

1 – Revues à comité de lecture (Rang A) : 74

- (74) Marboeuf, A., Mangeney, A., **Le Friant, A.**, Castro, M., Fernandez-Nieto, E., Lucas, A., Poulain, P., Moatty, A., Silver, M., Pedreros, R., Lemoine, A., Løvholt, F., (2025). Rheology and bathymetry effects captured by a multilayer landslide-tsunami model. *Geophys. J. Int*, Vol. 242, Issue 3, <https://doi.org/10.1093/gji/ggaf232>.
- (73) Fontaine, F.R., Komorowski, J-C., Corbeau, J., Burtin, A., de Chabalier, J.-B., Grandin, R., Saurel, J.M., Agrinier, P., Moune, S., Jadelus, F., Melezan, D., Gabriel, J-G., Vidal, C., Zimmermann, B., Vaton, D., Koziol, J., Lavenaire, J-M., Moretti, R., Lemarchand, A., Labasque, T., Blard, P.H., Tibari, B., Zimmermann, L., Aubaud, C., Vergne, J., Andrieu, A., Filliaert, A., Chilin-Eusebe, E., Wahlgren, S.Z., Inostroza, M., Métaxian, J-P., Potier, A., Fernandez, I., Robert, V., Deroussi, S., Carazzo, G., Tait, S., Vlastelic, I., Jessop, D.E., Bonaimé, S., **Le Friant, A.**, Chaussidon, M., Michaud-Dubuy, A., Retailleau, L., Di Muro, A., Allard, P., Satriano, C. (2025) Ongoing multi-parameter unrest at the Montagne Pelée volcano on Martinique from 2019 to 2024, *Scientific Report*, accepted June 2025, <https://doi.org/10.1038/s41598-025-05641-6>
- (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., (2024) Sea surface acidification events in the Andaman Sea associated with the last Toba volcanic activity. *Global and Planetary change*, <https://doi.org/10.1016/j.gloplacha.2024.104460>
- (71) Frédéric Leone, Monique Gherardi, Matthieu Péroche, Émilie Lagahé, Pierre Aumond, Jonathan Siliezar Montoya, Fahad Idaroussi Tsima, 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., Escartín, 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 submatine 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*, 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., Bachélery, P., Besson, P., Verdurne, P., Chevrel, O., Di Muro, A., Peltier, A., Devidal, J-L., Nowak, S., Thimon, 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 off Mayotte revealed by in situ sampling and petrological monitoring. *Comptes Rendus Géosciences*, Tome 354, n°. S2, pp 195-223.
- (65) Andujar, J., Scailet, 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, (2022). 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.**, 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) Breitkreuz, 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 volcaniclastic 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) Llopert, 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., Llopert, 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 Scientits**. (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 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 ; Breitkreuz, 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.
