

## Giuseppe Torri, Ph.D.

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### EDUCATION

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- 2012 Ph.D.**, Theoretical Physics, Imperial College London  
Thesis: “Counting gauge invariant operators in supersymmetric theories using Hilbert series”  
Advisor: Prof. Amihay Hanany
- 2007 M.Sc.**, Theoretical Physics, Università degli Studi di Milano – Bicocca  
Thesis: “Partition functions for the chiral ring of supersymmetric gauge theories”  
Advisor: Prof. Alberto Zaffaroni  
Final grade: 110/110 magna cum laude
- 2005 B.Sc.**, Physics, Università degli Studi di Milano – Bicocca  
Final dissertation: “Representations of SU(3) and the quark model”  
Advisor: Prof. Alberto Zaffaroni  
Final grade: 110/110 magna cum laude

### POSITIONS

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- 2018-current** Assistant Professor, Dept. Atmospheric Sciences, U. of Hawai‘i at Mānoa
- 2015-2018** Research Associate, Earth & Planetary Sciences, Harvard University
- 2012-2015** Post-Doctoral Fellow, Earth & Planetary Sciences, Harvard University

### PUBLICATIONS

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- Torri, G., A.D. Nugent, B.N. Popp – The isotopic composition of rainfall on a subtropical mountainous island, *accepted pending minor revisions*
- Torri, G. (2022) – Isotopic equilibration in convective downdrafts, *Geophysical Research Letters*, 49, e2022GL098743.
- Sakaeda, N., G. Torri (2022) – The behaviors of intraseasonal cloud organization during DYNAMO/AMIE, *J. Geoph. Res. Atmos.*, 127, e2021JD035749.
- Stuecker, M., C. Karamperidou, A.D. Nugent, G. Torri, S. Coats, S. Businger (2021) – Comments on “The financial dilemma of students pursuing an atmospheric science graduate degree in the United States”, *Bull. Amer. Met. Soc.*, **102**, 323-324.
- Torri, G. (2021) – On the isotopic composition of cold pools in radiative-convective equilibrium, *J. Geophys. Res. Atmos.* **126**.

- Tachera, D., N. Lautze, G. Torri, D. Thomas (2021) – Characterization of the isotopic composition and bulk ion deposition of precipitation from Central to West Hawai‘i Island between 2017 and 2019, *J. Hydro: Regional Studies*, **34**, 100786
- Dores, D., E., C. R. Glenn, G. Torri, R. B. Whittier, B. N. Popp (2020) – Stable isotopic composition of precipitation on Oahu, Hawaii, during the 2017-2018 La Niña and implications for groundwater recharge. *Hydrological Processes*. **34:34**: 4676-4696.
- Torri, G., D. K. Adams, H. Wuang, Z. Kuang (2019) – On the diurnal cycle of GPS-derived column water vapor over Sumatra, *Journal of the Atmospheric Sciences*, **76(11)**, <https://doi.org/10.1175/JAS-D-19-0094.1>.
- Torri, G. and Z. Kuang (2019) – On cold pool collisions in tropical boundary layers, *Geophysical Research Letters*, **46**, doi: 10.1029/2018GL080501
- Zuidema, P., G. Torri, C. Muller, A. Chandra (2017) – A survey of precipitation-induced atmospheric cold pools over oceans and their interactions with the larger-scale environment, *Surveys in Geophysics*, **38(6)**, 1283-1305.
- Torri, G., D. Ma, and Z. Kuang (2017) – Stable water isotopes and large-scale vertical motions in the tropics, *J. Geophys. Res. Atmos.*, **122**, 3703-3717.
- Torri, G. and Z. Kuang (2016) – Rain evaporation and moist patches in tropical boundary layers, *Geoph. Res. Let.*, **43(18)**.
- Torri, G. and Z. Kuang (2016) – A Lagrangian study of precipitation-driven downdrafts, *J. Atmos. Sci.*, **73**, 839-854.
- Gentine, P., A. Girelli, S. Park, J. Nie, G. Torri and Z. Kuang (2016) – Role of surface heat fluxes underneath cold pools, *Geoph. Res. Let.*, **43**, 874-883.
- Torri, G., Z. Kuang and Y. Tian (2015) – Mechanisms for convection triggering by cold pools, *Geoph. Res. Let.*, **42(6)**, 1943-1950.

### **Theoretical Physics (authors in alphabetical order)**

- J. Davey, A. Hanany, N. Mekareeya, G. Torri (2011) – M2-branes and Fano 3-folds, *J. Phys. A*, **44**, 40.
- A. Hanany, G. Torri – Brane tilings and supersymmetric gauge theories (2011), *Nucl. Phys. Proc. Suppl.*, **216**, 1, 270-272.
- A. Hanany, E. E. Jenkins, A. V. Manohar, G. Torri (2011) – Hilbert series for flavor invariants of the Standard Model, *J. High En. Phys.*, **2011**, 3, 96.
- J. Davey, A. Hanany, N. Mekareeya, G. Torri (2010) – Brane tilings, M2-branes and Chern-Simons theories, *Acta Phys. Pol. B Proc. Suppl.*, **2**, 3, 639-655.
- I. R. Klebanov, G. Torri (2010) – M2-branes and AdS/CFT, *Int. J. Mod. Phys. A*, **25**, 2-3, 332-350.
- J. Davey, A. Hanany, N. Mekareeya, G. Torri (2009) – Higgsing M2-branes, *J. High En. Phys.*, **2009**, 11, 28.
- J. Davey, A. Hanany, N. Mekareeya, G. Torri (2009) – Phases of M2-branes, *J. High En. Phys.*, **2009**, 6, 25.

