Debora Yumi de Oliveira

Curriculum Vitæ Summary

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Education

2019–2023 **University of California, Irvine** | Irvine, USA
Ph.D., Civil and Environmental Engineering
Focus area: Hydrology and Water Resources
Dissertation: Statistical underpinning of process-based diagnostics of hydrologic models
Advisor: Prof. Jasper Alexander Vrugt

2016–2018 **Universidade Federal de Santa Catarina** | Florianópolis , Brazil
Master's degree, Environmental Engineering
Focus area: Hydrology and Applied Hydraulics
Thesis: Bayesian inference applied to interception and rainfall-runoff modeling
Advisor: Prof. Pedro Luiz Borges Chaffe

2010–2015 **Universidade Federal de Santa Catarina** | Florianópolis, Brazil
Bachelor's degree, Sanitary and Environmental Engineering
Thesis: Identification of interception model parameters using an automatic calibration algorithm
Advisor: Prof. Pedro Luiz Borges Chaffe

2012–2013 **École Nationale Supérieure de Géologie** | Nancy, France
BRAFITEC Exchange Program
Focus area: Water Resources/Hydrogeology

Academic Appointments

2025–on **Universidade Presbiteriana Mackenzie** | São Paulo, Brazil
Assistant Professor
Escola de Engenharia

2023–2025 **University of California, Irvine** | Irvine, USA
Postdoctoral Scholar
Department of Civil and Environmental Engineering
Supervisor: Prof. Amir AghaKouchak
Focus: Climate Extremes

2023–2023 **California State University, Long Beach** | Long Beach, USA
Temporary Lecturer
Department of Civil Engineering & Construction Engineering Management

Teaching Experience

02/25–on **Universidade Presbiteriana Mackenzie** | São Paulo, Brazil
Assistant Professor
Fenômenos de Transporte I
Hidráulica I
Hidráulica II

09–11/23 **California State University, Long Beach** | Long Beach, USA
Lecturer
CE 437. Engineering Hydraulics

01–03/23 **University of California, Irvine** | Irvine, USA
Teaching Assistant
ENGRCEE 171. Water Resources Engineering

09–12/22 **University of California, Irvine** | Irvine, USA
Teaching Assistant
ENGRCEE 20. Introduction to Computational Engineering Problem Solving

09–12/20 **University of California, Irvine** | Irvine, USA
Teaching Assistant
ENGRCEE 20. Introduction to Computational Engineering Problem Solving

Honors and Awards

2022 **AGU 2021 Editors' Citation for Excellence in Refereeing for Water Resources Research**
American Geophysical Union

2017 **Prêmio Jovem Pesquisador**
Brazilian Water Resources Association (ABRHidro)

2015 **Top graduating student in Sanitary and Environmental Engineering**
Universidade Federal de Santa Catarina

Service to the Community

Journal reviewer
Nature
Hydrology and Earth System Sciences
Water Resources Research
Brazilian Journal of Water Resources
Revista de Gestão de Água da América Latina

Referred Journal Publications

2025 AghaKouchak, A, et al. including de Oliveira, DY. Building urban fire resilience to enhance national security. *Nature Cities*. doi:10.1038/s44284-025-00296-w.

2024 Huning, LS, et al. including de Oliveira, DY. Sustainability nexus analytics, informatics, and data (AID): Drought. *Sustainability Nexus Forum*. doi:10.1007/s00550-024-00546-w.

Anzolin, G, de Oliveira, DY, Vrugt, JA, AghaKouchak, A, Chaffe, PLB. Nonstationary frequency analysis of extreme precipitation: Embracing trends in observations. *Journal of Hydrology*. doi:10.1016/j.jhydrol.2024.131300.

de Oliveira, DY, Vrugt, JA. Reply to Comment by W. Knoben and M. Clark on The Treatment of Uncertainty in Hydrometric Observations: A Probabilistic Description of Streamflow Records. *Water Resources Research*. doi:10.1029/2023WR036550.

2022 Vrugt, JA, de Oliveira, DY, Schoups, G, Diks, CGH. On the use of distribution-adaptive likelihood functions: Generalized and universal likelihood functions, scoring rules and multi-criteria ranking. *Journal of Hydrology*. doi:10.1016/j.jhydrol.2022.128542.

de Oliveira, DY, Vrugt, JA. The Treatment of Uncertainty in Hydrometric Observations: A Probabilistic Description of Streamflow Records. *Water Resources Research*. doi:10.1029/2022WR032263.

Vrugt, JA, de Oliveira, DY. Confidence intervals of the Kling-Gupta efficiency. *Journal of Hydrology*. doi:10.1016/j.jhydrol.2022.127968.

David, PC, Chaffe, PLB, Chagas, VBP, dal Molin, M, de Oliveira, DY, Klein, AHF, Fenicia, F. Correspondence Between Model Structures and Hydrological Signatures: A Large-Sample Case Study Using 508 Brazilian Catchments. *Water Resources Research*. doi:10.1029/2021WR030619.

2020 Paiva, RCD, et al. including de Oliveira, DY. Advances and challenges in the water sciences in Brazil: a community synthesis of the XXIII Brazilian Water Resources Symposium. *Revista Brasileira de Recursos Hídricos*, doi:10.1590/2318-0331.252020200136.

Franco, ACL, de Oliveira, DY, Bonumá, NB. Comparison of single-site, multi-site and multi-variable SWAT calibration strategies. *Hydrological Sciences Journal*. doi:10.1080/02626667.2020.1810252.

2019 Bartiko, D, de Oliveira, DY, Bonumá, NB, Chaffe, PLB. Spatial and seasonal patterns of flood change across Brazil. *Hydrological Sciences Journal*, doi:10.1080/02626667.2019.1619081.

David, PC, de Oliveira, DY, Grison, F, Kobiyama, M, Chaffe, PLB. Systematic increase in model complexity helps to identify dominant streamflow mechanisms in two small forested basins. *Hydrological Sciences Journal*. doi:10.1080/02626667.2019.1585858.

2018 de Oliveira, DY, Chaffe, PLB, Sá, JHM. Extending the Applicability of the Generalized Likelihood Function for Zero-Inflated Data Series. *Water Resources Research*. doi:10.1002/2017WR021560.

2015 Sá, JHM, Chaffe, PLB, de Oliveira, DY. Análise comparativa dos modelos de Gash e de Rutter para a estimativa da interceptação por floresta ombrófila mista. *Revista Brasileira de Recursos Hídricos*. doi:10.21168/rbrh.v20n4.p1008-1018.