 - (39) Cassidy, M., Watt, S.F.L., Talling, P.J. Palmer, M.R., Edmonds M., Jutzeler, M., Wall-Palmer, D., Coussens, M., Gernon, T., Taylor, R.N., Michalik, A., Inglis, E., McCanta, M.C., Manga, M., Boudon, G., Adachi, T., Breitkreuz, C., Hornbach, M.J., Colas, S.L., Endo, D., Fujinawa, A., Kataoka, K.S., Maeno, F., Tamura, Y., Wang, F., Ishizuka, O., **Le Friant, A.** and Shipboard Science Party, (**2015**). Rapid onset of mafic magmatism facilitated by volcanic edifice collapse. *Geophys. Res. Lett.*, vol 42, Issue 12, 4778-4785.
 - (38) **Le Friant, A.**, Ishizuka, O. , Boudon, G. , Palmer, M.R. , Talling, P. , Villemant, B. , Adachi, T., Aljahdali, M., Breitkreuz, C., Brunet, M., Caron, B., Coussens, M., Deplus, C., Endo, D., Feuillet, N., Fraas, A.J., Fujinawa, A., Hart, M. B., Hatfield, R.G., Hornbach, M., Jutzeler, M., Kataoka, K. S., Komorowski, J-C., Lebas, E., Lafuerza, S., Maeno, F., Manga, M., Martínez-Colón, M., McCanta, M., Morgan, S., Saito, T., Slagle, A., Sparks, S., Stinton, A., Stroncik, N., Subramanyam, K. S.V., Tamura, Y., Trofimovs, J., Voight, B., Wall-Palmer, D., Wang, F., Watt, S.F.L. (**2015**). Submarine record of volcanic island construction and collapse in the Lesser Antilles arc: First scientific drilling of submarine volcanic island landslides by IODP Expedition 340. *Geochem., Geophys., Geosyst.*, 16, 2, 420-442.
 - (37) Zhao, J., Moretti, L., Mangeney, A., Stutzmann, E., Kanamori, H., Capdeville, Y., Calder, E. S., Hibert, C., Smith, P. J., Cole, P., and **Le Friant, A.**, (**2015**). Model space exploration for determining landslide source history from long period seismic data, *PURE AND APPLIED GEOPHYSICS GEOPHYS.*, vol. 172, Issue 2, p. 389-413, DOI:1007/s00024-014-0852-5.
 - (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., Breitkreuz, 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.
- (33) Leclerc, F., Feuillet, N., Cabioch, G., Deplus, C., Bazin, S., Beauducel, F., Boudon, G., **Le Friant, A.**, DeMyn, L., Melezan, D. (2014). The holocene drowned reef of Les Saintes plateau as witness of a long-term tectonic subsidence along the Lesser Antilles volcanic arc in Guadeloupe. *Marine Geology*, 355, 115-135.
 - (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>.
 - (31) Boudon G., B. Villemant, **A. Le Friant**, M. Paterne, E. Cortijo, (2013). Role of large flank-collapse events on magma evolution of volcanoes. Insights from the Lesser Antilles Arc. *J. Volcanol. Geotherm. Res.*, 263, 224-237, doi:10.1016/j.jvolgeores.2013.03.009.
 - (30) Karstens, J., Crutchley, G.J., Berndt, C., Talling, P.J., Watt, S.F.L., Trofimovs, J., Hühnerbach, V., **Le Friant, A.**, and Lebas, E. (2013) Insights into pyroclastic flow emplacement from high-resolution 3D seismic data offshore Montserrat, Lesser Antilles. *Journal of Volcanology and Geothermal Research*, 257, 1-11, doi:10.1016/j.jvolgeores.2013.03.004
