

LISTE COMPLETE DES PUBLICATIONS (08/2023)

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

- (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. (In press). Seafloor coseismic ruptures and mass wasting from Mw 6.3 Les saintes submarine earthquake, *Communication Earth and Environment*.
- (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., Thinon, 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.
- (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 U1397 and U1399 of IODP 340 expedition. *Frontiers in Earth Science*, section Volcanology, 10. <https://doi.org/10.3389/feart.2022.767485>.
- (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.**,

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- (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) Breitreuz, 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>.
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 - (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 site U1401A (340 Expedition IODP). *Journal of Volcanology and Geothermal Research*, Vol 403, 1 October, 107001. <https://doi.org/10.1016/j.jvolgeores.2020.107001>
 - (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 Chabalier, 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
- (40) Hornbach, MJ; Manga, M; Genecov, M ; Valdez, R ; Miller, P ; Saffer, D ; Adelstein, E; Lafuerza, S ; Adachi, T ; Breikreuz, C ; Jutzeler, M ; **Le Friant, A**; Ishizuka, O; Morgan, S; Slagle, A; Tailing, PJ; Fraass, A; Watt, SFL; Stroncik, NA; Aljandali, M ; Boudon, G; Fujinawa, A ; Hatfield, R ; Kataoka, K ; Maeno, F ; Martinez-Colon, M ; McCanta, M; Palmer, M; Stinton, A ; Subramanyam, KSV; Tamura, Y; Villemant, B; Wall-Palmer, D; Wang, F (2015), Permeability and pressure measurements in Lesser Antilles submarine slides: Evidence for pressure-driven slow-slip failure, *J. Geophys. Res. Solid Earth*, 120-12, 7986–8011, doi:10.1002/2015JB012061.
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- (32) Cassidy, M., Trofimovs, J., Watt, S.F.L., Palmer, M.R., Taylor, R.N., Gernon, T.M., Talling, P.J. **Le Friant, A.** (2014), Multi-stage collapse events in the South Soufrière Hills, Montserrat as recorded in marine sediment cores. Geological Society, London, Memoirs, v. 39, 383-397. <http://dx.doi.org/10.1144/M39.20>.
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