am eager to lead our association with dedication, transparency, and a spirit of inclusivity. I am here to listen to your ideas and concerns and to ensure that our association serves you effectively.

Thank you for entrusting me with this responsibility. With your support and our collective passion, we can continue to make significant strides in understanding volcanic processes and mitigating their impacts on society.

Sincerely,

Costanza Bonadonna
IAVCEI President

1.3 Celebrating and Supporting our IAVCEI Commissions and Networks

E ngā hau e whā, tēnā koutou
Greetings to all my colleagues around the world

The recent IUGG meeting in Berlin marked the end of eight years on the IAVCEI Executive Committee (Exec) for me, first as one of the general members, and then as Vice President (VP). I would like to congratulate the newly elected Exec and wish them all the best for their term of service to our wonderful volcanology community. In my VP role I had the privilege of working with our Commissions and Networks, alongside fellow VP Masato Iguchi. In my view, our Commissions and Networks are the life blood of IAVCEI, and I would like to personally thank all Commission and Network leadership groups, past and present, for the amazing work that they do to promote and foster advances in volcanology around the world, both in terms of research (and research collaborations), but also in terms of equity, diversity, and inclusion.

During our term as VPs, we carried out two rounds of reporting, one at the end of 2020 and one at the end of 2022. We also carried out a thorough review of Commissions and Networks during the 2020 reporting round, asking leaders for their view on several topics, including how IAVCEI can better support them. Here I provide a brief overview of our Commissions and Networks and our recent initiatives. Then, drawing from the information provided in the annual reports and the review, I provide some thoughts on possible future initiatives.

We currently have a total of 25 Commissions (18 IAVCEI Commissions and 7 Joint Commissions with other IUGG associations) and 3 Networks; the full list of Commissions and Networks and their leaders can be viewed on the IAVCEI website, under the "Our work" tab. Reading the annual reports it was clear that most of our Commissions and Networks have been active over the past term, despite the challenges associated with the COVID-19 pandemic. Most managed to host virtual workshops and meetings, stay in touch with their members via newsletters, emails, websites, and social media accounts, and reinstate in-person activities after the pandemic. It was inspiring to read about all the activities that are underway.

Key recent initiatives

Several initiatives were carried out during our term in response to feedback from Commissions and Networks. These include:

- **The Commission and Network Guidelines were updated** to bring these more in line with actual practice, and to boost ECR involvement. Current guidelines can be viewed on the website (https://www.iavceivolcano.org/iavcei-commission-guidelines). Note that these are undergoing a further review at present, by the new Working Group responsible for updating our Statutes and Bylaws. (For example, we are ensuring that there are also clear guidelines for our Networks, which are a relatively new addition to IAVCEI, and which, until now have had to follow Commission Bylaws).

- **The IAVCEI website was updated** to include the following forms:
  - The Commissions and Networks annual report template
  - Application form for proposing a new Commission
  - Application form for proposing a new Working group

- **Liaison Committees were disestablished**. Liaison Committees were set up by VPs several terms ago to foster collaboration between Commissions. However, when we surveyed Commission Leaders, we discovered that IAVCEI Liaison Committees were not working for them; indeed, the Committees were not active. This likely stems from the fact that these Liaison Committees were supposed be self-run by representatives from each Commission, and that never really got off the ground. The decision was thus made to disestablish them, and to create alternative opportunities to facilitate communication between Commissions, outlined in the bullets below.

- **More accurate and up-to-date information about Commission and Network leadership** (and contact information) is now provided on our IAVCEI website. This information is kept up to date by our helpful administrator at Guarant. (*On that note, please send any updated names and/or contact details to Svatkova Denisa svatkova@guarant.cz or to one of the new VPs!*)

- **A new email distribution list** of Commission and Network leaders, commissions@iavcei.eu, was established. This list includes all current Commission and Network leaders, as well as the current Exec, and is also kept up to date by Guarant.

- **A regular, catered Commission and Network Leaders workshop** was introduced. Ad hoc workshops have been held at past meetings, but we decided to elevate the leaders' workshop to be a core element of our main conferences, and to provide food and drink to thank and celebrate our Commission and Network leaders for the work they do for IAVCEI. The workshops are hosted by the IAVCEI Exec via the VPs, ideally at all major meetings where a critical number of Commissions and Networks are represented. A successful workshop was held during the Scientific Assembly in Rotorua in early 2023, with representatives from 21 out of our 28 Commissions and Networks attending, as well as myself, Lizzette, Patrick, and Roberto on behalf of the Exec.

Thoughts on possible future initiatives

Reading reports from our Commissions and Networks over the past few years, and listening to feedback at the Rotorua workshop and in follow up emails from Commission leaders, I provide the following considerations for how IAVCEI can better support our Commissions and Networks:

- **Ethics, equity, diversity, and inclusion:** Several Commissions would like more guidance on EDI issues, including on increasing geographic diversity amongst Commission members. We should consider how more guidance on EDI matters can be provided, whether via a new dedicated EDI role on the Exec (a proposal I have put forward to the new Exec), or by a series of working groups tacking specific tasks. Commissions and Networks have provided suggestions for specific initiatives, including:
  - Developing good-practice EDI guidelines for our conferences, which should then be incorporated into wider guidelines for hosting IAVCEI conferences. Such guidelines could include, for example, requiring Early Career/ECR-Net member involvement in local organising committees.
  - Reviewing our systems and processes to ensure they are inclusive and make recommendations for improvement. This could include reviewing websites, forms, and other communication products to incorporate inclusive language, including when referencing gender.
  - Providing the wider volcanological community with a go-to person or committee that Commissions, Networks, Working Groups and individual members could contact to discuss ethics and EDI-related matters, including ethical and lawful data collection methods and data storage.
  - Collecting information on diversity within IAVCEI and developing metrics to determine how effective any measure to increase diversity is.

- **Facilitating collaboration:** In addition to the Commission and Network leaders' workshops at major conferences, it might be good for VPs to offer an annual (virtual) check in for Commission and Network leaders. This could aid facilitation of collaboration between Commissions and help coordinate session proposals for conferences.

- **Guidelines for key processes and activities:** Commissions and Networks have said they would appreciate some guidelines and templates for key processes, such as maintaining membership databases, holding elections, seeking financial support, communicating to wider IAVCEI membership, and hosting workshops and fieldtrips, among others.

- **Tracking membership:** Maintaining up to date membership lists for Commissions and Networks is challenging. In the future it would be great if we could have a process whereby prospective members could click a "join Commission" or "join Network" on individual Commission and Network websites and have that automatically update a membership list. Some Commissions and Networks successfully use their Facebook page as a proxy for a membership database. In most cases, Commissions and Networks have a clear overview of their core leadership group or committee but are less confident that the wider membership list is up to date.

- **Transparency around opportunities for financial support:** Many of our Commission leaders are not fully aware of what IAVCEI support is available to them, nor how to go about requesting it. Being more transparent about the amounts and recipients of past IAVCEI grants by openly reporting these on our website would go a long way to improving awareness. Perhaps we can encourage recipients to write a few words on the initiative the grant supported, and this could also be reported on the website. Not only does this increase transparency, but it would also provide inspiration for other members. Furthermore, equitable promotion of funding opportunities is important, so that all IAVCEI members can seek support, not just those "in the know".

- **Protecting Commissions as bottom-up entities.** We periodically receive requests from our parent body, IUGG, to reduce the number of Commissions within IAVCEI. Despite efforts of past VPs (including Masato and myself!), only in very few cases have suggested mergers been embraced by Commissions and carried out effectively. Most Commissions are protective of the space they inhabit. By their very nature, Commissions form from bottom-up shared interest amongst members of our community, and in my view are likely to only be successful if they maintain the scope that their members are passionate about. The degree of activity displayed in annual reports is testament to this passion. Instead of continuing to explore possible mergers, in my view we would better serve our community by fully supporting our current Commissions and Networks, ensuring they maintain the required level of activity outlined in the Bylaws (and disestablishing them if they do not), and carefully considering all new proposals for Commissions and Networks. Most will indeed likely be justified, however in some cases the proposed new activity may be able to be incorporated within an existing Commission or Network, possibly via a thematically focussed working group.

Finally, I wish everyone a successful remainder of 2023, and to our Commissions and Networks: Keep up the good work!

Ngā mihi mahana
warm greetings

Jan Lindsay

1.4 The Voice of IAVCEI Early Career Researchers

The outgoing IAVCEI Executive Committee (EC) was the first in the history of the association to include an official representative of the Early Career Researchers (ECR) community. *This community includes undergraduate, masters and PhD students, as well as post-doctoral researchers (with short or long-term appointments) up to 8 years of their most recent relevant degree, in the broad field of volcanology and chemistry of the earth's interior, from all over the world*. While being essential protagonists of the research led by the IAVCEI community, ECRs face many challenges specific to their early career condition (e.g., unstable employment, limited funding and career opportunities, restricted research networks, frequent worldwide relocations and life decision making). Despite these challenges, ECRs are endeavoring to lead excellent research projects, publish in world-class journals, fund their own independent research, and secure stable employment.