 - (29) Trofimovs, J., Talling, P.J., Fisher, J.K., Sparks, R.S.J., Watt, S.F.L., Hart, M.B., Smart, C., **Le Friant, A.**, Cassidy, M., Moreton, S.G., Leng, M.J. (2013) Timing, origin and emplacement dynamics of mass flows offshore of SE Montserrat in the last 110 ka: implications for landslide and tsunami hazards, eruption history, and volcanic island evolution. *Geochem., Geophys., Geosyst.*, V. 14, Issue 2, 385-406.
 - (28) Crutchley, G.J., Karstens, J., Berndt, C., Talling, P.J., Watt, S.F.L., Vardy, M.E., Hühnerbach, V., Urlaub, M., Sarkar, S., Klaeschen, D., Paulatto, M., **Le Friant, A.**, Lebas, E., Maeno, F. (2013) Insights into the emplacement dynamics of volcanic landslides from highresolution 3D seismic data acquired offshore Montserrat, Lesser Antilles. *Marine Geology*, 335, 1-15. doi:10.1016/j.margeo.2012.10.004.
 - (27) Watt, S.F.L., Talling, P.J., Vardy, M.E., Masson, D.G., Henstock, T.J., Huehnerbach, T.A., Minshull, M., Urlaub, M., Lebas, E., **Le Friant, A.**, Berndt, C., Crutchley, G.J., Karstens, J. (2012b). Widespread and progressive seafloor-sediment failure following volcanic debris avalanche emplacement: Landslide dynamics and timing offshore Montserrat, Lesser Antilles. *Marine Geology*, 323, 69-94. doi: 10.1016/j.margeo.2012.08.002.
 - (26) Manga M., M. Hornbach, **A. Le Friant**, O. Ishizuka, N. Stroncik, T. Adachi, M. Aljahdali, G. Boudon, C. Breithreuz, A. Fraass, A. Fujinawa, R. Hatfield, M. Jutzeler, K. Kataoka, S. Lafuerza, F. Maeno, M. Martinez-Colon, M. McCanta, S. Morgan, MR. Palmer, T. Saito, A. Slagle, A. Stinton, K.S.V. Subramanyam, Y. Tamura, P. Talling, B. Villemant, D. Wall-Palmer, F. Wang, (2012). Heat Flow inb the Lesser Antilles island arc and adjacent back arc Grenada basin. *Geochemistry, Geophysics and Geosystems (G3)*, 13, doi: 10.1029/2012GC004260
 - (25) Trofimovs, J., Foster, C., Sparks, R.S.J., Loughlin, S., **Le Friant, A.**, Deplus, C., Porritt, L., Christopher, Luckett, R., T., Talling, P.J., Palmer, M.R., Le Bas, E. (2012). Submarine pyroclastic deposits formed during the 20thMay 2006 dome collapse of the Soufrière Hills volcano. *Bull. Volc.* v. 74, 2, 391-405. Doi 10.1007/s00445-011-0533-5.
 - (24) Watt, S.F.L., Talling, P.J., Vardy, M.E., Heller, V., Hühnerbach, V., Urlaub, M., Sarkar, S., Masson, D.G., Henstock, T.J., Minshull, T.A., Paulatto, M., **Le Friant, A.**, Lebas, E., Berndt, C., Crutchley, G.J., Karstens, J., Stinton, A.J., Maeno, F. (2012a), Combination of volcanic-flank and seafloor sediment failure offshore Montserrat, and their implications for tsunami generation, *Earth Planet. Sci. Lett.*, v. 319, 2, p. 228-240, doi:116/j.epsl.2011.11.03.
 - (23) Wall-Palmer D., M.B. Hart, C.W. Smart, R.S.J. Sparks, **A. Le Friant**, G. Boudon, C. Deplus, J.C. Komorowski. (2012). Pteropods from the Caribbean Sea: variations in calcification

