

LISTE COMPLETE DES PUBLICATIONS (08/2024)

1 – Revues à comité de lecture (Rang A) :

- (72) Alves, A., Paulhac Buisson Mathieu, Louvat, P., Rollion-Bard, C., Bassinot, F., Gray, W.R., Paris, G., Caron, B., Del Manzo, G., **Le Friant, A.**, Moreno, E., Bartolini, A., (**In press**) Sea surface acidification events in the Andaman Sea associated with the last Toba volcanic activity. *Global and Planetary change*.
- (71) Frédéric Leone, Monique Gherardi, Matthieu Péroche, Émilie Lagahé, Pierre Aumond, Jonathan Siliezar Montoya, Fahad Idaroussi Tsimba, Pablo Poulain, **Anne Le Friant**, Anne Mangeney, Said Hachim Mogne et Valentin Roudier, (**2023**). « Mayotte se prépare au risque tsunami : modélisations, alerte, évacuation, sensibilisation », *EchoGéo*, 64 | 2023, mis en ligne le 30 septembre 2023. URL : <http://journals.openedition.org/echogeo/25078> ; DOI : <https://doi.org/10.4000/echogeo.25078>
- (70) Brunet, M., Nalpas, T., Hallot, E., **Le Friant, A.**, Boudon, G., Kermarrec, J-J, (2023). Gravity-driven sliding and associated deformations along complex submarine slopes: a laboratory modeling approach based on constraints observed offshore Martinique Island (Lesser Antilles). *BSGF – Earth Sciences Bulletin*, 194-12. <https://doi.org/10.1051/bsgf/2023008>
- (69) Caron, B., Del Manzo, G., Villemant, B., Bartolini, A., Moreno, E., **Le Friant, A.**, Bassinot, F., & Baudin, F. (2023). The Young Toba Tuff: A multiple or a single cataclysmic eruption story? *Scientific Reports*. <https://www.nature.com/articles/s41598-023-37999-w>
- (68) Hughes, A., Escartin, J., Billant, J., Leclerc, F., Andreani, M., Olive, J-A., Arnaubec, A., Dano, A., Delorme, A., Deplus, C., Feuillet, N., Gini, C., Gracias, N., Hamelin, C., Istenic, K., Komorowski, J-C., **Le Friant, A.**, Marchand, C., Mével, C., Lie Onstad, S., Quidelleur, X. (2023). Seafloor earthquake ruptures and mass wasting from the 2004 Mw 6.3 Les saintes submarine earthquake, *Communication Earth and Environment* 4, 270. <https://doi.org/10.1038/s43247-023-00919-x>
- (67) Poulain, P., **Le Friant, A.**, Mangeney, A., Viroulet, S., Fernandez-Nieto, E., Castro Diaz, M., Peruzzetto, M., Grandjean, G., Bouchut, F., Pedreros, R., Komorowski, J-C, 2023. Performance and limits of a shallow model for landslide generated tsunamis: from laboratory experiments to simulations of flank collapses at La Montagne Pelée (Martinique). *Geophysical Journal International*. *Geophysical Journal International*, Volume 233, Issue 2, May 2023, Pages 796–825, <https://doi.org/10.1093/gji/ggac482>.
- (66) Berthod, C., Komorowski, J-C. , Gurioli, L., Médard, E. , Bachèlery, P., Besson, P., Verdurme, P., Chevrel, O., Di Muro, A., Peltier, A., Devidal, J-L., Nowak, S., Thion, I., Burckel, P., Hidalgo, S., Deplus, C., Loubrieu, B., Pierre, D. Bermell, S., Pitel-Roudaut, M., Réaud, Y., Fouchard, S., Bickert, M., **Le Friant, A.**, Paquet, F., Feuillet, N., Jorry, S., Fouquet, Y., Rinnert, E., Cathalot, C., Lebas, E., (**2022**). Temporal magmatic evolution of the Fani Maoré submarine eruption 50 km of Mayotte revealed by in situ sampling and petrological monitoring. *Comptes Rendus Géosciences*, Tome 354, n°. S2, pp 195-223.
- (65) Andujar, J., Scaillet, B., Moreira, M., Di Carlo, I., Feuillet, N., **Le Friant, A.**, Bickert, M., Paquet, F., Jorry, S., (**2022**). Experimental evidence for the shallow production of phonolitic compositions at Mayotte. *Comptes Rendus. Géoscience*, Tome 354, no. S2, pp. 225-256.