While serving for the ECR representative role on the outgoing EC, my aims were to support the existing and already successful IAVCEI ECR network (or ECR-net), and to provide an ECR perspective to the EC initiatives, actions and decisions. The ECR-net was created during the 2013 IAVCEI Scientific Assembly in Kagoshima, Japan, by enthusiastic ECRs, with the aim of forming an open and active network to share resources on the career development of young researchers. Since then, the ECR-net has thrived, under the impulse of an engaged ECR community looking for advice on how to navigate their way through the early stages of their careers in academia, observatories and beyond. By including an ECR representative on the EC, IAVCEI recognizes the importance of the ECRs in the development and sustainability of their research community, and welcomes the ECR-net as a core organization of the association.

The ECR-net is now driven by 8 to 10 ECR volunteers forming a working group, which includes the elected ECR representative within the EC. During the past 4 years, a 2-to-3 year turnover of the volunteers on the working group has been implemented to ensure that a diversity of devoted ECRs have the opportunity to serve. With the logistical and financial support of the 2019–2023 EC, ECR-net has been able to pursue existing actions, such as:

I. maintaining open online platforms to share resources, facilitate communication within the ECR community and relay career opportunities. See our website (https://ecrnet.iavceivolcano.org/) and various social media pages (https://ecrnet.iavceivolcano.org/how-to-join-the-network/).
II. organizing free networking, mentoring and social events at the main IAVCEI conferences (see a retrospective of our activities on our website, https://ecrnet.iavceivolcano.org/current-activities/.

New initiatives were also developed during this period, driven by the necessity to maintain cohesion during the COVID pandemic, which postponed physical meetings for two years.

ECR social event during the 28th IUGG General Assembly in Berlin, Germany (2023). During this cross-association social event—food! beverages! networking!— a semi-formal survey of attendees perspectives on a range of early career topics was organized. These data were used to structure an inter-association panel discussion the next day. A panelist from IAVCEI was present, and ECR-Net representation in the audience made sure IAVCEI's perspectives were included in the discussion.

The ECR-net hence launched a series of virtual, fully open, Q&A panels with members of the research community to discuss a variety of topics related to career development, which are viewable on our YouTube channel. Another novel initiative was to provide physical and online spaces for ECRs to present their research and represent their field, through webinars (part of the IAVCEI webinar series: https://www.iavceivolcano.org/media-gallery/webinars/) and plenary ECR presentations at the 2023 IAVCEI Scientific Assembly in Rotorua, New Zealand. This last initiative was facilitated by the presence of an ECR representative on the EC and on the local organizing committee of the scientific assembly, which is going to be maintained over the new term.

Beyond pursuing and consolidating the progress made by the ECR-net and the IAVCEI EC over the past term, I believe that some key challenges remain to be addressed. One revolves around access to publishing for ECRs, which is threatened by the author-payer model of open science. Advocating for equal publishing opportunities in the current changing publishing world is an essential role of the IAVCEI. Another challenge is related to the wellness of ECRs in an increasingly competitive research environment. While the duration between PhD completion and first stable employment keeps increasing, ECRs have to endure and balance their professional and personal wellbeing. It is the role of the IAVCEI community as a whole, and established researchers in particular, to provide ECRs with the serenity and space necessary for them to grow towards a position of professional maturity. When mentoring, employing or collaborating with ECRs, this requires for example ensuring a respectful, equal and inclusive working environment, protecting their intellectual properties, and providing balanced working conditions. I am certain that our community, and the newly elected IAVCEI EC, is up to the task, and will continue engaging and supporting our diverse and enthusiastic ECRs.

Julia Eychenne
2019–2023 ECR representative on the IAVCEI Executive Committee

1.5 Bulletin of Volcanology: Whatever Next?(!)

At the IAVCEI general assembly in Berlin, we (Fran Van Wyk de Vries and myself) passed on our roles as Executive Editor and Editorial Assistant to Marie Edmonds and Richard Herd. We had picked up the stick from James and Linda White during the IAVCEI assembly in Portland in 2017. Six years later, and **it has** to be time for a change in guard, but for journal direction?

To ensure continuity back in 2017, James and I spent an enjoyable night swapping notes (possibly at a bar … who knows) somewhere in Portland. While Linda and Fran were not able to meet in person, Linda's careful preparation laid the way for a good start. Fran, Marie, Richard and myself have likewise spent some time ensuring that the transition of Bulletin of Volcanology to new management is smooth, and that the publication model has a memory, and a future. In April, we all spent two days together in Cambridge discussing everything from the handling system through to initiatives to continue to move the journal forward. For me, it was then time to catch the train to Peterborough for a Bristol Rovers match and leave the Bulletin in new and very safe hands. For Marie, well … I don't think she likes football.

When Fran and I picked up the stick, we could not have imagined the support we would have received. At a rough guess, since Portland, I have read (every single word) of between 500 and 600 papers before passing on for review, correction, final editing and/or proof-setting. For the time needed to do that, we need to thank Thomas and Daniel who missed my presence at the beach, dinner table or evening film as they aged from somewhere around nine, to a t-shirt size that falls in that difficult zone that shops do not stock.

We tried to embrace what we felt to be the cornerstones of the Bulletin, these being:

- Maintaining a family feel, where the handling system is not just a black box interface, but a group of people with whom you can discuss, who you know are there for you, and from whom you will receive a quick, human and supportive/productive response.
- *Remember*: The Executive Editor is part of IAVCEI, and is there for you.
- Providing a last bastion for, and encouraging publication of, over-length treatments of deserving topics where we can extend out to 20 000 words.
- *Remember*: Length limits are at the discretion of the Executive Editor.
- Keeping Bulletin of Volcanology fee-free, while evolving ways to maximize the number of no-cost Open Access papers we can publish, which is now above 50 %.
- *Remember*: There is no base charge or excess page fees, and you have the right to unlimited color reproduction of Figures … even tables.

At the same time, we experimented with a number of new initiatives, of which the special issue, perspectives and data report directions have been the most rewarding. In parallel we focused on building a collegial, friendly and productive working relationship between the three points of the publication triangle, these being (i) the editorial board, (ii) IAVCEI, and (iii) Springer.

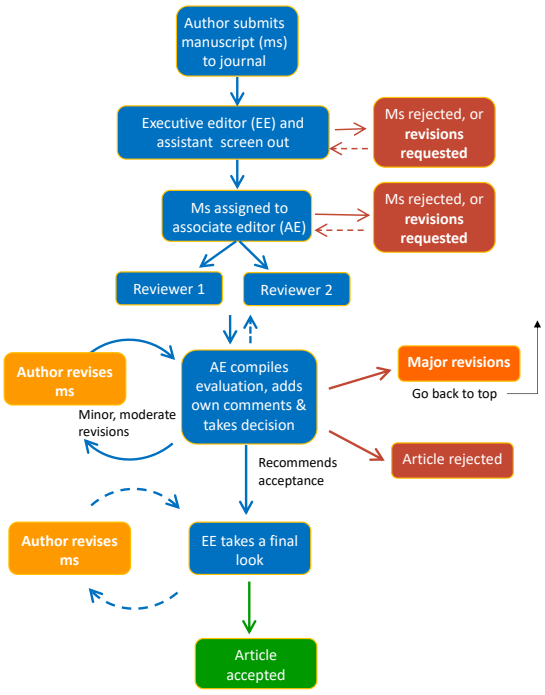
From the outset, we applied a strict quality control policy. This was based on multiple comments from the community during 2017, as well as advice passed on by James. As a result, we gave every in-coming submission an initial flight-worthy check, and every out-going paper a hard edit prior to proof-setting. Many of you reading have received the "EE-Edit" email with an attached PDF drenched with edits. Thank you for working with us

through those, as applying a consistent standard has pulled our impact factor up to a level it has never before achieved, that is: 3.5 (I wish we could achieve the same for Bristol Rovers).

Pedantic and annoying, yes … but the devil has been proved to be in the detail, and implementing this hard editorial policy has worked dividends. I thank every single author for working with me on this. Thank you, and find me for a beer at the next IAVCEI assembly (I can buy you one, or you can buy me one. Your choice).

For IAVCEI, Bulletin of Volcanology really is a wonderful opportunity to show case *our* science, to put out a high quality and well-presented product, and to take pride in that product. Our editorial policy evolved with this in mind and, in January and based on consistency of problems across 350 papers, we published an editorial *Guidelines on manuscript format, structure, and style: avoiding editorial holdups in the publication process* (https://doi.org/10.1007/s00445-022-01619-8). In parallel, we launched a journal template (https://www.springer.com/journal/445/updates/25882350). Both are designed to help with and maintain standard and quality, while short-cutting hold-ups.

The editorial system at Bull. Volc. – simplified version



I would like to repeat the flow chart that we placed in the January Editorial here, just to clarify the manuscript processing steps involved at Bulletin of Volcanology. Note that the executive editor gives the paper a read both at the beginning and end of the process, with final checks being applied before hand-on of publication-ready files for proof setting. At this final step the manuscript often goes back to the author for final edits and/or correction.