A. Hanany, N. Mekareeya, G. Torri (2008) – The Hilbert series of Adjoint SQCD, *Nucl. Phys. B*, **825**, 1-2, 52-97.

## **TEACHING EXPERIENCE**

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<b>2022, F</b>	ATMO 620	Physical Meteorology
<b>2022, S</b>	ATMO 305	Meteorological Instruments and Observations
<b>2021, F</b>	ATMO 620	Physical Meteorology
<b>2021, S</b>	ATMO 606	Cumulus Dynamics
<b>2020, F</b>	ATMO 620	Physical Meteorology
<b>2020, S</b>	ATMO 765	Seminars in Meteorology
<b>2020, S</b>	ATMO 412	Meteorological Analysis and Forecasting
<b>2019, F</b>	ATMO 620	Physical Meteorology
<b>2019, S</b>	ATMO 416	Tropical Analysis and Forecasting (w/ Steven Businger)
<b>2018, F</b>	ATMO 620	Physical Meteorology (w/ Yuqing Wang)

## **GRANTS**

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Assessment of Cloud Development and Organization Processes within the Madden Julian Oscillation using ARM Observations and Lagrangian Modeling, DOE, co-I, \$576,876, 10/01/19–09/30/23

A Lagrangian investigation of stable water vapor isotopes in deep convective systems, NSF, PI, \$299,971, 07/01/20—06/30/23

A new approach to studying supercell storms: the use of water isotopes, Merage Foundation, PI, \$202,667, 15/01/22—14/01/24

RII Track-1: Change Hawaii; Harnessing the Data Revolution for Island Resilience, NSF, \$20,000,000, 06/01/22—05/31/2027.

CC\* Compute: Koa-A High Performance and Flexible Research Computing Resource, NSF, co-I, \$400,000, 06/01/22—05/31/24.

Understanding diurnal, rainfall processes over tropical islands to improve subseasonal-to-seasonal forecasts, NOAA, co-I, \$828,199, 01/09/22—08/31/25.

An Evaluation of the NextGen National Water Model in Tropical Conditions with the Aim of Improving Hyperlocal Flood Forecasting, NOAA, PI, \$875,486, 08/01/22—07/31/24

## **AWARDS & SCHOLARSHIPS**

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<b>2021</b>	Board of Regents Excellence in Teaching award (nominated)
<b>2021</b>	American-Made Challenges Solar Forecasting Prize
<b>2021</b>	Innovation2Impact Initiative Award
<b>2021</b>	Second place for the University of Hawai‘i Venture Competition
<b>2021</b>	Winner of the Pacific Asian Center for Entrepreneurship Innovation Challenge

<b>2020</b>	Winner of the University of Hawai‘i Innovation Impact Challenge
<b>2015</b>	The Foundation Blanceflor Boncompagni Ludovisi, née Bildt Scholarship
<b>2012-14</b>	Harvard University Center for the Environment – Ziff Environmental Fellowship
<b>2011-12</b>	Fondazione Angelo dalla Riccia Scholarship
<b>2005/07</b>	Università degli Studi di Milano Bicocca Distinction Award

## **INVITED PRESENTATIONS**

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<b>2022</b>	EUREC4A-iso Online Workshop, Virtual
<b>2021</b>	Tropical Pacific Observing Needs Workshop, Virtual
<b>2020</b>	ATOMIC group, Virtual
<b>2020</b>	Durham University, Durham, UK
<b>2019</b>	Università degli Studi di Milano – Bicocca, Milan, Italy
<b>2018</b>	Woods Hole Oceanographic Institute, Woods Hole, USA
<b>2018</b>	Colorado State University, Fort Collins, USA
<b>2017</b>	Ludwig-Maximilian Universität, Munich, Germany
<b>2016</b>	University of Washington, Seattle, USA
<b>2016</b>	Max-Planck-Institut für Meteorologie, Hamburg, Germany
<b>2014</b>	Massachusetts Institute of Technology, Cambridge, USA

## **SERVICE**

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<b>2022</b>	Member of the School of Ocean and Earth Science and Technology Dean Search Advisory Committee
<b>2019-current</b>	Member of the Department of Atmospheric Sciences Curriculum Committee
<b>2018-current</b>	Member of the Information Technology Services Cyberinfrastructure Faculty Advisory Committee
<b>2018-2021</b>	Organizer and chair of session “Atmospheric Convection: Processes, Dynamics, and Links to Weather and Climate” at AGU Fall Meeting
<b>2017</b>	Organized and chaired session “Land-Atmosphere Interactions, Biosphere-Boundary Layer Feedbacks, and Moist Convection” at AGU Fall Meeting
<b>2015</b>	Chaired session “Other Mesoscale Processes” at 16 <sup>th</sup> Conference on Mesoscale Processes, Boston
<b>2012-current</b>	Reviewer for Geophysical Research Letter, Journal of the Atmospheric Sciences, Journal of Geophysical Research, Journal of Climate, Nature, and various proposals for National Science Foundation, the National Oceanic and Atmospheric Administration, and the Department of Energy.

## **PROFESSIONAL MEMBERSHIP AND OTHER**

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Member of American Geophysical Union, American Meteorological Society, Associazione Italiana di Scienze dell'Atmosfera e Meteorologia, Società Italiana di Meteorologia.

Co-founder of Nimbus AI, a start-up company that uses artificial intelligence to provide high-resolution solar irradiance forecasts in environments with complex topography, such as the Hawaiian Islands.