

German-French Workshop on Volcanic islands

May 11th-12th, GFZ



Location: GFZ Helmholtz Centre for Geosciences, Lecture rooms 1-2, Building H, Telegrafenberg, 14473 Potsdam

The Programme:

Day 1 (Monday, May 11th)

9:15-9:30 Welcome and introduction

9:30 Session 1: Volcanic processes and dynamics

1. From magma ascent to lava flow emplacement on seafloor: case of the 2018-2020 Fani Maoré deep-submarine eruption (Mayotte, Mozambique Channel) (Pauline Verdurme, GEOMAR)
2. Karthala-La Grille plumbing system(s), Comoros archipelago (François Lötter, IPGP/LMV)
3. Geomorphic evolution of the Karthala caldera complex, Comoros archipelago (Grace Guryan, GFZ)
4. Hidden structures at Mount Teide, Tenerife (Davitia James, GFZ)
5. *TBD (Angèle Laurent, IPGP)*

12:30-13:30 Lunch

13:30 Session 2: Natural hazards

6. Flank collapse hazard of Pacific islands (Daniel O'Hara, USGS)
7. Long-term deformation of coastal volcanoes in SE-Asia: linking displacement rates, volcanic activity and flank instabilities (Edgar Zorn, GFZ/LMU Munich)
8. Landslide susceptibility on Bioko Island (Jacob Brauner, GFZ)

Break

15:30 Session 3: Biodiversity and landscape evolution

9. Coupled modelling of landscape evolution and biodiversity (Esteban Acevedo Trejos, ZMT Leibniz)
10. Diversification and Evolution of Hawaiian *Megalagrion* Damselflies (Robert Hadfield, University of Cologne)
11. Island age and ontogeny (Jadie Sauerbier, Utrecht University)
12. The island mass effect in tropical volcanic systems: linking hydrology, nutrient inputs to phytoplankton biomass and community composition (Emma Moreau, IPGP/GFZ)

Discussion and diner at Schleusenkrug Biergarten in Berlin

Day 2 (Tuesday, May 12th)

9:00 Session 4: Hotspot volcanoes and mantle plumes: advances and open questions

13. Volcanic history of Rodrigues Island and implications on the Reunion plume (Julien Seghi, IPGP)
14. A second track of the Reunion hotspot in the Mascarene basin (Vincent Famin, IPGP)
15. Contributions of mantle convection modelling to the understanding of mantle plumes dynamics and hotspot tracks (Maëlis Arnould, Lyon I University)

Break

11:00 Session 5: New geochemistry tools for tropical volcanic settings

16. Denudation rates from meteoric $^{10}\text{Be}/^9\text{Be}$ (Hella Wittmann, GFZ)
17. Denudation in Reunion and Guadeloupe islands at the 1 kyr timescale (Adrien Folch, GFZ)
18. Cosmogenic ^{36}Cl : development and application to Hawaii (Emma Lodes, Arizona State University)

12:30-13:30 Lunch

13:30 Session 6: Climate, erosion, and volcanoclastic sedimentation

19. Holocene paleoclimate reconstruction in the southern Indian Ocean (Emeline Bellet, Savoie-Mont-Blanc University)
20. Reconstructing the weathering history of La Réunion Island over the past 750 ka from marine core and fluvial sediments (Lukas Rowald, FU Berlin)
21. *TBD* (Athina Tzevahirtzian, Bordeaux University)

Break

15:30 Session 7: Retroactive effects of human populations on volcanic Islands

22. Anthropogenic impact on Reunion Island from lacustrine sediments at the century timescale (Fabien Arnaud, Savoie-Mont-Blanc University)
23. Impact of cyclones and anthropic activities on the critical zone (Bhavani Benard, IPGP)
24. Using sedimentary records to investigate natural hazards in pre- and post-Columbian societies on Guadeloupe Island, Lesser Antilles (Marie Tallon, Savoie-Mont-Blanc University)

Discussion: funding opportunities for German-French collaborations

17:30 Guided tour of the Refractor (historical telescope, section 4.7 building A27, ~20 minutes)