One issue that we did not address in the January editorial was the review process, which also expects speed, quality and objectivity. The other day I was talking to my PhD student, Sophie, when we realized we could classify reviews into one of three classes. However, we quickly found that Arthur Michalek (https://doi.org/10.1007/s13187-013-0602-x) had already come up with the same classification, which following Michalek (2014) is:

- Some reviewers adopt the persona of Vlad the Impaler whose sole purpose is to impale the manuscript on every obvious and esoteric bit of information.
- Others emulate Polyanna and would not find fault with the most egregious oversights.
- What the journal wants is Walter Cronkite (a journalist once known as the *Most Trusted Man in America*). That is, "someone who is objective, fair, and tough. Someone who could produce a review that if responded to properly would result in a much stronger manuscript which would be of enhanced value to our readership"

This points to a pattern in reviewer traits that Vlad should avoid and Polyanna should apply, these being:

- Read everything. Check everything.
- Be constructive, be objective, but never be flippant or insulting.
- During the second round, help with refinements.
- Do not review your review.
- Embrace your limits: do not be overly opinionated on issues you know little about.
- Recognize when an author may be a poorly-advised student or Post-Doc.
- Help when an author group that is plainly in need of some English editing.

Regarding this latter point, for us Anglophones *it is our job to help*. I have learnt that if we do not help, then no one will. Finally, for every paper you submit, accept to review two. This is currently *the most pressing problem*: **finding reviewers**.

Ian Curtis once wrote, "*I've been waiting for a guide to come and take me by the hand*". Sometimes that guide never arrives or does not need to arrive, but for authors-in-need, that guide has to be the editor and reviewers; and that guide has to be there. The guide must be correct, diligent and consistent, yet understanding, open-minded, constructive and, above all, present. Then, in the last phase of *final edits*, which can be perceived as a *grabbing hand* pulling the author back from publication, recognize that the editor is there to help you *in large amounts*. At this step in particular, the editor needs to be trusted. They know what they are doing, are applying journal style and policy, are intimate with the design of the presentation model they are asking you to follow, have experience from hundreds of papers handled and, above all, are there to *work with you and for you*.

So, as Douglas Adams (nearly) wrote, "*so long, and thanks ~~for~~ to all the fish*", these wonderful fish being the 2007–2023 editorial board (sorry I can't name you all!), and especially my two, long-suffering, deputies: Jacopo and Laura. Now let's get behind Marie and Richard in our journey onwards, and especially by supporting their efforts in making Bulletin of Volcanology the best it can be.

Andrew Harris
Out-going Executive Editor of Bulletin of Volcanology

1.6 In-Coming Bulletin of Volcanology Executive Editor Statement

We would like to thank the outgoing Executive Editor Andrew Harris and Editorial Manager Fran Van Wyk de Vries for the enormous amount of work and care they have invested in the Bulletin of Volcanology over the past 6 years. Theirs are large shoes to fill, but we will do our best to maintain the high standards and energy of the journal moving forward, and we are delighted to be doing so. We would encourage all of the IAVCEI community to share with us the exciting research you are doing at the forefront of volcanology and across a range of fields. As you know, the Bulletin of Volcanology is currently a transformative (hybrid) Springer journal and as such authors are able to publish gold open access articles. The share of open access articles published by the journal is increasing year on year and currently stands at ~ 60%; we would like to see this increase. We have a number of topical collections open at the present time; please look at the calls for papers:

https://www.springer.com/journal/445/updates/18557382

These topical collections include themes on the management of volcanological data, interactions between observatories and aviation, the 2022 Mauna Loa eruption, uncertainties in volcanic risk analysis, among many more. If you have an idea for a special collection, please do make contact to discuss it with us. Finally, I would like to draw to your attention the new article format now available: *Data Reports*. These are short communications specifically for publishing datasets, ideally suited for volcano observatories, for example, wanting to get data out into the community, obtain copyright protection and be cited. More updates to follow – we look forward to working with you.

Marie Edmonds
Executive Editor

Richard Herd
Managing Editor, Deputy Executive Editor

The Bulletin of Volcanology editorial board dinner at IUGG in Berlin. Round the table for left to right are: Marie Edmonds, Andrew Harris, Laura Pioli, Costanza Bonadonna, Ulli Kueppers, Alesandro Bonforte, Jacopo Taddeucci, Roberto Sulpizio, Patrick Allard and our current Executive Publisher at Springer, Beate Hienz.

SECTION 2. IUGG 2023 – BERLIN

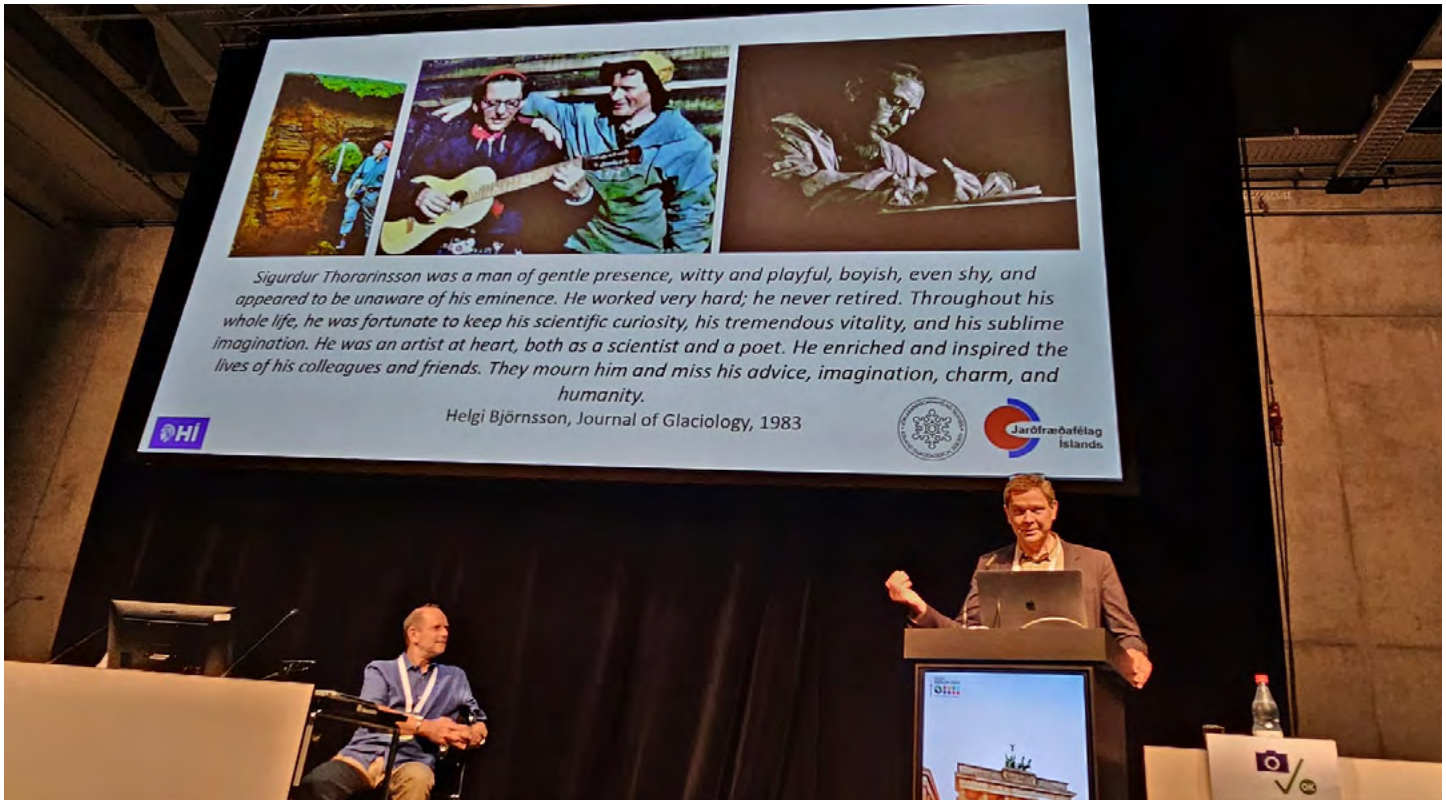
2.1 IUGG 28th General Assembly 2023 (Berlin) – Summary

- Total IUGG registrations: 5020 (4610 picked-up the badge onsite); Waived registrations: 382
- Delegate countries: 105. Top 8 countries attendance: Germany (958), China (662), USA (454), Japan (279), Italy (272), UK (244), France (203), India (170)
- Association attendances: IAMAS (890), IASPEI (700), IAG (591), IAGA (531), IAHS (510), IAPSO (415), IACS (315), IAVCEI (212)
- 14 IAVCEI Symposia in Volcanology and 22 joint Symposia with other IUGG Associations
- 2023 IUGG Early Career Scientist Award to IAVCEI member Tarsilo GIRONA HERNANDEZ (Volcanology, University of Alaska Fairbanks, USA) for his pioneering and innovative approaches for studying the degassing and eruptive behavior of volcanoes by combining remote sensing, numerical modeling and machine learning.
- IUGG Union Lecture by IAVCEI member Robin MATOZA (UC Santa Barbara) on: "Advances in Global Volcanic Eruption Monitoring and Cataloging using Seismo-Acoustic Observation Systems".
- IAVCEI General Assembly and Awards ceremony with key points including:
  - Summary of main IAVCEI developments for the 2019–2023 Mandate
  - Presentation of newly elected Executive Committee for 2023–2027
  - Discussion of potential changes to IAVCEI Statutes and By-Laws
  - Delivery of 5 awards (Walker award, Wager medal, Fisher medal, Krafft medal, Thorarinsson medal)
- The IUGG Council selected Incheon (Rep. of Korea) as the site of the 29th IUGG General Assembly to be held in summer 2027. The exact dates of the assembly will be announced soon.

