

# KAUSHAL GIANCHANDANI

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## RESEARCH INTEREST

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(Physical, Paleo- & Exo-) Oceanography, Climate (Dynamics & Data Analysis), Nonlinear Dynamics

## EDUCATION

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**Hebrew University of Jerusalem, Israel** Oct 2017 - present  
Ph.D. in Oceanography  
Thesis: Physical-biogeochemical dynamics of extreme paleoclimate events  
Advisors: Prof. Hezi Gildor, Prof. Yosef Ashkenazy (Ben-Gurion Uni.) and Prof. Eli Tziperman (Harvard Uni.)

**National Institute of Science Education and Research, India** Aug 2012 - May 2017  
Integrated B.Sc. - M.Sc. in Physics [view thesis]  
Thesis: Transition to turbulence in subcritical baroclinic flows  
Advisor: Dr. Antoine Venaille (École Normale Supérieure de Lyon)

## WORK EXPERIENCE

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**Institute of Earth Sciences, Hebrew University of Jerusalem** Oct 2020 - Jan 2021  
Teaching Assistant  
Course: Mathematical methods in scientific models [view notes]  
Instructor: Prof. Nathan Paldor

**École Normale Supérieure de Lyon** May - Jul 2016  
Summer Intern  
Project Title: Transition to turbulence in subcritical baroclinic flows (continued as master's thesis)  
Advisor: Dr. Antoine Venaille

**Institute of Mathematical Sciences** Jun - Jul 2015  
Summer Research Fellow  
Project Title: Binary logic using spatially patterned deaths in chemical oscillators [view report]  
Advisor: Prof. Sitabhra Sinha

**Indian Institute of Science Education and Research - Kolkata** May - Jul 2014  
Summer Intern  
Project Title: Time series analysis of the bouncing ball experiment [view report]  
Advisors: Prof. Prasanta K. Panigrahi and Prof. A.N. Sekar Iyengar

**National Institute of Science Education and Research** May - Jun 2013  
Summer Intern  
Project Title: Motion of the Foucault pendulum [view report]  
Advisors: Dr. Joydeep Bhattacharjee

## PUBLICATIONS

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2. **Gianchandani, Kaushal**, Hezi Gildor, and Nathan Paldor. "On the role of domain aspect ratio in the westward intensification of wind-driven surface ocean circulation." *Ocean Science* 17, no. 1 (2021): 351-363. [pdf]
  1. Campisi-Pinto, Salvatore, **Kaushal Gianchandani**, and Yosef Ashkenazy. "Statistical tests for the distribution of surface wind and current speeds across the globe." *Renewable Energy* 149 (2020): 861-876. [pdf]
- In review:*
- Gianchandani, Kaushal**, Sagi Maor, Ori Adam, Alexander Farnsworth, Hezi Gildor, Daniel J. Lunt, and Nathan Paldor. "Both tectonic activity and CO<sub>2</sub> variability affect temperature gradients in the Cretaceous." [preprint]

## SEMINARS

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- Atmospheres and Oceans Seminar Jan 2021  
Johns Hopkins University, Baltimore, MD, USA

## CONFERENCES AND WORKSHOPS

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- GFD Days 2022 Talk Apr 2022  
Ben-Guiron University of the Negev, Sede Boqer, Israel
- Ocean Sciences Meeting 2022 Talk Feb - Mar 2022  
Session: AI05 Role of ocean-atmosphere dynamics in global climate, Online
- Next Generation Challenges in Energy-Climate Modeling Workshop Poster Sep 2021  
University of Reading, Reading, UK, Online
- NASA PACE Applications Workshop Sep 2021  
National Aeronautics and Space Administration, Online
- Wave Dynamics and Climate Workshop Talk Sep 2019  
Inter-University Institute for Marine Sciences, Eilat, Israel
- Israeli Association for Aquatic Sciences' 15th Annual Meeting Talk Mar 2019  
Haifa, Israel
- EPScon 2019 Poster Mar 2019  
Weizmann Institute of Science, Rehovot, Israel
- GFD Days 2019 Poster Jan 2019  
Ben-Guiron University of the Negev, Sede Boqer, Israel
- Ice, Oceans and Atmospheres on Earth and Elsewhere May 2018  
CNR Headquarters, Rome, Italy
- 10th Conference on Nonlinear Systems and Dynamics Poster Dec 2016  
Indian Institute of Science Education and Research - Kolkata, Kolkata, India
- Statphys26 Jul 2016  
Lyon, France

## SCHOOLS

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- International Spring School: Hydrothermal Vents May 2021  
European Astrobiology Network Association, Online
- Summer School on Fluid Dynamics of Sustainability and Environment Sep 2018  
University of Cambridge, Cambridge, UK
- 10th Winter School on Astroparticle Physics Dec 2015  
Bose Institute, Darjeeling, India

## SERVICES

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- Member, The Oceanography Society Student Committee Sep 2021 - present  
Served on the Coding Resources Subcommittee
- Co-chair, Session AI05 in Ocean Science Meeting 2022 Feb - Mar 2022  
Participant of the inaugural OSM Session Mentoring Program

## MENTORSHIP

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- Sagi Maor (B.Sc. student), Hebrew University of Jerusalem Nov 2021 - Oct 2022  
– Undergraduate research project in paleo-oceanography

## OUTREACH ACTIVITIES

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- TOS Panel Discussion for World Oceans Day Jun 2022  
Title: Using Ocean and Environmental Data to Address Socio - Economic Challenges
  - Organized and moderated the panel discussion with 50+ attendees (students, researchers and industry professionals) from 5 countries
- Young Data Scientists Quest Jan - Apr 2022
  - Mentored 30 students of Launch High School, Cedar City, UT for a 10 week data science bootcamp
  - Designed two data science projects to complement the bootcamp
  - Conducted multiple training sessions on data acquisition (source: Google Trends), data visualization and statistical analysis

## AWARDS

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- **Registration Grant**, Ocean Sciences Meeting 2022 Feb - Mar 2022
- **Innovation in Science Pursuit for Inspired Research (INSPIRE) Fellowship** 2012 - 2017  
Sponsor: Department of Science & Technology, Government of India  
*Awarded to the top 1% of students in India pursuing an undergraduate degree in basic sciences*
- **Physics Summer Research Fellowship** Jun - Jul 2015  
Sponsor: Institute of Mathematical Sciences, Chennai  
*Awarded to 15 students selected from applicants across India to pursue an internship in Physics at the institute*

## MEMBERSHIPS

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- The Oceanography Society Apr 2019 - present
- Israeli Association for Aquatic Sciences Mar 2019 - present
- The New York Academy of Science Oct 2020 - Oct 2021

## TECHNICAL STRENGTHS

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Computer Languages : Python, Fortran, Bash, C++, HTML  
Packages : MITgcm, (py)ferret,  $\LaTeX$   
Software : MATLAB, Mathematica  
Operating systems : Ubuntu (other linux based OSs), macOS (unix), Microsoft Windows