CURRICULUM VITAE

Benoit Taisne
Associate Professor
Asian School of the Environment

Academic Qualifications

2008	PhD (Geophysics), *Institut de Physique du Globe de Paris*, CNRS
2004	MSc (Geophysics), *Institut de Physique du Globe de Paris*
2004	MSc (Earth Sciences), *École Normale Supérieure de Paris*
2002	BSc (Earth Sciences), *École Normale Supérieure de Paris*, UPMC

Professional Qualifications / Memberships

2012 - Present	Member of the Asia Oceania Geosciences Society
2008 - Present	Member of the European Geophysical Union
2006 - Present	Member of the American Geophysical Union
2004 - Present	Member of the International Association of Volcanology and Chemistry of the Earth's Interior

Summary of Working Experience

2020 – Present	Associate Professor, Asian School of the Environment, NTU
2020 – Present	Associate Chair (Research/Graduate), Asian School of the Environment, NTU
2012 – Present	Principal Investigator, Earth Observatory of Singapore, NTU
2012 – 2020	Assistant Professor, Asian School of the Environment, NTU
2010 – 2012	Postdoctoral Researcher, Montserrat Volcano Observatory
2008 – 2010	Postdoctoral Researcher, Seismological laboratory of the Institut de Physique du Globe de Paris
2008	Seismologist, Montserrat Volcano Observatory

Academic Honours and Awards

Year	Academic Honour / Award
2019	Recipient, 2018 Nanyang Education Award (School)
2021	Nominated, 2020 Nanyang Education Award (College)

RESEARCH SUMMARY

Key Areas of Research

- Ground-based and remote volcano monitoring.
- Numerical and analogue modelling.
- Early warning systems, local and regional.

Public Lecture

1. Taisne, B. (August 2015), The Sound of Nature's Fury, AOGS, Singapore

Keynote Presentations

1. Taisne, B. (June, 2014) New Innovative Approaches for Monitoring Mayon, for the 200th Year Commemoration of the 1814 Plinian Eruption of Mayon, Legazpi, Philippines

2. Taisne, B. (August, 2013) Density control on formation of crustal magma storage system, Goldschmidt Conference, Florence, Italy

Plenary

1. Taisne, B. (February, 2018), Can you hear me? From source to stakeholders, how can we harvest infrasound signals and what can they offer developing megacities?, AOGS-EGU NatHazards, Taal, Philippines

2. Taisne, B. (March 2016), The Sound of Nature's Fury, IPS, Singapore

3. Taisne. B. (November, 2014) How volcano seismology unravelled the beauty of the dynamics of magma propagation, ASC, Manila, Philippines

Invited Presentations

1. Taisne, B., Perttu, A. (2017), Infrasound's capability to detect and characterise volcanic events, from local to regional scale, EGU General Assembly, Oral, Invited

2. Taisne, B. (2014), New Innovative Approaches for Monitoring Mayon, 200th Year Commemoration of the 1814 Plinian Eruption of Mayon, Oral, Invited Keynote

3. Taisne, B. (2014), How volcano seismology unravelled the beauty of the dynamics of magma propagation, ASC, Oral, Invited Plenary

4. Taisne, B. and Peltier, A. (2014) Toward joint inversion of monitoring data with physical models during unrest periods, Eos Trans. AGU, 95(52), Fall Meet. Suppl., Abstract V34B-06, Oral, Invited

5. Taisne, B. (2013) Density control on formation of crustal magma storage system, Goldschmidt, Oral, Invited Keynote

6. Taisne, B., Jaupart, C. and Tait, S. (2012), New insights on dyke width and upward velocity, Geophysical Research Abstract, EGU General Assembly, Oral, Invited

7. Taisne, B. and Brenguier, F. (2012), Complex dynamics of dyke propagation deduced from seismic monitoring and physical models, Geophysical Research Abstract, EGU General Assembly, Oral, Invited

8. Taisne, B. (2011), Dynamics of a long-lived fissure eruption, Eos Trans. AGU, 92(52), Fall Meet. Suppl., Abstract V32A-08, Oral, Invited

9. Taisne, B. (2010), Vagaries of magma ascent at shallow levels: Physical principles and field data analysis, G-COE symposium 2010: Dynamic Earth and Heterogeneous Structure, Tohoku University, Japan, Oral, Invited

Solicited university seminars

1. Taisne, B., Potential for mitigating the impact of explosive volcanic event using remote infrasound for eruption's source parameters characterisation, The Institute of Earth Sciences seminar, The Hebrew University of Jerusalem, January 2021

2. Taisne, B., Potential for mitigating the impact of explosive volcanic event using remote infrasound for eruption's source parameters characterisation, Earth Observatory of Singapore, Nanyang Technological University, January 2021

3. Taisne, B., Potential for mitigating the impact of explosive volcanic event using remote infrasound for eruption's source parameters characterisation, Institut of Geophysics & Tectonics, School of Earth & Environment, The University of Leeds, March 2021