More details can be found in the August 2023 IUGG Newsletter (Volume 23, No. 8):
https://iugg.org/wp-content/uploads/2023/07/IUGGej2308.pdf

Please propose and promote IAVCEI sessions and activities for the 29th IUGG General Assembly. *We need to boost IAVCEI attendance and increase both the impact of IAVCEI on IUGG and the support of IUGG to IAVCEI!*

Contact any of the IAVCEI Executive Committee members with ideas and suggestions.



Magnús Guðmundsson giving his tribute to Sigurður Thorarinsson at the IAVCEI General Assembly held as part of IUGG – 2023.

2.2 IAVCEI at the IUGG2023: An ECR Perspective

Claire Harnett & Ailsa Naismith, ECR-Net and Volcanic and Magmatic Studies Group (VMSG) committee of UK and Ireland

IUGG (the International Union of Geodesy and Geophysics) host their conference every four years. IUGG is an international organization that comprises eight semi-autonomous Associations, of which IAVCEI is one! The IUGG conference is therefore an important meeting for geoscientists worldwide, including us volcanologists. IUGG2023 was held on 11–20 July at the Berlin CityCube. Berlin is a progressive, inclusive city, and we were treated to bright sunshine in a beautiful location for the duration of the conference. The scientific programme included sessions across a broad spectrum of volcanology: from modelling of magma deformation, interactions between volcanic eruptions and climate, to historical volcanology. Our personal highlights were Sessions V09 (Advanced Remote Sensing Techniques to Study Volcanic Hazards) and V04 (Integrated Approaches to Pyroclastic Density Currents).

The 2023 conference was the first time that IUGG included several "Big Themes" in its program, such as EDI issues, ECR concerns, and interactions between the Global North and Global South. We were pleased to see these themes included in the program and delighted that the IUGG are starting to place these conversations on the stage at large, international conferences. As these conversations become more familiar at IUGG, we would really like to see the organization build on these by using their platform to elevate voices of those that are often under-represented in our community.

We were impressed by the multiple contributions to IUGG2023 of IAVCEI members, both in their scientific efforts (including informative posters and engaging talks) and in their willingness to 'stand up and be counted'. From debating the current IAVCEI bylaws in the IAVCEI General Assembly, to urging the panel of an EDI Big Theme to consider how conference fees impact who can attend in person, individual members of our community raised their voices to call for progress for everyone across the geosciences. There was a relatively small number of IAVCEI delegates at IUGG2023. This may be partly because many attended IAVCEI2023 in New Zealand earlier this year. However, the conference is an essential part of our calendar and a valuable opportunity to talk with people from other areas of geoscience about these issues. IUGG also provides funding to IAVCEI which is contingent on attendance of IAVCEI members to IUGG conferences. We would love to see more IAVCEI members at future IUGG assemblies!

IUGG2023 is especially important for IAVCEI members because it hosts the IAVCEI General Assembly (not to be confused with the IAVCEI Scientific Assembly, also every 4 years, next held in Geneva in 2025). The IAVCEI GA is an opportunity for the IAVCEI Committee to speak with our community about the advances that have been made by the community, and to award community members for outstanding contributions. This year, the GA also included proposals to change various statements within the bylaws that govern IAVCEI's proceedings. This led to lively discussions within the volcanological community present in Berlin. The general take-home message from this discussion seemed to be a feeling that perhaps an overall review of the bylaws is required to ensure they accurately reflect the full breadth of awesome volcanologists in our community, including those who might have entered the field through non-traditional academic routes. We really welcome these discussions going forward.

In the IAVCEI GA, the newly-elected IAVCEI Committee shared their vision for their tenancy (2023 – 2027). This vision aims to build an inclusive, diverse community that gives voice to underrepresented groups (e.g., enriching the governance of IAVCEI through greater inclusion of underrepresented groups in leadership roles, commissions, and other prominent roles). This is a promising time for the international volcanological community to collaborate with IAVCEI and IUGG in making progress. Though the conversations at IUGG may be just beginning, we see a huge opportunity for volcanologists around the world to share their learning and experiences with the greater volcanological (IAVCEI) and geological (IUGG) community. So, look for opportunities to get involved; to disseminate your science, to share your learning; and to make your voice heard on the wider stage.

SECTION 3. 2023 IAVCEI AWARDS

3.0 Introduction to the Awards

At the General Assembly held in Berlin on 18 July, we celebrated the IAVCEI awardees of 2023. The awards and awardees were:

Thorarinsson Medal: Kathy Cashman

Kathy with pahoehoe on Kilauea

Krafft Medal: John Pallister

John with the plane he built

Fisher Medal: Karen Fontijn

Karen sampling (with permit approval) tephra fall deposits from Puyehue – Cordón Caulle in the Nahuel Huapi National Park, Argentina

Wager Medal: Michael Heap

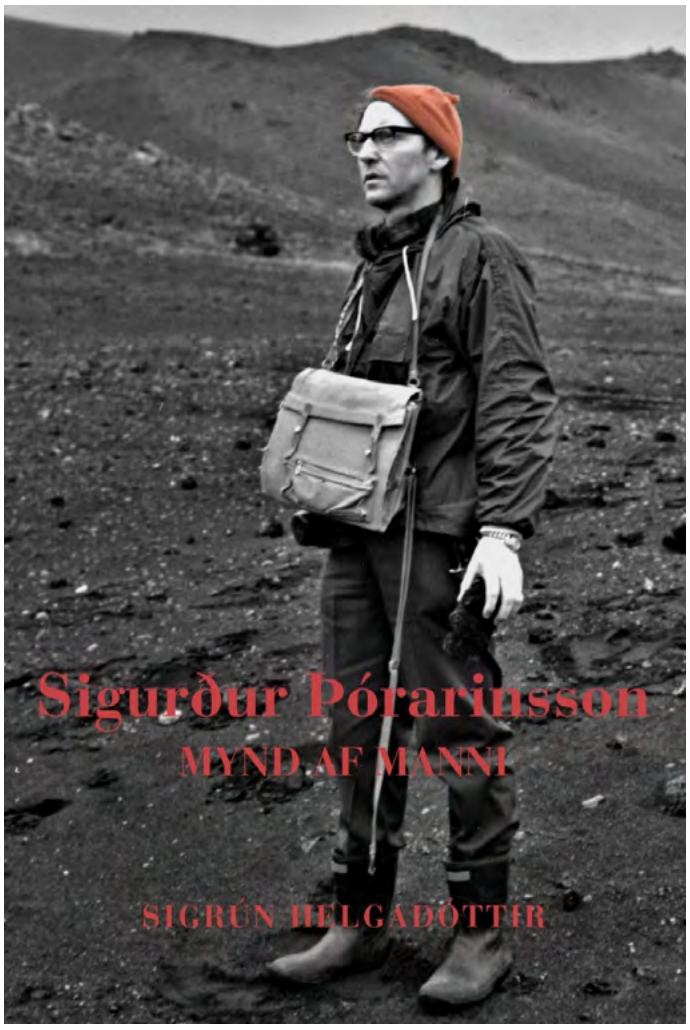
Mike, at the top of Rincón de la Vieja, Costa Rica.

Walker Award: Thomas Jones

Tom on a scoria cone in the Canary Islands

Next, following a perspective on our highest level of award (the Thorarinsson Medal), we have invited each nominator and awardee to say a little something. Each entry is, more-or-less, a transcript of their speeches as given in Berlin.

3.1 The Legacy of Sigurður Thorarinsson (1912–1983)



Sigurður Thorarinsson in the field with his red cap. From the cover of his biography (photo: NASA)

The volcanologist/glaciologist/geomorphologist and poet that the Thorarinsson Medal is named after, was born and grew up in northeast Iceland, the oldest of seven siblings. Sigurður Thorarinsson was a very bright kid and already a proficient reader at the age of four. He lost his father when he was 12 years old. In the poor peasant society in Iceland at this time, it was common that families had to be split up when a parent passed away. This happened with Sigurður's family, and he was taken into care by the local vicar. The foster family felt that this bright young boy should receive higher education. They supported him to move to the town of Akureyri where he graduated from high school at the age of 19. He started his university studies in Denmark in 1931, transferring to Stockholm, Sweden, the following year. His studies were within the fields of glaciology and volcanology and involved extensive fieldwork in Iceland in 1934–1939. In his doctoral thesis, defended in 1944 at the University of Stockholm, the term tephra was introduced, and the field of tephrochronology established, based on studies of tephra layers preserved in Icelandic soils.

The eruption of Surtsey in November 1963 (photo: Sigurður Thorarinsson).

