

Tilemachos Bolioudakis

PhD Candidate

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Education

- 2021–present **PhD**, *Cornell University*, Civil & Environmental Engineering, Environmental C.F.D.
- 2021–2024 **M.Sc. in Environmental Fluid Mechanics and Hydrology**, *Cornell University*
- 2019–2021 **M.Sc. in Oceanography and Management of the Marine Environment**, *NKUA*
- 2012–2019 **B.Sc. in Physics**, *National and Kapodistrian University of Athens (NKUA)*, Section of Environmental Physics and Meteorology

Experience

- 08/2024 - present **System Administrator**, *Environmental C.F.D. Group*, Civil & Environmental Engineering, Cornell University
- 01/2023 - present **Graduate Teaching Assistant**, *Numerical Methods (CEE 6000 - Fall 25)*, Fluid Mechanics (CEE 3310 - Fall 23 & 24) - Engineering Computation (CEE 3200 - Spring 23,24,25), Civil & Environmental Engineering, Cornell University
- 08-12/2022 **Graduate Research Assistant**, *Civil & Environmental Engineering*, Cornell University
- 08/2021 - 08/2022 **Cornell Fellow Graduate Research Assistant**, *Civil & Environmental Engineering*, Cornell University
- 07-11/2020 **Volunteer**, *Youth Directorate*, Ministry of Education / Religious Affairs, Hellenic Republic

Awards

- 05-08/2023 **DeFrees Fellowship**, *Civil & Environmental Engineering*, Cornell University
- 2022 **Gerondelis Foundation Scholarship**, *Graduate Study Scholarship Program*, Gerondelis Foundation Inc., Lynn, MA, United States
- 2021 **Cornell University Fellowship**, *Academic Year 2021-2022*
- 2020 **Scholarship for M.Sc. Tuition Fees**, *Based on academic achievements*, National and Kapodistrian University of Athens

Publications

- 09/2024 **Preprint**, *Submitted in Journal of Physical Oceanography*, arXiv link, <https://arxiv.org/abs/2502.01607>
- 10/2025 **Preprint**, *Submitted in Ocean Dynamics*, DOI link provided by Research Square

Invited Talks / Conference Presentations

- 07/2024 **Interinstitutional Postgraduate Program NKUA-HCMR**, *Pathways to turbulence formation in high amplitude internal solitary waves of depression shoaling over gentle slopes*, Dep. of Physics, Athens, Greece, Announcement link
- 05/2024 **Fluid Dynamics of Sustainability and the Environment**, *Summer School*, Ecole Polytechnique, Paris, France, <http://fdse.org>
- 02/2024 **American Geophysical Union**, *Ocean Sciences Meeting*, New Orleans, Louisiana, USA, Poster <https://agu.confex.com/agu/OSM24/meetingapp.cgi/Person/1469507>
- 11/2023 **American Physical Society**, *76th Annual Meeting of the Division of Fluid Dynamics*, Presentation Washington, D.C., USA, <https://meetings.aps.org/Meeting/DFD23/Session/T44>

- 11/2022 **American Physical Society, 75th Annual Meeting of the Division of Fluid Dynamics**,
Presentation Indianapolis, Indiana, USA, <https://meetings.aps.org/Meeting/DFD22/Session/L27.2>
- 08/2022 **9th International Symposium on Stratified Flows**, Cambridge, UK,
Poster <https://www.damtp.cam.ac.uk/events/issf2022/>

Approved High-Performance-Computing Proposals

- 09/2024 **Maximize Project**, *NSF supported ACCESS Allocations, USA*, Role: Co-PI, Amount: 6.5M Service Units
- 03/2021 **Preparation/Development Projects**, *GRNET HPC System A.R.I.S., Greece*, Role: Co-PI, Amount: 200K Service Units

Additional Training

- 05/2024 **Fluid Dynamics of Sustainability and the Environment**, *Summer School*, Ecole Polytechnique, Paris, France, <http://fdse.org>
- 12/2020 **GRNET PRACE Training Center**, *Efficient Use of HPC Systems*
- 11/2020 **GRNET PRACE Training Center**, *Introduction to Parallel Programming*
- 10/2018 **Hellenic Physics Union Summer School**, *Aegina, Greece*
- 07/2018 **25th summer school-conference. Dynamical systems and complexity**, *NCSR Demokritos, Athens, Greece*

Languages

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|---------|----------------------------------------|---------|
| English | British Council IELTS (grade 7.0 of 9) | 05/2019 |
| Greek | Native Language | |

Computer Skills

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|-------------|--------------------------------------------------------------------|
| Experience | Linux/Unix environments, High-Performance Computing |
| Data | Synology NAS servers, Globus data transfers |
| Software | MATLAB, TecPlot, VisIt, \LaTeX , Microsoft Office, ArcGIS |
| Programming | Fortran, Python, R |