- as an indicator of past ocean carbonate saturation. *Biogeosciences*, 9(1), 309-315, doi: 10.5194/bg-9-309-2012
- (22) Beck, C., Reyss, J-L., Leclerc, F., Moreno, E., Feuillet, N., Barrier, L., Beauducel, F., Boudon, G., Clément, V., Deplus, C., Gallou, N., Lebrun, J-F., **Le Friant, A.**, Nercessian, A., Paterne, M., Pichot, T., Vidal, C., (2012). Identification of deep subaqueous co-seismic scarps through specific coeval sedimentation in Lesser Antilles: Implication for seismic hazard. *Natural hazards and earth system sciences*, 12, 5, 1755-1767, doi:10.5194/nhess-12-1755-2012.
 - (21) Voight B., **A. Le Friant**, G. Boudon, C. Deplus, J.C. Komorowski, E. Lebas, R.S.J. Sparks, P. Talling, J. Trofimovs (2012), Undrained Sediment Loading Key to Long-Runout Submarine Mass Movements: Evidence from the Caribbean Volcanic Arc. In: Y. Yamada, K. Kawamura, K. Ikehara, Y. Ogawa, R. Urgeles, D. Mosher, J. Chaytor, M. Strasser (Eds), *Submarine Mass Movements and Their Consequences. Advances in Natural and Technological Hazards Research*, 31, 417-428, doi: 10.1007/978-94-007-2162-3-37.
 - (20) Lebas, E., **A. Le Friant**, G. Boudon, S. Watt, P. Talling, N. Feuillet, C. Deplus, C. Berndt, M. Vardy (2011). Multiple widespread landslides during the long-term evolution of a volcanic island: insights from high-resolution seismic data, Montserrat Lesser Antilles. *Geochemistry, Geophysics, Geosystems*, 12, 1, doi: 10:1029/2010GC003451
 - (19) **Le Friant, A.**, E. Lebas, V. Clément, G. Boudon, C. Deplus, B. de Voogd, P. Bachélery (2011). A new model for the evolution of la Réunion volcanic complex from complete geophysical surveys, *Geophys. Res. Lett.* 38, doi : 10.1029/2011GL047489
 - (18) Saint-Ange, F., B. Savoye†, L. Michon, P. Bacheler, C. Deplus, B. De Voogd, J. Dyment, E. Le Drezen, M. Voisset, **A. Le Friant**, G. Boudon, (2011) A volcanioclastic deep-sea fan off La Réunion Island (Indian Ocean): gradualism versus catastrophism, *Geology*, 39, 3, 271–274, doi: 10.1130/G31478.1.
 - (17) **Le Friant, A.**, Deplus, C., Boudon, G., Feuillet, N., Trofimovs, J., Komorowski, J-C., Sparks, R. S. J., Talling, P., Loughlin, S., Palmer, M., Ryan., G. (2010). Eruption of Soufrière Hills (1995-2009) from an offshore perspective: insights from repeated swath bathymetry surveys. *Geophys. Res. Lett.*, 37, L11307, doi:10.1029/2010GL043580.
 - (16) Feuillet, N., Leclerc, F., Tapponnier, P., Beauducel, F., Boudon, G., **Le Friant, A.**, Deplus, C., Lebrun, J-F, Nercesian, A., Saurel, J-M, Clement, V. (2010). Active faulting induced by slip partitioning in Montserrat and link with volcanic activity : New insights from the 2009 GWADASEIS marine cruise data. *Geophys. Res. Lett.*, 37, L00E15, doi:10.1029/2010GL042556
 - (15) Trofimovs, J., J.K. Fisher, H.A. Macdonald, P.J Talling, R.S.J. Sparks, M.B Hart, C. Smart, G. Boudon, C. Deplus, J-C. Komorowski, **A. Le Friant**, S. Moreton, M. Leng, (2010). Evidence for carbonate platform failure during rapid sea-level rise; ca 14 000 year old bioclastic flow deposits in the Lesser Antilles. *Sedimentology*, 57 (3), 735-759.
 - (14) **Le Friant, A.**, Boudon, G., Arnulf, A., Robertson, R. (2009). Debris avalanche deposits offshore St Vincent (West Indies): impact of flank-collapse events on the morphological evolution of the island, *J. Volcanol. Geotherm. Res.*, 179, 1-10.
 - (13) **Le Friant, A.**, Deplus, C., Boudon, G., Sparks, R.S.J., Trofimovs, J., Talling, P., (2009). Submarine deposition of volcanioclastic material from the 1995-2005 eruptions of Soufrière Hill Volcano, Montserrat, West Indies, *Geol. Soc. London*, vol. 166, 171-182. doi:10.1144/0016-76492008-047.
 - (12) Samper, A., Quidelleur, X., Boudon, G., **Le Friant, A.**, Komorowski, J-C., (2008). Radiometric dating of three large volume flank-collapses in the Lesser Antilles Arc, *J. Volcanol. Geotherm. Res.*, doi:10.1016/j.jvolgeores.2008.02.028, 176, 485-492.
 - (11) **Le Friant, A.**, Heinrich, P., Boudon, G. (2008). Field survey and numerical simulation of the 21 November 2004 tsunami at Les Saintes (Lesser Antilles), *Geophys. Res. Lett.* vol. 35, L12308, Doi10:1029/2008GL034051.
 - (10) **Le Friant, A.**, Lock, E.J., Hart, M.B., Boudon, G., Sparks, R.S.J., Leng, M.J., Smart, C.W., Komorowski, J.C., Deplus, C., and Fisher, J.K. (2008). Late Pleistoicene tephrochronology of marine sediments adjacent to Montserrat, Lesser Antilles volcanic arc. *Geol. Soc. London*, 165, 279-289.