Sigurður moved back to Iceland in 1945, just before the end of the second world war. He was given a research position at the Natural History Museum in 1947, where he worked until he was appointed professor at the University of Iceland in 1969. Important milestones in Sigurður's work include studies of the eruptions of Hekla in 1947–1948 and Surtsey in 1963–1967. Both eruptions had a significant impact on volcanology, not least due to the pioneering and detailed work of Sigurður. His work on Hekla established that the thinning of tephra with distance from vents follows an exponential decline. Sigurður documented the Surtsey eruption in great detail. In the analysis of the explosive activity during the first several months he described and defined what is today called Surtseyan activity, cock's tail explosions and continuous uprush. He was also a pioneer on volcano-ice interaction. In 1952 Sigurður put forward the hypothesis, later established by observations, that eruptions in the subglacial Grímsvötn volcano can be triggered by pressure release when water is drained in jokulhlaups from the geothermally active caldera. He also threw light on the history of volcanic activity in Grímsvötn over the centuries with careful analysis of written records. Overall, his work on the history of volcanism in Iceland, based to a considerable extent on tephrochronology, has formed the basis of most of the more recent work in this field.

Sigurður in the Swedish-Icelandic expedition to Vatnajökull in the spring of 1936.

Sigurður Thorarinsson contributed actively to glaciology and wrote many important papers in Geografiska Annaler in 1937–1943 on Vatnajökull, partly based on the work of the Swedish-Icelandic expedition in 1936. He led the Iceland Glaciological Society for 14 years, until his death in 1983. He sat on various boards and was instrumental in establishing the Nordic Volcanological Institute at the University of Iceland in 1974.

Sigurður Thorarinsson was a brilliant communicator and speaker. He travelled extensively all over the world to give lectures. He was frequently asked to guide heads of state and other dignitaries during visits to Iceland. In 1967 he trained the astronauts of the Apolo missions in the moon-like volcanic landscape of the northern central highlands of Iceland. Everybody in Iceland knew of him, having relied on his accurate and easily understood explanations over the radio when events such as volcanic eruptions occurred. However, this was only one aspect of Sigurður the polymath. He was, from an early age, brilliant at writing humorous poetry in traditional Icelandic style. In the 1960s, he was at least as well known in Iceland for his cleverly composed lyrics as his geology, although the writing of lyrics was simply a pastime to Sigurður. He was also a popular companion on trips with friends and colleagues where he led communal singing with his guitar. However, Sigurður was also in many ways a private person, needing to have time by himself, working very hard on his science and putting in long hours.

A biography of Sigurður Thorarinsson was published a couple of years ago. The author, Sigrún Helgadóttir, received the Icelandic Literary Price in 2021 for her work, on which this short biographical sketch is partly based. The polymath qualities and brilliance of Sigurður Thorarinsson put him apart from most of his contemporaries and give him a special place in the 20th century history of Iceland. The Thorarinsson Medal is a testimony to Sigurður the volcanologist, his achievements and legacy.

Magnús T. Gudmundsson

Sigurður next to a soil section with tephra layers.

3.2 2023 Thorarinsson Medal for Kathy Cashman

Thorarinsson Medal Citation

Citation prepared by Steve Sparks supported by Michael Manga, Guido Giordano and Sigurdur Gíslason

Kathy is an outstanding volcanologist through her brilliant research, dedication to applying her knowledge to the mitigation of volcanic hazards and from broader contributions on the relationship between volcanoes and society. She has studied volcanic systems from the magma reservoirs to the Earth's surface, using the combined tools of field observations and measurements, sample analysis for chemical and physical characteristics, laboratory experiments and theoretical models. She is acclaimed for quantitative analysis of the constituent phases of volcanic samples to quantify the kinetics of phase transformations and relate these to temporal changes in the physical properties of volcanic materials and the dynamics of volcanic processes. Her work has had significant impacts in igneous petrology, physical volcanology, and magmatic processes. She has made major contributions to understanding volcanic hazards with application to protecting life's and communities.

Her science is based primarily on observations combined with deep understanding of the physical and chemical processes that govern volcanic and igneous processes. She has been pioneering and outstanding in the arena of interpreting the structures and microscopic textures of volcanic rocks to make inferences about physical processes and conditions during volcanic eruptions. This body of work is innovative and ground-breaking. Above all her research is based on meticulous attention to detail and thoroughness in her field and microscopic observations, combined with a flair for intuitive and original thinking. She has defined or redefined the field: using rock textures to quantify eruption dynamics, relating lava flow morphology to physical properties of the lava, characterizing the role of degassing in eruption mechanics, the nature of crustal-scale magmatic system, and the study of tephra, including its formation, characteristics, dispersal and environmental impact. Sigurdur Thorarinsson proposed tephra as a general term for fragmented volcanic ejecta and was the founder of tephra studies. Kathy's research on tephra has been ground-breaking. Thorarinsson would have been pleased with the 2023 medalist.

Her work on lava flows has generated two significant ideas. First is the recognition of how crystallization changes lava rheology and in turn changes the style of flow (a'a' vs pahoehoe textures). Kathy identified recognised the critical role of crust formation of channelization of lava flows, providing a comprehensive assessment of the coupled physical and chemical processes that govern changes in lava flow emplacement. She made the first systematic set of measurements of permeability and made a quantitative connection between permeability, the outgassing (loss of gas) from magma, and eruption style. She led the way in the study the physics of permeable gas flow in magmas and the implications for degassing and eruption style. The importance of permeability is now widely recognized following in Kathy Cashman's footsteps. Her attention has turned to the nature of magmatic systems. She is a leading figure in developing the concept of transcrustal magmatic systems and the idea that multiple bodies of magma embedded in igneous mush are disrupted in many volcanic eruptions.

Kathy Cashman is an outstanding educator with an ability to engage many different kinds of audiences from specialist in her field of volcanology thorough to lectures for the public. Her talks are superb illustrated and she has a flair for engaging with non-specialist audiences. She has broad interests in wider aspects of science and volcanology, which enable her to relate to ideas and connections well outside science. Her early work as communications and outreach officer during the 1980 Mount St Helens eruption likely was a pivotal experience that shaped her

strong interests in volcanic hazards and the effects of volcanoes on society. She has worked with historians in reconstructing past and identifying long forgotten events. A major interest is in art related to volcanoes and she has collaborated with Emma Stibbon, one of the UK's finest landscape artists.

Kathy is already recognised as one of the most innovative and respected geoscientists in the World, being winner of the Bowen Award of the American Geophysical Union (AGU), recipient of the Murchison Medal of the Geological Society in 2020 and past President of the Volcanology, Petrology and Geochemistry Section of AGU. She has been elected as Fellow of the American Academy of Arts and Sciences, membership of the National Academy of Sciences, membership of the Academia Europea and Fellowship of the Royal Society of London. I know that she is especially delighted to receive the Thorarinsson Medal named after one of her scientific heroes. She is a brilliant supervisor of graduate students and postdoctoral researchers. She is an inspiration to the new generation of volcanologists and a champion of gender equality, inspiring many young woman to develop into outstanding volcanologists. She is one of the most important voices and creative minds in volcanology of the last few decades. She is a pioneer and now becomes the first female recipient of the most prestigious medal in volcanology. She is also a great friend and wonderful colleague, so congratulations Kathy on being awarded the 2023 Thorarinsson Medal.

Thorarinsson Medal Acceptance Speech

Kathy in the Oregon Cascades on the flank of Collier Cone (c. 1500 years old) with the melting remnants of the Collier glacier in the background

First and foremost, I would like to thank IAVCEI and Iceland for this great honor – Thorarinsson has long been a hero of mine, as have many of those who have received this award before me.

On the evening of Easter Monday, 29 March 1875, the keeper of the Ona lighthouse on the west coast of Norway added a note to the weather report in his journal: "Tonight, between 8 and 10 o'clock, fine grayish sand fell with the rain, forming a layer two lines thick, which stuck to the window panes and house walls".

Greetings from Iceland, Thorarinsson 1981

This opening sentence of Thorarinsson's Greetings from Iceland paper is familiar to all who study volcanic ash – in fact it has been described as part of the DNA of tephrochronology. It combines eyewitness accounts with written records, isochrons and data from peat bogs to illustrate the frequency of Icelandic ash impacts in Europe. This work presaged the 2010 eruption of Eyjafjallajökull, an eruption that transported me from Oregon to the UK and stimulated my now 10+ year interest in volcanic ash.

Serendipity is not unusual in changing the direction of volcanological careers, and in this regard my career is no exception. From my first experience with active volcanism on Mt. Erebus, Antarctica, to the 1980 eruption of Mount St. Helens, which confirmed my career aspirations as volcanological, to the long-lasting eruption of Kilauea volcano, which for several decades provided an amazing field laboratory for lava flow studies, I have been lucky to pursue volcanological research up close, in the field, around the world, and in the company of our wonderful family of volcanologists.

I can't possibly name and thank all of the individuals who have helped me, taught me, collaborated and explored volcanoes with me along the way. Instead I will thank them in groups, acknowledging the spectrum of interactions that we all enjoy over the course of our careers.

Although most end by thanking family, I will start by thanking mine. Many of you know that I come from a family of Earth scientists: we now span four generations. Most influential, however, have been my older twin sisters: both have PhDs in structural geology and have led long and productive academic careers. Although I tried to forge a different direction (English literature, botany) I quickly succumbed to the allure of field geology and decided to follow the same path.