- (64) Henri, M., Quidelleur, X., **Le Friant, A.**, Komorowski, J-C, Escartin, J., Deplus, C., Mevel, C. (**2022**). K-Ar Geochronology and geochemistry of underwater lava samples from the Subsaintes cruise offshore Les Saintes (Guadeloupe): Insights for the Lesser Antilles arc magmatism. *Marine Geology*, Vol 450, 106862. [10.1016/j.margeo.2022.106862](https://doi.org/10.1016/j.margeo.2022.106862).
- (63)* Poulain P., **Le Friant A.**, Pedreros R., Mangeney A., Filippini A. G., Grandjean G., Lemoine A., Fernandez-Nieto E., Castro Diaz, M., Peruzzetto, M. Numerical simulation of submarine landslide and generated tsunamis: Application to the on-going Mayotte seismo-volcanic crisis. *Comptes Rendus. Géoscience*, Tome 354 (2022) no. S2, pp. 361-390. <https://doi.org/10.5802/crgeos.138>.
- (62)* Villemant, B., **Le Friant, A.**, Caron, B., Del Manzo, G., Lafuerza, S., Emmanuel, L., Ishizuka, O., Guyard, H., Labourdette, N., Michel, A., Hidalgo, S., (**2022**). A 1.5 Ma marine record of volcanic activity and associated landslides 1 offshore Martinique (Lesser Antilles): sites

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- (61)* Peruzzetto, M., Levy, C., Thiery, Y., Grandjean, G., Mangeney, A., Lejeune, A-M, Nachbaur, A., Legendre, Y., Vittecoq, B., Saurel, J-M., Clouard, V., Dewez, T., Fontaine, F.R., Mergili, M., Lagarde, S., Komorowski, J-C., **Le Friant, A.**, Lemarchand, A., (2022). Simplified simulation of rock avalanches and 1 subsequent debris flows with a single thin-layer model. Application to the Prêcheur river (Martinique, Lesser Antilles). *Engineering Geology*. Vol 296, 106457.
 - (60)* Berthod, C., Médard, E., Di Muro, A., Hassen Ali, T., Gurioli, L., Chauvel, C., Komorowski, J-C, Bachèlery, P., Peltier, A., Benbakkar, M., Devidal, J-L., Besson, P., **Le Friant, A.**, Deplus C., Nowak, S., Thinon, I., Burkel, P., Hidalgo, S., Feuillet, N., Jorry, S., Fouquet, Y., (2021). Mantle xenolith-bearing phonolites and basanites feed the active volcanic ridge of Mayotte (Comoros archipelago, SW Indian Ocean). *Contributions to Mineralogy and Petrology* (2021) 176:7, . <https://doi.org/10.1007/s00410-021-01833-1>
 - (59)* Berthod, C., Médard, E., Bachèlery, P., Gurioli, L., DiMuro, A., Peltier, A., Komorowski, J-C, Benbakkar, M., Devidal, J-L, Langlade, J., Besson, P., Boudon, G., Rose-Koga, E., Deplus, C., **Le Friant, A.**, Bickert, M., Nowak, S., Thinon, I., Burckel, P., Hidalgo, S., Kaliwoda, M., Jorry S., Fouquet, Y., Feuillet, N., (2021). The 2018-ongoing Mayotte submarine eruption: Magma migration imaged by petrological monitoring. *Earth and Planetary Science Letters* 571 (2021) 117085. <https://doi.org/10.1016/j.epsl.2021.117085>
 - (58) Breitzkreuz, C, Schmitt, A.K., Repstock, A., Krause, J., Schulz, B., Bergmann, F., Bischoff, J., **Le Friant, A.**, Ishizuka, O., (2021). Record and provenance of Pleistocene volcanoclastic turbidites from the central Lesser Antilles (IODP Expedition 340, Site U1398B). *Marine Geology* 438 (2021) – 106536. <https://doi.org/10.1016/j.margeo.2021.106536>
 - (57)* Llopart, J., Lafuerza, S., **Le Friant, A.**, Urgeles, R., Watremez, L. (2021). Long-term and long-distance deformation in submarine volcanoclastic sediments: coupling of hydrogeology and debris avalanche emplacement off W Martinique Island. *Basin Research*, vol 33 – 4, <https://doi.org/10.1111/bre.12553>.
 - (56)* Mencaroni, D., Llopart, J., Urgeles, R., Lafuerza, S., Gràcia, E., **Le Friant, A.**, Urlaub, M., (2020). From gravity cores to overpressure history: the importance of measured sediment physical properties in hydrogeological models. *Geological Society, London, Special Publications*, 500, 289-300, 22 May 2020, <https://doi.org/10.1144/SP500-2019-176>
 - (55) Knappe, E., Manga, M., **Le Friant, A.**, and the IODP 340 Scientists (2020). Rheology of natural sediments and its influence on the settling of dropstones in hemipelagic marine sediment. *Journal of Earth and Space Science, AGU, Volume 7, Issue 3*. <https://doi.org/10.1029/2019EA000876>.