- (9) Boudon, G., **Le Friant, A.**, Komorowski, J.-C., Deplus, C., and Semet, M.P. (2007). Volcano flank instability in the Lesser Antilles Arc: diversity of scale, processes, and temporal recurrence. *J. Geophys. Res.* 112, B08205, doi:10.1029/2006JB004674
- (8) **Le Friant, A.**, Boudon, G., Komorowski, J.-C., Heinrich, P., and Semet, M.P. (2006). Potential flank-collapse of Soufrière volcano, Guadeloupe, Lesser Antilles ? Numerical simulation and Hazards. *Natural Hazards*, 39, 381-393.
- (7) Trofimovs, J., Amy, L., Boudon, G., Deplus, C., Doyle, E., Fournier, N., Hart, M.M.B., Komorowski, J.C., **Le Friant, A.**, Lock, E., Pudsey, C., Ryan, G., Sparks, R.S.J. and Talling, P.J. (2006). Submarine pyroclastic deposits formed at the Soufrière Hills Volcano, Montserrat (1995-2003) : what happens when pyroclastic flows enter the ocean ? *Geology*, 34 (7), 549-552.
- (6) Halama, R., Boudon, G., Villemant, B., Joron, J.-L., **Le Friant, A.** and Komorowski, J.-C. (2006). Pre-eruptive crystallization conditions of mafic and silicic magmas at the Plat Pays volcanic Complex, Dominica (Lesser Antilles). *J. Volcanol. Geotherm. Res.*, 151, 200-220.
- (5) **Le Friant, A.**, Harford, C., Deplus, C., Boudon, G., Sparks, R.S.J., Herd, R. and Komorowski, J.-C. (2004). Geomorphological evolution of Montserrat (West Indies): importance of flank collapse and erosional processes. *Geol. Soc. London*, 161, 147-160.
- (4) **Le Friant, A.**, Heinrich P., Deplus C., Boudon G., (2003). Numerical simulation of the last flank-collapse event of Montagne Pelée, Martinique, Lesser Antilles. *Geophys. Res. Lett.*, 30, 2, 1034.
- (3) **Le Friant, A.**, Boudon G., Deplus C., Villemant B., (2003). Large scale flank collapse events during the activity of Montagne Pelée, Martinique, Lesser Antilles - *J. Geophys. Res.*, 108, B1, 2055.
- (2) **Le Friant, A.**, Boudon G., Komorowski J.-C., Deplus C., (2002). L'île de la dominique : zone d'émission des avalanches de débris les plus volumineuses de l'arc des Petites Antilles, *C.R. Geosciences*, v. 334, p. 235-24.
- (1) Deplus C., **Le Friant A.**, Boudon G., Komorowski J.-C., Villemant B., Harford C., Ségoufin J., Cheminée J.L., (2001). Submarine evidence for large-scale debris avalanches in the lesser Antilles arc, *Earth Planet. Sci. Lett.*, v. 192, 2, p. 145-157.