My mentors have come in many forms. My professors pushed me to think independently while at the same time teaching me the joy of shared discovery that has formed the mainstay of my career. And friendships formed during my PhD years with Gordon Grant and Siggi Gislason have lasted a lifetime. For my passion for volcanology I thank those who taught me in the field, including Phil Kyle, Haroun Tazieff and Werner Giggenbach during my first season on Mt. Erebus; USGS colleagues Don Swanson, Tom Casadevall, Dan Dzurisin and Bill Chadwick at Mount St. Helens; Jim Kauahikaua and Maggie Mangan at the Hawaiian Volcano Observatory; and Dick Fiske at the Smithsonian, who introduced me to the world of submarine volcanism.

Career roles soon change from mentee to mentor, and working with graduate students has been the highlight of my career. I have learned as much from them as I have given and I thank them all. I briefly acknowledge a few of them here, and in so doing trace their role in many directions that my research has taken.

My first PhD student Caroline Klug's description of pumice textures as "frustratingly heterogeneous" led us to explore different methods of pumice characterization, eventually inspiring our exploration of pumice permeability, degassing and controls on fragmentation. Julia Hammer's work on microlite crystallization driven by magma ascent at Pinatubo and Merapi showcased

ways in which groundmass crystallization recorded conduit processes. Lava flow research continued with Adam Soule, who combined field and laboratory studies to study the kinetics and rheological consequences of cooling-driven crystallization during flow emplacement. Similarly Alison Rust's work linked bubble deformation and rheology with the physical conditions of gas escape from vesiculating magma. Diana Roman provided a new direction: her interest in volcano seismology prompted collaborations with John Power and Seth Moran (USGS) as we attempted to link magma movement through conduits with seismic signals in the wallrock. Work with Heather Wright and Italian colleagues Mauro Rosi and Raffaello Cioni took us to Ecuador to study conduit processes operative during recent eruptions of Guagua Pichincha and Tungurahua. With Emily Johnson, postdoc Laura Pioli and UO colleague Paul Wallace I became acquainted with cinder cone eruptions in Mexico, an interest that Natalia Deligne continued in our own backyard of the Oregon Cascades, although with insight added from lidar imaging. Hannah Dietterich bridged my move to the UK by combining field work in Hawaii with lab work at Bristol to assess the ways in which lava flows interact with topography as they flow. With Bristol PhD student Emma Nicholson I transitioned to volcanic ash studies in Iceland, where I first fully appreciated Thorarinsson's pioneering work and started thinking about the role of external water on fragmentation processes. Sacha Lapins renewed my interests in volcano seismology and introduced me to the power of machine learning, while PhD student Hannah Buckland aided my transition back to Oregon with her work on the Mazama ash deposit from the eruption that formed Crater Lake, OR.

I end by calling out colleagues who I consider both friends and heroes. Michael Manga and Ross Griffiths are talented and insightful fluid dynamicists from whom I always gain insight. And over the past decades I have particularly valued collaborations and mind melding sessions with Alison Rust, Guido Giordano, Jon Blundy and Steve Sparks – to them I give the most heartfelt thanks.

Kathy Cashman (07/09/2023)

3.3 2023 Krafft Medal for John Pallister

Krafft Medal Citation
Citation prepared by Warner Marzocchi

I met John several years ago. Since then I had the opportunity to know him well and to appreciate all the scientific and personal traits that are important for this award.

One of the most striking John's achievements is the quite successful leadership of the Volcano Disaster Assistance Program (VDAP), a joint program of the U.S. Geological Survey and the U.S. Agency for International Development. In its history, VDAP has contributed to respond to more than 70 major volcanic crises at more than 50 volcanoes and helped building volcano hazard mitigation programs in a dozens nation, and its contribution is appreciated worldwide. As VDAP chair, John expanded VDAP interests to a broader range of researches and applied scientific projects. A remarkable landmark that testifies his successful VDAP leadership was the invitation by the President of Indonesia in 2010 to lead a U.S. team assisting the Indonesian Center for Volcanology and Geologic Hazard Mitigation in their successful response to the "100-year eruption" of Merapi volcano, which saved thousands of lives. As a VDAP member and leader he has significantly contributed to volcanic crisis responses in United States, Indonesia, Papua New Guinea, Saudi Arabia, Chile, Colombia, Ecuador, Costa Rica and Philippines.

His wide range of volcanological knowledge is proved by the several papers on international journals. The most remarkable aspect of the John's scientific work, at least for the aim of this nomination letter, is that he has been contributing significantly to support and disseminate modern operational probabilistic tools for volcanic hazard analysis, such as the event trees, and to quantify uncertainties in eruption forecasting. As it is happening in many other natural hazard fields, these topics are becoming key research subjects that will allow significant improvements in the capability to assess and to manage the risk posed by volcanoes. In his role of National Program Coordinator, John has contributed also to shape researches in U.S. about geological hazards identifying research priorities for the for the U.S. Geological Survey's Volcano Hazards, Landslides Hazards, and National Geologic Mapping Programs. John is a widely well-recognized scientist and leader as witnessed by his role as the first U.S. Vice President for the International Consortium on Landslides and the USGS Representative to the Geological Society of America's Congressional Fellow Program. For work with colleagues on the National Atlas of the United States, John and colleagues received the U.S. Vice Presidential Hammer Group Award in 1999. For his scientific leadership and contributions to multi-disciplinary science and partnerships, John received the USGS Customer Service Award in 2000, and in 2014 the Distinguished Service Award of the U.S. Department of Interior – the highest award of the Department for his scientific contributions in volcanology and volcano hazard mitigation. In 2018 John was elected member of the Academia Europaea for his scientific contributions to volcanology.

Besides the scientific aspects, John has an exceptional personality and humanity, which are fundamental traits for a successful collaboration with people of different background and education. He was able to have positive and fruitful interactions with presidents (e.g., with the Indonesian Vice President during the Merapi eruption, and with the Chilean President Michelle Bachelet during the eruption of Chaitén volcano in 2008), with scientists of different nations, and with normal people living under the threat of erupting volcanoes. This was a crucial feature for managing successfully many volcanic crises. For this aspect of his personality John has been invited for a lecture on Science Diplomacy for American Association for the Advancement of Science (AAAS).

Krafft Medal Acceptance Speech

John with Supriyati Andreastuti at Merapi in 2010

I am deeply honored and humbled to be selected for the 2023 Krafft medal and I would like to share the honor with my colleagues in the Volcano Disaster Assistance Program (VDAP), the USGS Volcano Hazards Program and with observatory partners worldwide. Personally, I am especially fortunate to have had the opportunity to work with and to learn from Chris Newhall and Rick Hoblitt who brought Bayesian Event Trees into the mainstream of volcanic hazards and crisis response. I am also extremely fortunate to have worked with and learned from more than a dozen talented and experienced VDAP colleagues. And most importantly, I thank partners in more than a dozen volcano observatories around the world who have invited our VDAP team to assist with infrastructure projects and crisis responses.

I am also fortunate to have been around as satellite remote sensing came of age for volcano crisis response. In particular I acknowledge the USGS Advance Systems Center for providing critical information at critical times, as well as the International Charter for Space and Major Disasters for their support to our teams. And I thank the U.S. Agency for International Development and USGS for almost 40 years of support to VDAP and to partner observatories.

In his introduction, Warner mentioned our work with Bayesian Event Trees (BET). Let me add a few thoughts about these. Our VDAP experience has shown that probabilistic analyses such as BET are effective not only for forecasting, but also as communication tools – both within the response team itself and with emergency managers. Id refer you to papers that Chris Newhall and I have written for some of the challenges and potential solutions in the use of event trees during volcanic crisis responses.

I would also like to offer a few general thoughts about the future of eruption forecasting. First, forecasting of complex natural events requires a probabilistic approach. Second, I believe that advances in monitoring coupled with increased understanding of magmatic processes has set the stage for increasingly effective forecasts. Third, there is a continuing need for the growth of open-access databases of volcanic unrest and eruption. In this business, "the past is often the key to the future" and enhanced local and global histories of volcanic activity are required to improve forecasting.

And finally, it has been said many times before, but in closing I would like to reiterate that effective mitigation of volcanic risk requires trusting relationships and effective hazard communication. I thank and honor the world's many volcano observatories for the tremendous job they do in monitoring, forecasting and communicating hazards– activities that are responsible for saving many, many thousands of lives.

John Pallister (12/12/2023)

3.4 2023 Fisher Medal for Karen Fontijn

Fisher Medal Citation

Citation prepared by Sam Poppe supported by David Pyle, Gezahegn Yirgu, and Matthieu Kervyn

Prof. Karen Fontijn received the 2023 Fisher medal from IAVCEI for her exceptional contributions to field-based physical volcanology studies of silicic volcanism in the Global South.

Karen´s work has centered around constraining the eruptive chronology of poorly documented silicic volcanic systems in the East-African Rift, the Andes and Indonesia. Anyone who has had the pleasure of working alongside Karen in the field has experienced her meticulous methodology of describing and collecting spatially representative and vast tephra sample series. The tephrochronological databases she set up are now reference works for many colleagues. The first tephrochronological framework at the Rungwe volcanoes in Tanzania, 5000 years of volcanism at Agung volcano in Indonesia, and 1500 km of road sections in Chile, Karen has demonstrated that we can only gain a holistic understanding of volcanic plumbing systems and the eruptions they feed through the meticulous documentation of a volcano´s eruptive history. Her work has become a role model for multidisciplinary volcanology, drawing on methods from petrology, geochemistry, soil science, geochronology, structural geology, and tectonics.