4. Taisne, B., From gelatine to volcanic ash, Institute of Geophysics and Tectonics, University of Leeds, UK, June 2017

5. Taisne, B., Dynamics of magma movements using radiated seismic energy, Earthquake Research Institute, University of Tokyo, Japan, March 2013

6. Taisne, B., How to stop a propagating dyke? –Imaging magma transport in real time, Earth Observatory of Singapore, Singapore, November 2011

7. Taisne, B., The physics of dyke propagation, Centro de Geociencias, UNAM, Campus Juriquilla, Mexico, March 2011

8. Taisne, B., Conditions for the Arrest of a Vertical Propagating Dyke, Institute of Geophysics and Tectonics, University of Leeds, England, October 2010

9. Taisne, B., Migration du magma et éruption: Analyse des données d'observatoires et modèles dynamiques, Laboratoire de Géologie, École normale supérieure, Paris, France, October 2010

10. Taisne, B., The effect of solidification on a propagating dike, National Research Institute for Earth Science and Disaster Prevention, Tsukuba, Japan, July 2010

11. Taisne, B., The effect of solidification and stratification on the dynamics of dyke propagation, implication for field data analysis, Earthquake Research Institute, University of Tokyo, Japan, July 2010

12. Taisne, B., The effect of freezing and stratification on the dynamics of dyke propagation, Department of Earth Sciences, University of Bristol, England, January 2010

13. Taisne, B., Migration du magma et éruption : Analyse des données d'observatoires et modèles dynamiques, Laboratoire de Géophysique Interne et Tectonophysique, Université de Savoie, Chambéry, France, January 2010

14. Taisne, B., Vicissitudes de l'ascension des magmas à travers la croûte terrestre, Laboratoire Magmas et Volcans, Université Blaise Pascal, Clermont Ferrand, France, October 2008

15. Taisne, B., Propagation d'un dyke sujet à la solidification : Implications pour l'analyse des données sismiques, Laboratoire de Géophysique Interne et Tectonophysique, Université de Savoie, Chambéry, France, October 2008

Research Funding

<For Co-PI grants, or where grants are from larger block grants to NTU, pls indicate both share of grant and total grant amount, e.g. "300,000 (600,000)".>

External Grants

Role	Year	Project Title	Amount (S$)	Source of Grant
PI	Applied (expected outcome in June 2021)	Linking analogue modelling to monitoring and petrology, in order to better understand magmatic processes	1,162,182	MOE-Tier2
Co-PI	2019 - 2022	Evaluating unrest and potential hazards at Changbaishan volcano, China	240,000 (499,890)	NRF-NSFC
PI	2017 - 2021	Field And Experimental Investigation Of Magma Transport And Arrest: The Effects Of Discontinuities And Heterogeneity In Earth's Crust	422,280	NRF-ISF
PI	2016 - 2018	Probability of volcanic ash in ASEAN airspace	454,000	Civil Aviation Authority of Singapore
Co-PI	2015 - 2018	Dynamics of large volcano-magmatic systems.	20,000 (334,341) 13,161 (220,000 in EUR)	Université Sorbonne Paris Cité
Co-PI	2015 - 2017	Causes, processes, and forecasts of eruptions of open-vent volcanoes in SE Asia	200,000(559,730)	MOE AcRF Tier 2
PI	2012 - 2014	Study on Likelihood of Prolonged Period of Volcanic Ash Coverage over Singapore and the Singapore Flight Information Region	288,000	Civil Aviation Authority of Singapore

Internal Grants

Role	Year	Project Title	Amount (S$)	Source of Grant
Co-PI	2019 - 2021	Detecting and Tracking Volcanic Ash Using Social Media Data	99,000(198,000)	NTU-ACE
Co-PI	2018-2019	Efficient Markov Chain Monte Carlo Method for Volcanic Data Inversion	25,000(50,000)	NTU-CoS

PI	2017 - 2019	Dynamics of dyke propagation	792,223	MOE/RCE
PI	2015 - 2020	Improving Infrasound Event Detection and Characterization in Southeast Asia	1,673,744	MOE/RCE
PI	2019 - 2020	Independently Triggered Analysis for Eruption Source Parameter Retrieval from Infrasound	186,375	MOE/RCE
PI	2019 - 2020	Probability of Disruption to Life in SE Asia due to Long Range Transport of Volcanic Ash	36,954	MOE/RCE
PI	2019 - 2022	A multi-disciplinary integrated approach to natural laboratory volcanoes	1,545,048	MOE/RCE
PI	2016 - 2019	Real Time Spatial Sonification Of Nature's Furies Using Infrasound	50,186	MOE AcRF Tier 1
PI	2013 - 2019	Volcanic eruption: location and characterization using Infrasound	807,203	MOE/RCE
PI	2014 - 2019	Laboratory volcanoes: Mayon (Philippines), Marapi, Gede and Salak (Indonesia).	2,289,421	MOE/RCE
PI	2013 - 2016	MUON tomography at Mayon volcano, Philippines. Toward a better understanding of open-vent systems	512,769	MOE/RCE

