

Thibault de GARIDEL-THORON

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RESEARCH INTERESTS

Paleoceanography and paleoclimatology, micropaleontology, ecology and evolution of foraminifera, machine learning and robotics applied to micropaleontology.

PROFESSIONAL EXPERIENCE

2023- present Senior Scientist (Directeur de Recherche) CNRS-CEREGE, France
2005-2023. Junior Scientist (Chargé de Recherches) CNRS-CEREGE, France
2002-2005. Post-doctoral fellow, Institute of Marine & Coastal Sciences, Rutgers Univ., NJ, USA
1996-1997. Scientist at Laboratoire de Police Scientifique de Lyon

EDUCATION

2019 Habilitation à Diriger des Recherches Aix-Marseille Université
2002 PhD. CEREGE-Université d'Aix Marseille III.
1998 DEA Environnements et Paléoenvironnements Océaniques – Université Bordeaux I

RESEARCH

Publications – Selected, 5 items

- Chaabane, Sonia, T. de Garidel-Thoron, J. Meilland, O. Sulpis, Thomas B. Chalk, G. Brummer, P. G. Mortyn, et al. 2024. "Migrating Is Not Enough for Modern Planktonic Foraminifera in a Changing Ocean." *Nature* 636 (8042): 390–96. <https://doi.org/10.1038/s41586-024-08191-5>.
- Adebayo, Michael B., Clara T. Bolton, Ross Marchant, Franck Bassinot, Sandrine Conrod, and Thibault de Garidel-Thoron. 2023. "Environmental Controls of Size Distribution of Modern Planktonic Foraminifera in the Tropical Indian Ocean." *Geochemistry, Geophysics, Geosystems: G(3)* 24 (4). <https://doi.org/10.1029/2022gc010586>.
- Marchant, Ross, Martin Tetard, Adnya Pratiwi, Michael Adebayo, and Thibault de Garidel-Thoron. 2020. "Automated Analysis of Foraminifera Fossil Records by Image Classification Using a Convolutional Neural Network." *Journal of Micropalaeontology* 39 (2): 183–202. <https://doi.org/10.5194/jm-39-183-2020>.
- Regoli, Fabienne, Thibault de Garidel-Thoron, Kazuyo Tachikawa, Zhiming Jian, Liming Ye, André W. Droxler, Guillaume Lenoir, Michel Crucifix, Nicolas Barbarin, and Luc Beaufort. 2015. "Progressive Shoaling of the Equatorial Pacific Thermocline over the Last Eight Glacial Periods." *Paleoceanography* 30 (5): 439–55. <https://doi.org/10.1002/2014pa002696>.
- Garidel-Thoron, Thibault de, Yair Rosenthal, Franck Bassinot, and Luc Beaufort. 2005. "Stable Sea Surface Temperatures in the Western Pacific Warm Pool over the Past 1.75 Million Years." *Nature* 433 (7023): 294–98. <https://doi.org/10.1038/nature03189>.

h-index: 27 • 50 peer-reviewed publications; frequent co-authorship with students & post-docs.

Reports

- Jean-Francois Doussin, Thibault de Garidel-Thoron, Anne Brès, Nicolas Arnaud, P. Lherminier, et al.. Prospective océan-atmosphère 2023-2028. Institut National des Sciences de l'Univers. 2023. ([hal-04334125](https://hal.archives-ouvertes.fr/hal-04334125))
- Pascale Braconnot, Guillaume Leduc, Fabien Arnaud, Doris Barboni, Franck Bassinot, et al.. Livre Blanc - Paléoclimats et Paléoenvironnements. CNRS, 147 p., 2024. ([hal-04530506](https://hal.archives-ouvertes.fr/hal-04530506))

Patent & Softwares

- MicroFossil Sorter (MISO) – Système et procédé de tri particulière, et installation et procédé de tri et de caractérisation particulière associés (8/3/2021). Patent.
- Logiciel MiSo : Control software for the sorting machine (CNRS Innovation declarations 15/12/2018; v2 on 17/04/2024). License L23350 CNRS Innovation for ATG Technologies.
- ParticleTrieur software: Annotation, classification, and morphometry of microparticles (CNRS Innovation declaration 17/04/2024).
- Casajus Nicolas, Greco Mattia, Chaabane Sonia, Giraud Xavier, de Garidel-Thoron Thibault (2025). *forcis: An R client to access the FORCIS database*. R package version 0.1.0.9000, <https://frbcesab.github.io/forcis>.