Karen her peculiar excellence, however, lies in leading our community by example toward equitable scientific collaboration. She displays a rare sense of selflessness and ethics. She always has the local communities she works in on her mind while wearing her heart on her sleeve. Wherever her fieldwork leads her, she makes sure to work with the most relevant local scientists, respect local politics and culture, and use her scientific work to improve the conditions of those she works with. She does this with an admirable disregard for her own benefit. She helped build educational or logistical projects deeply grounded in local needs, including school libraries, solar panels, and much more. She has been one of the driving forces in the foundation of the IAVCEI International Network for Volcanology Collaboration (INVOLC), and their ethics guidelines. She follows those guidelines to the exemplary letter when operating outside of her home base in Belgium and is highly respected by colleagues in the Global South, especially those in East African countries where she has been the most active in the last few years.

Since before she started building her own research group at the Université libre de Bruxelles in Belgium, she has been propagating her meticulous method grounded in field-based observations to many aspiring volcanologists in her path.

Two students from Tanzania and Ethiopia have now delivered exquisite Ph.D. work on rift volcanoes in their own country under Karen's supervision. Those current and future students and collaborators will go on to form a whole new generation of multidisciplinary volcanologists working on volcanoes in their own backyard. This group of volcanologists that Karen inspired, understand how the keystone to disruptive volcanological research is in robust field observations in the tradition of Prof. Fisher, but also in global collaboration between scientists on equal footing and void of any discrimination or post-colonialism. Recognizing Karen with IAVCEI's Fisher medal signals that the IAVCEI community cannot wait to learn which volcanic discoveries her gardening tool will unscrape next.

Fisher Medal Acceptance Speech

Team RiftVolc sieving the Wendo Koshe Pumice deposits from Corbetti volcano, Ethiopia. Centre left: Amdemichael Zafu Tadesse, Centre right: Karen, Right: Sam Engwell. Others: teenagers of the local community at Corbetti interested in our activities.

Well, it goes without saying how grateful I am to David, Sam, Gezahegn and his colleagues, and Matthieu for their nomination and also their support throughout the years we've been working together. I appreciate working with them, all in different ways somehow, and them even just considering to nominate me, already meant an enormous lot to me, regardless of the outcome.

When I think back of my career and where I got today, and especially the work on East Africa, there is one person in particular I should acknowledge, and that is Gerald Ernst, my former supervisor. He did not make it easy for me at all, and we have had many differences and difficulties, up until screaming fights on top of volcanoes. However, in all honesty it was he who planted the seeds for the way I work today in how I approach collaborations and some of the core values that are also hope to pass on in our team in Brussels and elsewhere. It was Gerald who taught me the importance of including all project partners in research output, the importance of training people in volcanology in Africa, etc., so I'd like to acknowledge him for that.

Of course it was not only him who left an impression, also, and probably even more so, the people I worked with during my postdocs in Singapore and Oxford: Chris Newhall and Fidel Costa, and then David Pyle, Tamsin Mather, Victoria Smith: perhaps they don't realize it themselves, but all of them in their own ways have helped me built the confidence I needed (I was very shy at the time), and become more mature in my thinking and as a scientist. The chances I got in Oxford in particular the fact I was able to stay there for a long time, helped me to consolidate my ideas of what

I think is important in volcanology, particularly when working with people from different countries. And today, it is the students and other researchers in our team in Brussels that keep me going. Where I hope I can teach them a few things here and there, they should know I also learn a lot from them.

And in the end, it is really the time I spent in the field and the interactions with colleagues, students, but also our drivers and local people showing us where outcrops were (or keeping us safe from poisonous snakes), that all shaped my identity as a scientist today, and what I stand for. I played around with some numbers the other day, and it turns out that 78% of the world's on-land volcanoes are located in countries that have more volcanoes than IAVCEI members. I think that defines a structural problem in our community. So if there is one thing I do today, I'd like to invite you all to think about that number, and reflect on ways we can improve it to contribute to a real global community of volcanologists.

I thank you very much, and once again to David, Sam and the team.

Karen Fontijn (28/08/2023)

3.5 2023 Wager Medal for Michael Heap

Wager Medal Citation

Citation prepared by Jamie Farquharson

Mike Heap – a geologist by education and training – turned to rock mechanics during his PhD at the University College London, where he investigated the phenomenon of time-dependent deformation and failure in crustal materials. It was there that the seed was planted that well-established concepts pertaining to the physics of material deformation could be fruitfully applied to volcanic processes, and in doing so we could understand a host of micro- to macro-scale phenomena.

Mike is a gifted experimentalist who has taken advantage of his formal training in geology, rock mechanics, and rock physics to bring new perspectives and tools to volcanology. Through detailed and extensive laboratory work, combined with field campaigns to some of the world's most active and dangerous basaltic and andesitic volcanic systems, he has made transformative contributions towards understanding the mechanical, physical, and fluid transport properties of volcanic systems. As evidence, Mike has won the most-cited Bulletin of Volcanology paper Award not once, but twice – first in 2017 for his flagship work on Fracture and compaction of andesite, and again in 2021 for an invited review on The mechanical behaviour of volcanic rocks. Many of Mike's articles spotlight his capacity for incorporating empirical data into models of the volcano superstructure, grounding models in reality. This has been an underlying principle throughout Mike's research career, and is especially prominent in his recent work exploring the influence of hydrothermal systems on volcano stability.

Mike also has an impressive track record of service to the volcanology and rock mechanics communities: he has been formally recognised as an outstanding reviewer by the American Geophysical Union, and has served on four editorial boards – including a foundational role at the journal Volcanica. In this manner, Mike echoes the spirit of Lawrence Rickard Wager after whom this award is named, who was instrumental in the initiation of journals in his own field. Like Wager, Mike has an excellent capacity for communicating knowledge and enthusiasm for geosciences: a talent he has ably demonstrated over the last 13 years, holding teaching appointments in France, New Zealand, China, Switzerland, and Azerbaijan. In that time, Mike has supervised 11 Ph.D. students, 3 post-docs, and a research engineer.

In 1967, Professor William Alexander Deer wrote of Wager: "His acheivements were fashioned in the fire of discussion, distilled in the testing and re-testing of hypotheses, and built firmly on the patient accumulation and sifting of data…". Those who have collaborated directly with Mike – and there are many – will surely recognise the same spirit in his approach to research and teamwork. Mike demonstrates an unparalleled work ethic and unfettered inquisitiveness towards the natural world, reflected in an outstanding publication record. The problem with trying to distil Mike's achievements into a suite of publication metrics is that they are most assuredly out-of-date by the time you finish. Nevertheless, this much was true at the time of writing: since his PhD, Mike has published 189 papers – a rate of around a paper every month – and has been cited over 9400 times, and shows no sign of slowing down. Such productivity is facilitated by Mike's interdisciplinarity, his grantsmanship, his collegial nature, and his enthusiasm for broad collaboration: he has established an ever-growing network of over 300 co-authors. As one of them, it has been an enormous privilege to have known Mike as a mentor, collaborator, and friend. It is with great pleasure that I see him recognised as a worthy winner of the Wager medal.

Wager Medal Acceptance Speech

Mike setting up a triaxial deformation experiment in the laboratory

It's an incredible honour to receive the Wager Medal. I'm also honoured to have my name alongside all the fantastic scientists that have won this medal previously. I'd like to thank Jamie Farquharson and the nomination team – I know it's a lot of work to prepare such nominations – and I'd also like to thank IAVCEI. Science doesn't happen in isolation and so I'd like to thank all the amazing people I've been lucky enough to work with over the years, without whom I would not be standing here receiving this medal. I'd also like to thank my mum and dad, and of course Alex. Thanks again, I'm very honoured!

Michael Heap (14/08/2023)

3.6 2023 Walker Award for Thomas Jones

Walker Award Citation
Citation prepared by Kelly Russell

This year, IAVCEI awarded its prestigious and coveted GEORGE WALKER Award to Dr. Thomas Jones (PhD 2018) of Lancaster University. The Walker award recognizes Tom as an early-career scientist who has made diverse and outstanding contributions to the volcanological sciences via the highest quality publications in the top journals (e.g., Nature Comm., Nature Sci. Rep., Earth & Planet. Sci. Letts., Bull. Volcanology, Frontiers). Tom has a significant and laudable record of peer-reviewed publications but what is especially impressive is the breadth of his research and his capacity for scientific innovation. His publications show a dedication to answering seminal questions in our science using the fundamentals of fluid dynamics, physical experimentation, and field observations/measurements.