Citation Summary

Database	Citation Count		h-index
	without self-citations	with self-citations	
Scopus	-	835	15
Web of Science (SCI) / publons	-	763	14
Google Scholar		1034	17

Publications *(in chronological order, starting with the most recent)*

Bold	Denotes main author
**	Denotes directly supervised research staff, i.e. POs, RAs, RFs, postdocs, etc.
*	Denotes PhD students (supervised or co-supervised)
##	Denotes Tier 1A papers
#	Denotes Tier 1B papers

Journal Papers

1. Arellano, S. et al. (2021) Synoptic analysis of a decade of daily measurements of SO2 emission in the troposphere from volcanoes of the global ground-based Network for Observation of Volcanic and Atmospheric Change. *Earth Syst. Sci. Data*, 13, 1167–1188. Doi: 10.5194/essd-13-1167-2021 [39 co-authors including PhD student Charlotte Barrington]
2. *Nurfiani, D., Wang Xin, Gunawan, H., Triastuty, H., Hidayat, D., Wei, S., Taisne, B., and Bouvet de Maisonneuve, C. (2021) Combining petrology and seismology to unravel the plumbing system of a typical arc volcano: An example from Marapi, West Sumatra, Indonesia. *Geochemistry, Geophysics, Geosystems.* Doi: 10.1029/2020GC009524 ##
3. *Manta, F., Occhipinto, G., Hill, E., **Perttu, A., Assink, J. and Taisne, B. (2021) Correlation between GNSS-TEC and eruption magnitude supports the use of ionospheric sensing to complement volcanic hazard assessment. *J. Geophys. Res.* doi: 10.1029/2020JB020726 ##
4. Williams, R., **Perttu, A. and Taisne, B. (2020) Processing of Volcano Infrasound using Film Sound Audio Post Production Techniques to Improve Signal Detection via Array Processing. *Geosci. Lett.* doi: 10.1186/s40562-020-00158-4 #
5. *Pansino, S. and **Taisne, B.** (2020) Shear wave measurements of a gelatine's Young's modulus. *Front. Earth Sci.* doi: 10.3389/feart.2020.00171 #
6. **Perttu, A., **Taisne, B.**, De Angelis, S., Assink, J., **Tailpied, D. and Williams, R. (2020) Estimates of plume height from infrasound for regional volcano monitoring. *J. Volcanol. Geoth. Res. doi: 10.1016/j.jvolgeores.2020.106997* ##
7. **Perttu, A., Caudron, C., Assink, J.D., Metz, D., **Tailpied, D., Perttu, B., Hibert, C., *Nurfiani, D., Pilger, C., Muzli, M., Fee, D., Andersen, O.L., **Taisne, B.** (2020) Reconstruction of the 2018 tsunamigenic flank collapse and eruptive activity at Anak Krakatau based on eyewitness reports, seismo-acoustic and satellite observations. *Earth and Planetary Science Letters*. doi: 10.1016/j.epsl.2020.116268 ##
8. Pistone, M., Taisne, B. and Dobson, K. (2020) Editorial: Volumes, Timescales, and Frequency of Magmatic Processes in the Earth's Lithosphere. *Front. Earth Sci.* doi:10.3389/feart.2020.00118. #
9. *Manta, F., **Emadzadeh, A. and **Taisne, B.** (2019) New insight into a volcanic system: analogue investigation of bubble-driven deformation in an elastic conduit. *J. Geophys. Res.* doi: 10.1029/2019JB017665.##
10. Pilger, C., Gaebler, P., Ceranna, L., Le Pichon, A., Vergoz, J., **Perttu, A., **Tailpied, D. and **Taisne, B.** (2019) Infrasound and seismoacoustic signatures of the

28 September 2018 Sulawesi super-shear earthquake. *Nat. Hazards Earth Syst. Sci.*, 19, 2811–2825. doi: 10.5194/nhess-19-2811-2019. [##]