SEAGOING EXPERIENCE

Offshore Oceanographic Cruises

- N/O Marion Dufresne (february-march 2018), MobyDick, southern ocean..
- N/O Atalante (december 2015), cruise CaraCalHis, Carribean Sea : coring, hydrology, nets.
- R/V Bic Olaya, (april 2014), cruise CALHIS, Pacific ocean, Peru : coring, hydrology, nets.
- N/O Marion Dufresne (june 2012), Cruise MONOPOL, Bay of Bengal coring, hydrology, nets.
- R/V Sonne (april 2010), cruise PACENPAL, Pacifique central : coring.
- N/O Alis, (june 2008), cruise GYRAFOR-A, SW Pacific: plankton nets, PI.
- N/O Marion-Dufresne, (july-august 2007), cruise GYRAFOR-B, Indian ocean, plankton nets, PI.
- R/V Tansei-Maru, (may 2006), cruise KT06-11, NW Pacific : coring and nets.
- R/V Knorr, (may 2004), cruise Knorr 177-11, NE Atlantic : coring and nets. Site survey.
- R/V Baruna Jaya, (july 2003), cruise BJ8-03, Indonesian Seas : coring, hydrology, nets. Site survey; nets.
- N/O Marion Dufresne, (august-september 1999), cruise GINNA, North Atlantic : hydrology & coring.
- N/O Marion Dufresne, (1997), cruise IPHIS, West Pacific: coring.

TEACHING AND MENTORING

Post-Doctoral Supervision

- Sonia Chaabane, post-doctoral research associate (FRB CESAB/CEREGE/Max Planck Institute) - 2020-2025. Now CR IRD.
- Thang Le, post-doctoral research associate at MIO with C. Chevalier (ITEM) - 2021-2023. Now at Centuri institute, Marseille.
- Camille Godbillot, post-doctoral research associate (ITEM & IRD)– 2022-2025.
- Ross Marchant, post-doctoral research associate (ANR & Prestige Marie-Curie fellow).

PhD Supervision, recent

- Michael Adebayo (Aix-Marseille Université). Oct 16th, 2023. Dynamics of the Equatorial Ocean During Warm Plio-Pleistocene Periods by Automated Analysis of Planktonic Foraminifera. (Now ML scientist)
- Jaime Yesid Suarez Ibarra, co-direction with M. Weinkauff, Charles University, Czech republic, 2020-2024. (in post-doc at CEREGE w/ T. Chalk)

Master (M2) Supervision, recent

- 2024 : Annabelle Gao : co-supervision with Sonia Chaabane, Olivier Sulpis and Grégory Beaugrand (now PhD at Boston University) ; Mathias Ageron : co-supervision with Laetitia Licari (looking for a job on kelps)
- 2023 : Yohan Lichterfeld : co-supervision with G. Leduc (PhD student at CEREGE w/ G. Leduc & C. Bolton); Tobias Walla : co-supervision with E. Geslin & C. Barras (PhD student at IRD Nouméa)
- 2021 : Kani Bayez - co-supervision with L. Licari. (CM in natural park in Hauts de France)
- 2021 : Auria Kallend - co supervision with Sonia Chaabane & X. Giraud (PhD student at U Gent)

ACADEMIC LEADERSHIP AND COORDINATION

Coordination of Research Projects, recent

- 2025-2028 : Local PI for ANR PRCI BioIndicIA.
- 2023-2027 : AMIDEX MicroTree : Tri Automatisé de Microparticules pour les Sciences de l'Environnement.
- 2022-2028 : WP 3 leader EQUIPEX-+ IMAGINE-2
- 2020-2022 : PI of A*Midex project Institut Méditerranéen pour la Transition Environnementale, RapMed.
- 2019-2024 : 2017 : PI of FORCIS : Foraminifera Response to Climatic Stressors (CESAB - FRB).

National Responsibilities

- President of the Ocean-Atmosphere French National Panel - CSEA- INSU-CNRS (2021-pending)
- Member of the French Panel for offshore vessels - CNFH (2015-2019 ; 2019-2022)

CEREGE Responsibilities, recent

- Head of Climate Research Group (45 permanent faculty & staff, ~ 22 non tenured, ~10-20 students) – (2018-2023)
- Member of CEREGE Collegium, Outreach, Technological and Industrial Collaborations– (2018-2023)
- Member of CEREGE laboratory council (2018-2023)
- Member of CEREGE HR Board (2018-2023)
- Coordinator of the "Village des Sciences de l'Arbois" (Science Festival – ~150 scientists ; ~1000 pupils) – 2007-2021