Tom obtained his undergraduate degree in Geology from Bristol University during which time he spent a year as an exchange student at The University of British Columbia (UBC). In addition to taking several lecture-based courses relevant to his undergraduate studies, he carried out an independent research project on "attrition" processes attending the transport of kimberlite magma. Impressively, he accomplished enough research to publish his first scientific paper (Jones et al. 2014) that provided the first quantification of the shapes and surfaces of crystals modified by the rapid ascent of magma from the deep mantle. Tom then returned to the UK for an MSci degree from Bristol University. There, working with Kathy Cashman and Alison Rust, Tom used experiments to explore processes governing crystal fragmentation during volcanic eruption (Jones et al. 2016). Subsequently, he pursued his PhD dissertation with Ed Llewellin at Durham University. His PhD research was a fluid-dynamic experimental investigation of the dynamics of basaltic fissure eruptions supported by field work on natural systems. After his PhD, Tom held a two-year University Research Fellowship at Rice University. There he worked with Helge Gonnermann on the consequences of water entrainment during explosive hydromagmatic eruptions (Hajimirza et al. 2022). He was then hired as a lecturer in Earth Sciences at the University of Liverpool prior to accepting his present position as Reader at Lancaster University.

During his dissertation at Durham University, Tom maintained a research program at UBC where he ran attrition experiments in Professor John Grace's lab (Engineering) to quantify fine ash production via secondary fragmentation during explosive eruptions (Jones et al. 2017; Jones & Russell 2017). He then designed and built a new 'attrition' apparatus to run higher energy experiments pertinent to attrition of xenoliths and crystals during turbulent transport of magma (Jones et al. 2019). These are milestone papers that have catalyzed new lines of inquiry concerning 'attrition' processes in volcanic systems.

Tom's PhD research was equally unique and illustrates his remarkable ability to marry studies of natural systems, experimentation (i.e. analogue fluid experiments) and fluid dynamics theory. The analogue experiments serve to explore and quantify the physics of eruption processes not amenable to direct observations. His PhD included collaboration with Bruce Houghton on Hawaiian eruptions. Tom's Hawaii-based studies of eruption dynamics and dyke transport integrated field data with analogue fluid experiments and provide us with new understanding of the causes and consequences of localization (i.e. lava fountains) along dyke-fed fissures (EPSL 2021).

More recently, he has published a series of papers (Nat. Comm. 2019, 2022; Bull. Volc. 2022) that explore the physics for the break-up or fragmentation of low viscosity magmas during explosive eruptions. The break-up of these melts requires new physical models than are used to explain fragmentation of higher viscosity magmas (i.e. rhyolite). Tom's background in magma physics and analogue-fluid experimentation have facilitated his efforts to provide a better explanation for magma fragmentation during the eruption of low viscosity magmas.

One letter of support for Tom's nomination noted his ability to propose "imaginative and impactful" research projects within a "highly competitive research environment". This ability recently translated into Tom being recognized and awarded the incredibly prestigious and competitive UK Research and Innovation (UKRI) Future Leaders Fellowship – up to seven years research funding and release from teaching and administration (~$2M USD). To win one of these awards is a truly significant achievement.

Tom is at an early stage in his scientific career but is destined to emerge as a leading personality in our international volcanological community. Awarding him IAVCEI's George Walker Medal has, I am sure, given him great pleasure – it has also added to the excellence of the list of previous George Walker medalists.

Walker Award Acceptance Speech

Tom looking at scoria cones in the Canary Islands

Thanks to the IAVCEI committee, my nominators and all my supportive collaborators. This award also reflects those people, it is me receiving this award but of course science is a team effort.

I am extremely honoured and feel very lucky to receive the George Walker award, not only because of the list of previous awardees but also the volcanologist – George Walker – to whom this award is named after. A pioneer of quantitative physical volcanology and a theme I try to apply to my own research.

My introduction to volcanology research came during my studies at UBC, Vancouver where Kelly Russell introduced me to kimberlites and supported my uptake of more volcanology and research credits. Since then, our continued collaboration and friendship, now lasting longer than a decade, continues to help me ask important and exciting questions.

I was then lucky enough to spend a summer at LMU, Munich and join the vibrant atmosphere there, learning the benefits of a large collaborative research team, and my continued collaboration with members such as Bettina Scheu and Ulli Kueppers is something I greatly value. My Masters research then followed on the topic of volcanic ash generation, supervised by Alison Rust and Kathy Cashman at Bristol. Their generosity with scientific ideas and mentorship throughout my career as I have held different academic positions, moved countries and institutions is something I am extremely grateful for.

My PhD studies were focussed on the fluid dynamics operating within the plumbing system of basaltic fissure eruptions. Ed Llewellin introduced me to the world of scaled laboratory experiments and rheology – methods that I continue to deploy in my research today, and I thank Bruce Houghton for being an excellent field teacher on the slopes of Kilauea, always with a superb sense of humour.

Positions at the University of Tübingen, German and Rice University, Houston Texas helped shape, and broaden my research interests into Planetary Science and Pedagogy. I am thankful for all those colleagues who interacted with me along that journey. Particular thanks go to Helge Gonnermann who was incredibly generous with his time. A short 5 min chat about numerical modelling often turned into a full afternoon session discussing science but also life as a faculty member. Conversations that have stood me in good stead as I have built my research team.

In the past year, I have been warmly welcomed to Lancaster University and thank my supportive colleagues, Mike, Hugh, Jennie, Steve, and Lionel. The talented group of graduate students and postdocs, Chiedozie, Tegan, Jodie, Marie, Natalia, Pier, and George, with whom I am lucky to work with. And lastly, but not least my family, who have supported me along this journey with care, love, and patience.

Thomas Jones (08/09/2023)

SECTION 4. COV 2024 – GUATEMALA: WHAT TO EXPECT, AND HOW TO PREPARE

The 12th iteration of the Cities on Volcanoes conference series will be held February 11th through 17th in La Antigua, Guatemala. Cities on Volcanoes is a transdisciplinary international conference that deals specifically with volcanic risk, its social and cultural context, and how societies live with and make sense of their volcanic environment. This Cities on Volcanoes (COV12) will be held for the first time in Central America. Its regular program will prominently feature the Guatemalan and regional situation and will be fully accessible to both Spanish and English speakers. COV12 is an opportunity for the global community to come together in Guatemala and exchange knowledge related to volcanoes and society. Individuals from throughout the world with interests focused on the intersection of Volcanoes and Society are invited to present and participate. Abstract submission closes by October 8th and session themes may be found at the conference website (https://congress.iavceivolcano.org/conference-sessions/).

The local steering committee including Amilcar Roca, Beatriz Consenza, Armando Pineda, Carla Chun, William Chigna, Juan Carlos Rosito, Rudiger Escobar Wolf, Heather Wright and Jeffrey Johnson and its sub-committees are coordinating the week's activities including the regular program (February 12–13, 15–16), inter-conference field trips to Pacaya or Fuego volcanoes (February 14), and optional pre- and post-conference workshops (February 11, 17) and pre- and post-conference field trips. Regular conference activities will be held in the Porta Hotel and Conference Center while cultural events in the evening are planned for other venues throughout La Antigua Guatemala.

La Antigua Guatemala is the quintessential city among volcanoes and is an ideal site for the Cities on Volcanoes mission. It is a 500-year-old UNESCO heritage site and popular tourist destination with a variety of lodging and dining options to meet a range of budgets. Conference events will be held in the colonial downtown and within reasonable walking distances. The local steering committee expects strong interest in the event and the possibility that attendance will need to be limited due to the size of the conference center. Early registration opportunities will be provided to individuals presenting at the conference on subjects aligned with the COV mission.

More information about COV12 can be found at http://cov12.org or follow on social media @citiesonvolcanoes12 (Facebook) and @COVolcanoes12 (Twitter/X).

Specific questions may be sent to cov12antigua@gmail.com

SECTION 5. LEGAL RAMIFICATIONS OF THE 2019 WHAKAARI ERUPTION (NEW ZEALAND)

Update on Whakaari Court Case

Following the December 2019 eruption on Whakaari, the New Zealand Health and Safety Regulator, WorkSafe, laid two charges against GNS Science under the Health and Safety at Work Act 2015 (HSWA). The primary charge was dismissed by the Judge in October 2022. The remaining second charge against GNS alleged that GNS failed to ensure the health and safety of helicopter pilots providing transport services for GNS staff to and from Whakaari between 4 April 2016 and 4 December 2019. This charge is unrelated to the tragic events which occurred on 9 December 2019.

In late May 2023, GNS pled guilty to a reduced charge under HSWA which acknowledges that GNS failed to sufficiently consult, co-operate and co-ordinate with the helicopter operators which took GNS staff to and from, and landed on, Whakaari between 4 April 2016 to 4 December 2019 – the date of the last such trip.

In pleading guilty to this reduced charge, GNS is acknowledging that there should have been a more structured exchange of information with the helicopter operators about the risk presented by travel to and from Whakaari on GNS staff trips.

Importantly, the reduced charge does not allege the helicopter pilots were exposed to a risk of death or serious injury as a result of this breach.

GNS is yet to be sentenced on this charge.

The trial involving the remaining defendants is due to start on 10th July and run for 2–3 months.

Whilst we are unable to make any further comment while this remains an active legal matter, GNS Science extends its ongoing sympathy to the families of the victims and recognises the ongoing impacts the 2019 eruption, and subsequent investigations, continue to have on the wider community.

GNS Science (08/07/2023)

See also: https://www.gns.cri.nz/news/whakaari-update-gns-science-pleads-guilty-to-reduced-charge-under-the-health-and-safety-at-work-act-2015-hswa/