2 – IODP Proceedings (4)

Coussens, M.F., Wall-Palmer, D., Talling, P.J., Watt, S.F.L., Hatter, S., Cassidy, M., Clare, M., Jutzeler, M., Hatfield, R., McCanta, M., Kataoka, K., Endo, S., Palmer, M.R., Stinton, A., Fujinawa, A., Boudon, G., **Le Friant, A.**, (2016). Synthesis : stratigraphy and age control for IODP Sites U1394, U1395 and U1396 offshore Montserrat in the Lesser Antilles. Proc. IODP, data report. Doi:10.2204/iodp.proc.340.204.2016

Le Friant, A., Ishizuka, O., Stroncik, N.A., and the Expedition 340 Scientists, Proc. IODP, 340, (2013): Tokyo (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.340.2013.

Le Friant, A., Ishizuka, O., Stroncik, N.A., and the Expedition 340 Scientists, (2012). Lesser Antilles volcanism and landslides: implications for hazard assessment and long-term magmatic evolution of the arc. IODP Prel. Rept., 340. doi:10.2204/iodp.pr.340.2012.

Le Friant, A., Ishizuka, O., and Stroncik, N., (2011). Lesser Antilles volcanism and landslides: drilling volcanic landslides deposits and volcanoclastic sediments in the Lesser Antilles arc: implications for hazard assessment and long-term magmatic evolution of the arc. IODP Sci. Pros., 340. doi :10.2204/iodp.sp.340.2011.

3 – Chapitres d’ouvrages

Capra, L., Belousov, A., Bernard, B., Dufresne, A., **Le Friant, A.**, Mae Paguican, E., Roverato, M., van Wyk de Vries, B., Watt, S., (2025), Encyclopedia of Volcanoes,3 rd edition, <https://doi.org/10.31223/X5CM7P>.

- Subramanyam, K.S.V., Balaram, V., Manikyamba, C., Prijat Roy, A.K. Krishna, Sawant, SS., Narshimha, Ch and **the Expedition 340 scientists.** (2019) Geochemistry of Marine Carbonates from Hole 1394, off the coast of Montserrat, IODP Expedition-340; Implications on provenance, paleoenvironment and Lesser Antilles arc migration. Special Issue Dynamics of the Earth System: Recent Contributions from Scientific Ocean Drilling, Ed., Dhananjai Pandey, M. Ravichandran and Nisha Nair, National Center for Polar and Ocean Research, Goa (Ministry of Earth Science, India) Springer, Society of Earth Scientists Series
- Boudon, G., **Le Friant, A.**, Villemant, B., and Viodé, J.-P. (2005), Martinique. In: *Volcanic Atlas of the Lesser Antilles*, edited by J.M. Lindsay, R.E.A. Robertson, J.B. Shepherd and S. Ali, Seismic Research Unit, The University of the West Indies, Trinidad and Tobago, WI, 65-102.

4 – Actes de colloques avec comité de lecture (2)

- Peltier, A., Komorowski, J-C, Kowalski, P., **Le Friant, A.**, Lemarchand, A., Saurel, J-M., OVPF-IPGP team, 2021. La pratique de l'expertise volcanologique en réseau, constitution et fonctionnement des réseaux nationaux et internationaux : le cas de l'Observatoire Volcanologique du Piton de la Fournaise. Acte du Colloque «Droit et Volcanisme», Avril 2021, La Réunion.
- Boudon, G. **Le Friant, A.**, Komorowski, J.C., Deplus, C., Semet, M., (2003) Instabilité des volcans de l'arc Antillais: origine et implication sur les risques volcaniques. Rapport quadriennal 1999-2002, CNFGG, 23^{ème} assemblée internationale de l'UGGI, Sapporo, Japon, juillet 2003.
- Mangeney A., Heinrich P., **Le Friant A.**, Boudon G. et Deplus C., (1998) - Modeling of water waves generated by debris avalanches : application to past and potential events in Martinique and Montserrat, Lesser Antilles - Proceedings of the international Conference on Tsunamis, Paris, France, May 1998, European Commission, pp. 383-394.