 - (54) Subramanyam K.S.V., Balaram, C., Manikyamba, C., Roy, Parijat, Krishna, A. K., Sawant, S., S., Narshimha, Ch and the **IODP Expedition 340 Scientists**. (2020) Geochemistry of Marine Carbonates from Hole 1394, off the Coast of Montserrat, IODP Expedition-340; Implications on Provenance, Paleoenvironment and Lesser Antilles Arc Migration. In: Pandey D., Ravichandran M., Nair N. (eds) *Dynamics of the Earth System: Evolution, Processes and Interactions*. Society of Earth Scientists Series. Springer, Cham. https://doi.org/10.1007/978-3-030-40659-2_6
 - (53)* Moretti, R., Komorowski, J-C, Ucciani, G, Moune, S., Jessop, D., de Chabalier, J-B, Beauducel, F., Bonifacie, M., Burtin, A., Vallee, M., Deroussi, S., Robert, V., Gibert, D., Didier, T., Kitou, T., Feuillet, N., Allard, P., Tamburello, G., Shreve, T., Saurel, J-M, Lemarchand, A., Rosas-Carbajal, M., Agrinier, P., **Le Friant, A.**, Chaussidon, M. (2020). The 2018 unrest phase at La Soufrière of Guadeloupe (French West Indies) andesitic volcano: scrutiny of a failed but prodromal phreatic eruption. *Journal of Volcanology and Geothermal Research*. Vol. 393, 1 March 2020, 106769. <https://doi.org/10.1016/j.jvolgeores.2020.106769>
 - (52)* Solaro C., Boudon, G., **Le Friant, A.**, Balcone-Boissard, H., Emmanuel, L., Paterne, M., and IODP Expedition Science party, (2020). New insights into the recent eruptive history and collapse history of Montagne Pelée (Lesser Antilles arc) from offshore marine drilling

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- (51) Moretti, L., Mangeney, A., Walter, F., Capdeville, Y., Bodin, T., Stutzmann, E., **Le Friant A (2020)**. Constraining landslide characteristics with Bayesian inversion of field and seismic data. *Geophysical Journal International*, Volume 221, Issue 2, May 2020, Pages 1341–1348, <https://doi.org/10.1093/gji/ggaa056>
 - (50)* Tamburello, G., Moune, S., Allard, P., Venugopal, S., Robert, V., Rosas-Carbajal, M., Deroussi, S., Kitou, G-T, Didier, T., Komorowski, J-C, Beauducel, F., De Chabaliér, J-B., Lemarchand, A., **Le Friant, A.**, Bonifacie, M., Dessert, C., Moretti, R., (2019). Spatio-temporal relationships between fumarolic activity, hydrothermal fluid circulation and geophysical signals at an arc volcano in degassing unrest : La Soufrière of Guadeloupe (French West Indies). *Geosciences* 2019, 9, 480; doi:10.3390/geosciences9110480
 - (49)* Peruzzetto, M., Komorowski, J-C, **Le Friant, A.** Rosas-Carbajal, M., Mangeney, A. and Legendre, Y., (2019). Modeling of partial dome collapse of La Soufrière of Guadeloupe volcano: implications for hazard assessment and monitoring. *Scientific Reports* 9, 13105. <https://doi.org/10.1038/s41598-019-49507-0>
 - (48)* **Le Friant, A.**, Lebas E., Brunet, M., Lafuerza, S., Hornbach, M., Coussens, M, Watt, S.F.L., Cassidy, M.J, Talling, P.J. and IODP 340 Expedition scientists, (2019). Submarine landslides around volcanic islands: A review of what can be learned from the Lesser Antilles Arc. AGU Book “Submarine landslides: subaqueous mass transport deposits from outcrops to seismic profiles” edited by K. Ogata, A. Festa, G.A. Pini. <https://doi.org/10.1002/9781119500513.ch17>
 - (47) Lebas, E., **Le Friant, A.**, Deplus, C., de Voogd, B., (2018). Understanding the evolution of an oceanic intraplate volcano from seismic reflection data: A new model for La Réunion, Indian Ocean. *Journal of Geophysical Research – Solid Earth*, doi.1002/2017JB014959, 123, Issue 2, 1035-1059.
 - (46)* Brunet, M., Moretti, L., **Le Friant, A.**, Mangeney, A., Fernandez Nieto, E. (2017). Numerical simulations of 30-45 ka debris avalanche flow of Montagne Pelee volcano, Martinique: from volcano flank-collapse to submarine emplacement, *Natural Hazards*, vol. 87, I2, p1189-1222.