11. *Pansino, S., **Emadzadeh, A. and **Taisne, B.** (2019) Dike Channelization and Solidification: Time Scale Controls on the Geometry and Placement of Magma Migration Pathways. *J. Geophys. Res.* doi: 10.1029/2019JB018191.[##]
12. **Tan, C.T., **Taisne, B.**, Neuberg, J. and Basuki, A. (2019) Real-time assessment of potential seismic migration within a monitoring network using Red-flag SARA. J*. Volcanol. Geoth. Res.* doi: 10.1016/j.jvolgeores.2019.07.004. [##]
13. **Caudron, C., Girona, T., Taisne, B., Suparjan, S., Gunawan, H., Kristianto, K., and Kasbani, K. (2019) Change in seismic attenuation as a long-term precursor of gas-driven eruptions. *Geology* 47 (7): 632-636. doi: 10.1130/G46107.1 [##]
14. *Manta, F. and **Taisne, B.** (2019) A Bayesian approach to infer volcanic system parameters, timing, and size of Strombolian events from a single tilt station. *J. Geophys. Res.* doi: 10.1029/2018JB016882.[##]
15. *Pansino, S. and **Taisne, B.** (2019) How Magmatic Storage Regions Attract and Repel Propagating Dikes. *J. Geophys. Res.* doi: 10.1029/2018JB016311.[##]
16. *Derrien, A. and **Taisne, B.** (2019) 360 Intrusions in a Miniature Volcano: Birth, Growth, and Evolution of an Analog Edifice. *Front. Earth Sci.*, doi: 10.3389/feart.2019.00019.[#]
17. Theys, N., Hedelt, P., De Smedt, I., Lerot, C., Yu, H., Vlietinck, J., Pedergnana, M., Arellano, S., Galle, B., Fernandez, D., Carlito, C.J.M., *Barrington, C., Taisne, B., Delgado-Granados, H., Loyola, D. and Van Roozendael, M. (2019) Global monitoring of volcanic SO_2 degassing with unprecedented resolution from TROPOMI onboard Sentinel-5 Precursor. *Sci Rep*; 9(1):2643. doi: 10.1038/s41598-019-39279-y.[#]
18. **Caudron, C., **Taisne, B.**, Neuberg, J., Jolly, A. D., Christenson, B., Lecocq, T., Suparjan, Syahbana, D. and Suantika G. (2018), Anatomy of phreatic eruptions, *Earth, Planets and Space*, 70:168, doi:10.1186/s40623-018-0938-x.[#]
19. Jiao, L., Tapponnier, P., Costa, F., Donzé, F.-V., Scholtès, L., Taisne, B. and Wei, S. (2018) Necking and fracking may explain stationary seismicity and full degassing in volcanic silicic spine extrusion. *Earth Planet. Sci. Lett.* (503), 47-57, doi:10.1016/j.epsl.2018.09.023.[##]
20. Peltier, A., F. Beauducel, N. Villeneuve, V. Ferrazzini, A. Di Muro, A. Aiuppa, A. Derrien, K. Jourde, B. Taisne (2016), Deep fluid transfer evidenced by surface deformation during the 2014-2015 unrest at Piton de la Fournaise volcano, *J. Volcanol. Geoth. Res*., 321, 140-148, doi :10.1016 :j.jvolgeores.2016.04.031.[##]
21. **Caudron, C., **Taisne, B.**, **Perttu, A., Garcés, M., Silber, E. A., Mialle, P. (2016) Infrasound and seismic detections associated with the 7 September 2015 Bangkok fireball. *Geosci. Lett*. 3:26. doi:10.1186/s40562-016-0058-z
22. Odbert, H.M., Taisne, B. and Gottsmann, J (2015), Deposit loading and its effect on co-eruptive volcano deformation. *Earth Planet. Sci. Lett*., 413:186-196, doi: 10.1016/j.epsl.2015.01.005.[##]
23. Savage M. K., Ferrazzini, V., Peltier, A., Rivemale, E., Mayor, J., Schmid, A., Brenguier, F., Massin, F., Got, J.-L., Battaglia, J., DiMuro, A., Staudacher, T., Rivet, D., Taisne, B. and Shelley, A. (2015), Seismic anisotropy and its precursory change before eruptions at Piton de la Fournaise volcano, La Réunion, *J. Geophys. Res.*, doi: 10.1002/2014JB011665.[##]
24. Girona, T., Costa, F., Taisne, B., Aggangan, B. J. and Ildefonso S. (2015) Fractal degassing from Erebus and Mayon volcanoes revealed by a new method to monitor H_2O emission cycles, J*. Geophys. Res.*, doi: 10.1002/2014JB011797.[##]
25. Hibert, C., Mangeney, A., Polacci, M., Di Muro, A., Vergniolle, S., Ferrazzini, V., Peltier, A., Taisne, B., Burton, M., Dewez, T., Grandjean, G., Dupont, A., Staudacher, T., Brenguier, F., Kowalski, P., Boissier, P., Catherine P. and Lauret F. (2015) Towards continuous quantification of lava extrusion rate: results from the multidisciplinary analysis of the 2 January 2010 eruption of Piton de la Fournaise volcano, La Réunion, *J. Geophys. Res.*, doi: 10.1002/2014JB01176.[##]
26. Douillet, G. A., Taisne, B., Tsang-Hin-Sun, È., Müller, S. K., Kueppers, U., and Dingwell, D. B. (2015) Syn-eruptive, soft-sediment deformation of dilute pyroclastic

density current deposits: triggers from granular shear, dynamic pore pressure, ballistic impacts and shock waves, *Solid Earth Discuss.*, 6, 3261-3302, doi: 10.5194/sed-6-3261-2014