5- Articles de rang B, rapports, vulgarisation

- De Chabalier, J-B, Guillou, D. Volcans, séismes et tsunamis dans la Caraïbe – Témoignage sur un projet de coopération régionale, PREST 2017-2023. Rapport, 2024. Contributeurs à la rédaction : Bernard, P., Boisson, D/, Calais, E., Couard, V., Colon, S., Corbeau, J., Daniel, R., Foll, A., Fontaine, F., Gonzales, O'Leary, Hello, Y., Komorowski, J-C ., **Le Friant, A.**, Paul, S., Potier, A., Symithe, S., Vissière, S.
- Bachèlery, P., Gurioli, L., Berthod, C., Komorowski J-C., Peltier, A., Saurel, J-M., Lemarchand, A., and **REVOSIMA consortium** (2021). Mayotte. Synthesis chapter for the online European Catalog of active volcanoes – EUROVOLC project.
- Komorowski, J-C, Legendre, Y., Metcalfe, A., Moretti, R., Moune, S., Rosas-Carbajal, M., Peruzzeto, M., Jessop, D., Burtin, A., Beauducel, F., De Chabalier, J-B., Lemarchand, A., Saurel, J-M., **Le Friant, A.**, Villemant, B., Boudon, G., Esposti Ongaro, T., Barsotti, S., Neri, A., Heap, M , (2021). La Soufrière de Guadeloupe. Synthesis chapter for the online European Catalog of active volcanoes – EUROVOLC project.
- Le Friant, A.**, Mangeney, A., Grandjean, G., Poulain, P., (2020). Appoort d'une modélisation fine du Glissement sous-marin. Dans l'article « Des simulations pour anticiper le risque tsunami – le cas de Mayotte », Taillefer, N., Tronel, F., Lemoine, A., Pedreros, R., Filipini, A. 2020. Revue *Risques Infos*, Institut des Risques Majeurs, 17-07-2020.
- Deves, M., Chaussidon, M., **Le Friant, A.**, Courtillot, V., Komorowski, J-C, Lejeune, A-M., Moretti, R., Peltier, A., Vallée, M., Satriano, C., Lajeunesse, E., Lesur, V., Lemarchand, A., Saurel, J-M. (2020). Développement de l'observation et de la surveillance des risques telluriques : Retour sur quelques étapes clés du par les scientifiques de l'institut de Physique du Globe de Paris. Revue pour Mémoire, n°21, automne 2020. Ministère de la transition écologique.

- Caron, B., Del Manzo, G., Bartolini, A., Villemant, B., Moreno, E., **Le Friant, A.**, Bassinot, F., Baudin, F., (2019). Les téphra de la super éruption du Toba, il y a 74 000 ans..., dans « Voir L'invisible », Editions du Puits Fleuri.
- Le Friant, A.**, Komorowski, J-C., Vallée Martin, Lemarchand, A., Bernard, P., (2019). Séismes et volcans : observer pour comprendre les processus et évaluer les aléas. Revue Géosciences n° 23, p 20-27 Géosciences et Risques Naturels. <https://www.calameo.com/read/005719121fb4506404bdb>
- Poulain, P, **Le Friant, A.**, Mangeney, A., Grandjean, G., Pedreros, R., Pilippini, A., Lemoine, A. (2020)
– Scénarios d'impact de tsunamis liés à des instabilités potentielles de pentes sous-marines au large de Mayotte. Rapport IPGP/BRGM 15/06/2020.
- Poulain, P, **Le Friant, A.**, Mangeney, A., Grandjean, G., Pedreros, R., Pilippini, A., Lemoine, A. (2020)
– Scénarios d'impact de tsunamis liés à des instabilités potentielles de pentes sous-marines au large de Mayotte. Rapport IPGP/BRGM 15/05/2020.
- Poulain, P, **Le Friant, A.**, Mangeney, A., Grandjean, G., Pedreros, R., Pilippini, A., Lemoine, A. (2020)
– Scénarios d'impact de tsunamis liés à des instabilités potentielles de pentes sous-marines au large de Mayotte. Rapport d'avancement de thèse de Pablo Poulain, IPGP/BRGM 30/04/2020.