 - (45) Fraass, A.J., Wall-Palmer, D., Leckie, R.M., Hatfield, R.G., Burns, S.J., **Le Friant, A.**, Ishizuka, O., Aljahdali, M., Jutzeler, M., Martinez-Colon, M., Palmer, M., & Talling, P.J., (2017) A revised Plio-Pleistocene age model and paleoceanography of the northeastern Caribbean Sea: IODP Site U1396 off Montserrat, Lesser Antilles. *Stratigraphy*, vol13, I3, p183-203.
 - (44) Jutzeler, M., Manga, M., White, J.D.L., Talling, P.J., Proussevitch, A.A., Watt, S.F.L., Cassidy, M., Taylor, R.N., **Le Friant, A.**, Ishizuka, O. (2017). Submarine deposits from pumiceous pyroclastic density currents traveling over water : An outstanding example from offshore Montserrat (IODP 340). *GSA Bulletin*. Vol 129, Issue 3_4, 392-414, Doi :10.1130/B31448.1
 - (43)* Coussens, M., Wall-Palmer, D., Talling, P., Watt, S., Cassidy, M., Jutzeler, M., Clare, M., Hunt, J., Manga, M., Gernon, T., Palmer, M., Hatter, S., Boudon, G., Endo, D., Fujinawa, A., Hatfield, R., Hornbach, M., Ishizuka, O., Kataoka, K., **Le Friant, A.**, Maeno, F., McCanta, M., Stinton, A.. (2016), The relationship between eruptive activity, flank collapse and sea-level at volcanic islands: a long-term (>1 Ma) record offshore Montserrat, Lesser Antilles. *G3*, vol 17, Issue 7, 2591-2611.
 - (42)* Brunet, M., **A. Le Friant**, G. Boudon, S. Lafuerza, P. Talling, M. Hornbach, O. Ishizuka, E. Lebas, H. Guyard, and IODP Expedition 340 Science Party (2016), Composition, geometry, and emplacement dynamics of a large volcanic island landslide offshore Martinique: From volcano flank- collapse to seafloor sediment failure?, *Geochem. Geophys. Geosyst.*, 17-3, 699– 724, doi:10.1002/2015GC006034.
 - (41)* Palmer, M., Stuart J. Hatter, Thomas M. Gernon, Rex N. Taylor, Michael Cassidy, Peter Johnson, Anne **Le Friant**, and Osamu Ishizuka, (2015). Discovery of a large 2.4 Ma Plinian eruption of Basse-Terre, Guadeloupe, from the marine sediment record. *Geology*, 44-2, 123-126, doi:10.1130/G37193.1

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- (36)* Jutzeler, M., J. D. L. White, P. J. Talling, M. McCanta, S. Morgan, **A. Le Friant**, and O. Ishizuka **(2014)**, Coring disturbances in IODP piston cores with implications for offshore record of volcanic events and the Missoula megafloods, *Geochem., Geophys., Geosyst.*, 15, doi:10.1002/2014GC005447.
- (35)* Wall-Palmer, D., Coussens, M., Talling, P.J., Jutzeler, M., Cassidy, M., Marchant, I., Palmer, M., Watt, S., F.L., Smart, C., Fisher, J.K., Hart, M.B., Fraass, A., Trofimovs, J., **Le Friant, A.**, Ishizuka, O., Adachi, T., Aljahdali, M., Boudon, G., Breitreuz, C., Endo, D., Fujinawa, A., Hatfield, R., Hornbach, M., Kataoka, Kyoko, Lafuerza, S., Maeno, F., Manga, M., Martinez-Colon, M., McCanta, M., Morgan, S., Saito, T., Slage, A., Stinton, A., Subramanyam, K.S.V., Tamura, Yoshihiko, Villemant, B., Wang, Fei. **(2014)**, Late Pleistocene stratigraphy of IODP U1396 and compiled chronology offshore of south and south west Montserrat, Lesser Antilles. *Geochem., Geophys., Geosyst.*, 15, 7, doi:10.1002/2014GC005402.
- (34)* **Lafuerza S.**, **A. Le Friant**, M. Manga, G. Boudon, B. Villemant, N. Stroncik, B. Voight, M. Hornbach, O. Ishizuka and the Expedition 340 Scientific Party **(2014)**, Geomechanical characterizations of submarine volcano flank sediments, Martinique, Lesse Antilles Arc. S. Krastel et al., (Eds.), Sumarine mass movements and consequences, *Advances in Natural and Technological Hazards Research*, Springer Inten. Publishing, Switzerland, 2014, 37, 73-81, doi 10.1007/978-3-319-00972-8_7.
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