27. **Caudron, C., **Taisne, B.**, Garcés M. and Le Pichon, A. (2015), On the use of remote infrasound and seismic stations to constrain the eruptive sequence and intensity for the 2014 Kelud eruption, *Geophys. Res. Lett.*, 42, doi : 10.1002/2015GL064885.[##]
28. **Caudron, C., **Taisne, B.**, Kugaenko, Y. and Saltykov, V. (2015) Magma migration at the onset of the 2012-13 Tolbachik eruption revealed by Seismic Amplitude Ratio Analyses, J*. Volcanol. Geoth. Res.*, Special issue on Tolbachik 2012-13 eruption, 307, 60-67, doi:10.1016/j.jvolgeores.2015.09.010.[##]
29. Christopher, T., M. Edmonds, B. Taisne, H. Odbert, A. Costa, V. Hards and G. Wadge (2014), Periodic sulphur dioxide degassing from the Soufrière Hills Volcano related to deep magma supply. In: The Role of Volatiles in the Genesis, Evolution and Eruption of Arc Magmas. Eds G. Zellmer and M. Edmonds. *Geological Society of London Special Publication*, 410, DOI : 10.1144/SP410.11
30. Girona, T., Costa, F., Newhall, C. and Taisne, B. (2014), On depressurization of volcanic magma reservoirs by passive degassing, *J. Geophys. Res.*, DOI : 10.1002/2014JB011368.[##]
31. Rivaleta, E., Taisne, B., Bunger, A. and Katz, R. (2014), A review of mechanical models of dike propagation: schools of thought, results and future directions, *Tectonophysics*, 638:1-42, doi : 10.1016/j.tecto.2014.10.003.[##]
32. Hetenyi, G., Taisne, B., Garel, F., Médard, É., Bosshard, S. and Mattsson, H. B. (2012), Scales of columnar jointing in igneous rocks: field measurements and controlling factors, *Bull. Volcanol.* 74(2) :457-482, doi : 10.1007/s00445-011-0534-4.[#]
33. Roult, G., Peltier, A., Taisne, B., Staudacher, T., Ferrazzini, F., Di Muro, A. and OVPF Team (2012), A new comprehensive classification of the Piton de la Fournaise activity spanning the 1985-2010 period. Search and analysis of short-term precursors from a broad-band seismological station, *J. Volcanol. Geoth. Res.*, doi : 10.1016/j.jvolgeores.2012.06.012.[##]
34. **Taisne, B.** and Tait, S. (2011), The effect of solidification on a propagating dike, *J. Geophys. Res.*, 116, B01206, doi : 10.1029/2009JB007058.[##]
35. **Taisne, B.**, Tait, S. and Jaupart, C. (2011), Conditions for the arrest of a vertical propagating dyke. *Bull. Volcanol.* 73(2) : 191–204, doi : 10.1007/s00445-010-0440-1. [#]
36. **Taisne, B.** and Jaupart, C. (2011), Magma Expansion and Fragmentation in a Propagating Dyke, *Earth Planet. Sci. Lett.*, 301, 146-152, doi : 10.1016/j.epsl.2010.10.038. [##]
37. **Taisne, B.**, Brenguier, F., Shapiro, N.M. and Ferrazzini, V. (2011), Imaging the dynamics of magma propagation using radiated seismic intensity, *Geophys. Res. Lett.*, 38, L04304, doi : 10.1029/2010GL046068. [##]
38. **Taisne, B.** and Tait, S. (2009), Eruption versus intrusion? Arrest of propagation of constant volume, buoyant, liquid-filled cracks in an elastic, brittle host, *J. Geophys. Res.*, 114, B06202, doi : 10.1029/2009JB006297.[##]
39. **Taisne, B.** and Jaupart, C. (2009), Dike Propagation Through Layered Rocks, *J. Geophys. Res.*, 114, B09203, doi : 10.1029/2008JB006228.[##]
40. **Taisne, B.,** and Jaupart, C. (2008), Magma degassing and intermittent lava dome growth, *Geophys. Res. Lett.*, 35, L20310, doi : 10.1029/2008GL035432.[##]

Book Chapters

1. **Taisne B.,** **Perttu A., **Tailpied D., **Caudron C., Simonini L. (2019) Atmospheric Controls on Ground- and Space-Based Remote Detection of Volcanic Ash Injection into the Atmosphere, and Link to Early Warning Systems for Aviation Hazard Mitigation. In: *Le Pichon A., Blanc E., Hauchecorne A. (eds) Infrasound Monitoring for Atmospheric Studies*. Springer, Cham doi:10.1007/978-3-319-75140-5_34
2. Gonnermann, H.M. and Taisne, B. (2015), Magma Transport in Dikes, in *2nd edition of the Encyclopaedia of Volcanoes* doi: 10.1016/B978-0-12-385938-9.00010-9

3. Tait, S. and Taisne, B. (2013), The dynamics of dike propagation. *In Modeling Volcanic Processes : The Physics and Mathematics of Volcanism* (Edited by Drs Sarah Fagents, Tracy Gregg and Rosaly Lopes), Chapter 3, Cambridge University Press, ISBN : 9780521895439

Working Papers / Pipeline

1. Tailpied, D. et al. (under review) Assessing Uncertainties of Infrasound Network Detection Capabilities: Application to the Euro-Mediterranean and Southeast Asian Region, *GJI*

Conference Papers

1. Perttu, A., Taisne, B., Hidayat, D., Kristianto, K., Iguchi, M., Caudron, C., Lube, G. and Gunawan, H. (2020) Wet vs. Dry the Impact of Water on Infrasound Eruption Signals in Crater Lake Volcanoes: April 2020 Anak Krakatau Case Study, Eos Trans. AGU, 101(52), Fall Meet. Suppl., Abstract S006-08, Oral.
2. Taisne, B., Perttu, A., Tailpied, D., Jeng Sze Ng, A., Williams, R. and Whilldin, D. (2020) Step-by-Step... Getting Remote Infrasound Into Real-Time Estimate of Eruption Dynamics, Eos Trans. AGU, 101(52), Fall Meet. Suppl., Abstract V029-06, Oral.
3. Pansino, S., Emadzadeh, A., Taisne, B., Kamhaji, L. and Agnon, A. (2020) Let it flow: forensic analysis of crystals and field observations to retrieve dynamic of empanelment, Eos Trans. AGU, 101(52), Fall Meet. Suppl., Abstract V025-06, Oral.
4. Perttu, A., Caudron, C., Assink, J., Metz, D., Taisne, B., Tailpied, D., Perttu, B., Hibert, C., Fee, D., Nurfiani, D., Pilger, C., Muzli, M. and Andersen, Ö. (2019) Reconstruction of the December 2018 Anak Krakatau Eruptive Activity Based on Eyewitness Reports, and Remote Seismo-acoustic and Satellite Observations, Eos Trans. AGU, 100(52), Fall Meet. Suppl., Abstract V44B-07, Oral.
5. Tailpied, D., Perttu, A. and Taisne, B. (2019) Elaborating an early warning prototype to better monitor volcanic eruptions in SEA overcoming ubiquitous difficulties of the region, Eos Trans. AGU, 100(52), Fall Meet. Suppl., Abstract V51K-0253, Poster.
6. Manta, F., Occhipinto, G., Hill, E., Perttu, A., Assink, J. and Taisne, B. (2019) Correlation between GNSS-TEC and eruption magnitude supports the use of ionospheric sensing to complement volcanic hazard assessment, Eos Trans. AGU, 100(52), Fall Meet. Suppl., Abstract V51K-0250, Poster.
7. Perttu, A., Taisne, B. (2019) Volcano Infrasound Beyond Eruption Counts: Source Parameter Calculation in Research and Operations: IASPEI/IAVCEI Inter-Association Commission on “Volcano Seismology & Acoustics” Workshop, Poster
8. Tan, C. T., Taisne, B., Sevilla, W.I.G., Clarito, C.J.M, Luo, Y., Chardot, L., Caudron, C. (2019) Mining continuous seismic waveform to quantify our ability to see significant changes in a volcanic system, AOGS Annual Meeting, Poster
9. Luo, Y., Taisne, B. and Tan, C. T. (2019) Evaluate the Influence of Instrumental Bias on Single Analysis Based on Network Geometry, AOGS Annual Meeting, Poster
10. Nurfiani, D., Wang X., Kristianto, K., Triastuty, H., Hidayat, D., Wei, S., Taisne, B. and Bouvet de Maisonneuve, C. (2019) Combining petrologic and seismic studies to constrain magma storage conditions beneath Marapi volcano, West Sumatra, Indonesia, AOGS Annual Meeting, Poster
11. Perttu, A., Taisne, B., Luo, Y., Clarito, C.J.M., Sevilla, W.I.G. (2019) Near Real Time Estimation of Plume Height for the Mayon 2018 Eruption from Infrasound, AOGS Annual Meeting, Oral
12. Pansino, S., Emadzadeh, A. and Taisne, B. (2019). Time makes a difference: Time interval controls on magma migration geometry, AOGS Annual Meeting, Oral
13. Tailpied, D., Taisne, B. and Perttu A. (2019) Status of ash clouds detectability using long-range infrasound in Southeast Asia, AOGS Annual Meeting, Oral.

14. Whilldin, D., Perttu, A. and Taisne, B. (2019) Deployment of Seismo Wave MB3d at Nanyang Technological University, Science and Technology Conference, CTBTO.
15. Emadzadeh, A., Pansino, S., Manta, F. and Taisne, B. (2019) Twinkle, sparkle and follow the flow: conduit and dyke flow dynamics from PIV and PTV, Geophysical Research Abstract, EGU General Assembly, Oral
16. Perttu, A., Tailpied, D. and Taisne, B. (2019) Forensic Analysis of Infrasound Signals from the 2018 Palu Earthquake, Indonesia, Geophysical Research Abstract, EGU General Assembly, Oral
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139. Fargetton, T., Taisne, B. and Tait, S. (2006), Solidification Effect on an Upwardly Propagating Crack, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract V41C-1746, Poster

TEACHING SUMMARY

Key Courses Taught (Current Year and Last 2 years)

Course Code	***Course Title***	***Academic Year***	***Course Level***	***Type*** *(Lecture, Tutorial, etc.)*	***Semester***
ES1006	Introduction to field experience	AY14 – AY20	UG	Field	Sem 1
ES2001	Computational Earth System Science	AY15 – AY20	UG	Lecture and Tutorial	Sem 1
ES3004/7020	Introduction to Geophysics	AY16 – AY20	UG/PG	Lecture and Tutorial	Sem 2
ES4904/7007	Volcanology	AY18 & AY20	UG/PG	Lecture and Tutorial	Sem 2
TOPS-USP	Travel Overseas Programme for Scholars	AY20	UG	Field faculty mentor	Sem 2

Courses Taught (since joining NTU)

Course Code	***Course Title***	***Academic Year***	***Course Level***
ES7002	Research Skills in Earth System Science	AY13	PG
ES1006	Introduction to field experience	AY14	UG
ES7002	Research Skills in Earth System Science	AY14	PG
ES2001	Computational Earth System Science	AY15	UG
ES7003	Communication Skills for Scientists	AY15	PG
ES1006	Introduction to field experience	AY15	UG
ES2001	Computational Earth System Science	AY16	UG
ES7003	Communication Skills for Scientists	AY16	PG
ES3004/ES7020	Introduction to Geophysics	AY16	UG/PG
ES7007	Volcanology	AY16	PG
ES1006	Introduction to field experience	AY16	UG
ES2001	Computational Earth System Science	AY17	UG
ES3004/ES7020	Introduction to Geophysics	AY17	UG/PG
ES1006	Introduction to field experience	AY17	UG
ES2001	Computational Earth System Science	AY18	UG
ES3004/ES7020	Introduction to Geophysics	AY18	UG/PG
ES7007	Volcanology	AY18	PG
ES1006	Introduction to field experience	AY18	UG
ES2001	Computational Earth System Science	AY19	UG
ES3004/ES7020	Introduction to Geophysics	AY19	UG/PG
ES1006	Introduction to field experience	AY19	UG
ES2001	Computational Earth System Science	AY20	UG
ES3004/ES7020	Introduction to Geophysics	AY20	UG/PG
ES7007	Volcanology	AY20	UG/PG
ES1006	Introduction to field experience	AY20	UG
TOPS-USP	Join the Travel Overseas Programme for Scholars as a faculty mentor	AY20	UG

UG: Undergraduate course level
PG: Postgraduate course level

Academic Supervision and Mentoring

PhD students

No.	PhD Student	Period	Role	Thesis/ Project Title	Current Status
Current					
1	Dini Nurfiani	2016 - present	Co-supervisor	Combining petrology and seismology to constrain magma storage conditions beneath Marapi volcano	QE passed
2	Yang Juntao	2017 - present	Co-supervisor	Bayesian inversion for models in turbulence and fluid mechanics	QE passed
3	Charlotte Barrington	2018 - present	Co-supervisor	Using volcanic gases to understand persistently degassing volcanoes	QE passed
4	Vanesa Burgos	2019 – present	Co-supervisor	Application of volcanic analogues for short- and long-term hazard assessment at long-dormant volcanoes	QE passed
5	Luo Yizhou	2019 – present	Sole Supervisor	Investigating monitoring network and technic bias in our ability to forecast eruptions	QE passed
6	Andika Bayu Aji	2020 – present	Sole Supervisor	Comprehensive analysis of a recent eruptive event in Indonesia	Pre-QE
Graduated					
1	Stephen Pansino	2014 - 2019	Main Supervisor	An Experimental Approach to Dike Propagation: The Effects of Stress, Solidification and Internal Flow	Research Fellow at Durham University, UK
2	Fabio Manta	2014 - 2019	Sole Supervisor	Multivariate Approaches To Infer Volcanic System Parameters, Timing, and Size Of Explosive Eruptions	Research Fellow at IPGP, FR

Undergraduate Students Supervised

No. Graduated (Since joining NTU)					No. Currently Supervising				
CN-Yang	**M&T**	**(O)FYP**	**URECA**	**Research project**	**CN-Yang**	**M&T**	**(O)FYP**	**URECA**	**Research project**
8	3	3	4	2	1	0	1	0	2

CN-Yang refer to CN-Yang students doing semester long research project
M&T refer to group of students doing a Making & Tinkering project
(O)FYP refer to students doing local or Oversea Final Year Project for which I am the NTU mentor
URECA refer to students joining the Undergraduate Research Experience on CAmpus program
Research project refer to summer project from students from other school of ASE module for research experience.

Post-doctoral fellows

No.	Post-doc Fellow	Appointment	Period	Thesis/ Project Title	Current Status
In employment					
1	Dr. Dorianne Tailpied	Research Fellow	2017 - present	Remote eruption detectability using infrasound	
2	Dr. Adel Emadzadeh	Research Fellow	2017 - present	Flow and strain within and around migrating magma, analogue approaches	
Left service					
1	Dr. Stephen Pansino	Research Fellow	2019 – 2020	Experimental approach to feeder/non-feeder dykes	Research Fellow at Durham Univ., UK
2	Dr. Lauriane Chardot	Research Fellow	2016 - 2019	Forecasting eruptive activity based on accelerating seismicity at the Laboratory volcanoes	Responsible of scientific communication at the Communication and Engagement office of EOS
3	Dr. Corentin Caudron	Research Fellow	2015 – 2016	Remote ground based geological monitoring tools	Assistant Professor at IRD, France.
4	Dr. Patrick Whelley	Research Fellow	2013 – 2014	What is the decadal probability of getting volcanic ash in Singapore's airspace?	Research scientist at university Maryland, affiliated to NASA

Teaching Awards / Recognition

Year received	Teaching Award / Recognition
2019	Nanyang Education Award 2018 (school award)
Award won by students under my supervision	
2018	Mentored group of undergraduate students won Best Project for the Making & Tinkering for their work on optimizing the use of drone by coupling them with weather balloon (battery efficient and increase usable flight time)
2017	Mentored undergrad student, Darren Tan Pei Kun, received the CN Yang Residential Mentor Award for Research for his work on assessing potential of open CCTV data to detect deformation at associated volcanoes.
2016	Mentored undergrad student, Pei Shan Ang, received the CN Yang Residential Mentor Award for Research for her work on infrasound deployment in Singapore to assess local sources.

SERVICE SUMMARY

School

Period of appointment	Role
2020 – present	Associate Chair (Research)
2017 – 2020	Assistant Chair of Graduate Education. For which I'm taking an active role in our graduate student enrolment and wellbeing. In charge of the Teaching Assistant duty assignment for the Asian School of the Environment
2017 – present	Safety Committee Member
2013 – present	Chair of the visiting professor program of the Earth Observatory of Singapore that aims to favour/strengthen collaboration with other international leading institutes
2013 – 2017	In charge of the Teaching Assistant duty assignment for the Asian School of the Environment
2012 – present	Participation to several guided tour of EOS and ASE for VIPs
2013 – 2015	Co-organizer of EOS/ASE seminars
February 2016	Internal examiner for Annie Elizabeth Grace Winson's PhD: "Multiparametric Quantification of Volcanic Hazards for Eruption Forecasting and Communication"
January 2017	Internal examiner for Shawn Sim's PhD: "Run-Up Related to Onshore Tsunami Flows"

University

Period of appointment	Role
2019 – present	Member of the Graduate Education and Lifelong Learning Committee
2020 – present	Member of the Graduate College Executive Committee
2020 – present	Member of the Research Integrity Committee
2020 – present	NTUitive Fellow representative for ASE

Academic Community

Period of appointment	Role
2012 - present	Organize regular sessions for AOGS, AGU and EGU meetings
2015 - 2019	Associate Editor of Earth, Planets and Space (IF: 2.736)

2014 and 2018	Organized sessions at Cities on Volcanoes 8 and 10
2017 – 2019	Editor of special volumes “Volumes, Timescales, and Frequency of Magmatic Processes in the Earth’s Lithosphere – Part I and Part II” for Frontiers (IF: 2.892)

Other Service

Period of appointment	Role
2020 – 2021	Treasurer for Asia Oceania Geosciences Society
2021	Co-chair of the AOGS geoscience challenge
2019 – 2020	Assistant Treasurer for Asia Oceania Geosciences Society
June 2019	External examiner for Qualifying Examination at the International Joint Graduate Program in Earth and Environmental Sciences, Tohoku University, Japan
November 2018	External examiner for Rogers Bill Cordova Hinojosa’s PhD: “Modelisation de la rupture d’un milieu fragile soumis a l’injection d’un fluids visqueux. Analyse de la singularite en pression et du decollement en pointe de fissure”, Universite Paris Saclay, ENSTA ParisTech, France
November 2017	External examiner for Stefano Urbani’s PhD: “Lateral vs vertical propagation of dikes through analogue modeling”, University of ROMA TRE, Italy