

YAO YU

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RESEARCH KEYWORDS

satellite radar altimetry; machine learning; small-scale ocean dynamics; seafloor; ocean mixing

POSITION

Schmidt AI in Science Postdoc Fellow, University of California, San Diego	2023 – 2025
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EDUCATION

University of California, San Diego, Doctor of Philosophy in Earth Sciences	2018 – 2023
Wuhan University, China, Master of Engineering in Geodesy and Geomatics	2015 – 2018
Wuhan University, China, Bachelor of Engineering in Geodesy and Geomatics	2011 – 2015
Academia Sinica, Taiwan, Visiting Student	2016, 2017

PUBLICATIONS

Peer-reviewed papers

10. **Yu, Y.**, Sandwell, D. T., Dibarboure, G., Chen, C., & Wang, J. (2024). Accuracy and resolution of SWOT altimetry: Foundation seamounts. *Earth and Space Science*, <https://doi.org/10.1029/2024EA003581>
9. Gevorgian, J., Sandwell, D. T., **Yu, Y.**, Kim, S. S., & Wessel, P. (2023). Global distribution and morphology of small seamounts. *Earth and Space Science*, <https://doi.org/10.1029/2022EA002331>. [[pdf](#)]
8. **Yu, Y.**, Sandwell, D. T., & Gille, S. T. (2023). Seasonality of the Sub-mesoscale to Mesoscale Sea Surface Variability from Multi-Year Satellite Altimetry. *Journal of Geophysical Research: Oceans*, <https://doi.org/10.1029/2022JC019486> [[pdf](#)]
7. **Yu, Y.**, Gille, T., & Sandwell, D. (2022). Global Mesoscale Ocean Variability from Multiyear Altimetry: An Analysis of the Influencing Factors, *Artificial Intelligence for the Earth Systems*, <https://doi.org/10.1175/AIES-D-21-0008.1> [[pdf](#)]
6. Sandwell, D. T., Goff, J. A., Gevorgian, J., Harper, H., Kim, S. S., **Yu, Y.**, Tozer, B., Wessel, P., & Smith, W. H. (2022). Improved Bathymetric Prediction Using Geological Information: SYN BATH. *Earth and Space Science*, <https://doi.org/10.1029/2021EA002069> [[pdf](#)].
5. **Yu, Y.**, Sandwell, D., Gille, T., & Villas Bôas, A.B. (2021). Assessment of ICESat-2 for the recovery of ocean topography, *Geophysical Journal International*, <https://doi.org/10.1093/gji/ggab084> [[pdf](#)]
4. Chao, B. F., & **Yu, Y.** (2020). Variation of the Equatorial Moments of Inertia Associated with a 6-year Westward Rotary Motion in the Earth, *Earth and Planetary Science Letters*, <https://doi.org/10.1016/j.epsl.2020.116316> [[pdf](#)]

3. Chao, B. F., **Yu, Y.**, & Chung, C.H. (2020). Variation of Earth's Oblateness J2 on Interannual-to-Decadal Timescales, *Journal of Geophysical Research: Solid Earth*, <https://doi.org/10.1029/2020JB019421> [pdf]
2. Tanaka, Y., **Yu, Y.**, & Chao, B. F. (2019). Gravity and geoid changes by the 2004 and 2012 Sumatra earthquakes from satellite gravimetry and ocean altimetry. *Terr. Atmos. Ocean. Sci.*, doi:10.3319/TAO.2018.10.24.02 [pdf]
1. **Yu, Y.**, Chao, B. F., García-García, D., & Luo, Z. (2018). Variations of the Argentine gyre observed in the GRACE time-variable gravity measurements and Ocean Altimetry, *Journal of Geophysical Research: Oceans*, <https://doi.org/10.1029/2018JC014189> [pdf]

In progress

2. **Yu, Y.**, Gille, T., & Sandwell, D. (*in prep*) Tidal Conversion Using a Realistic High-Resolution Bathymetry Model
1. **Yu, Y.**, Sandwell, D., Dibarboure, G. (*submitted*) Abyssal Marine Tectonics from the SWOT Mission

ACADEMIC HONORS

Schmidt AI in Science Postdoc Fellowship, UCSD	2023-2025
H. William Menard Memorial Fellowship, UCSD	2023
Scripps Institution of Oceanography graduate fellowship, UCSD	2018
Frist Prize, Graduate Student Fellowship, Wuhan University	2016, 2017, 2018
National Scholarship, China	2014
Frist Prize, Undergraduate Student Fellowship, Wuhan University	2012, 2013, 2014, 2015

FUNDING

UCSD Earth Section Small Grants (recipient; \$3290; for one-day workshop and monthly meetings)	2024
NASA SWOT Science Team (postdoc)	2024-2028

Travel funds:

MPOWIR Pattulo Conference	2023
Satellite Observations and Climate Models Summer School, JPL	2022
Spaceborne Earth Observations and Global Change Summer School, Shanghai Astronomical Observatory	2014

TEACHING

Teaching assistant of SIO 111 Ocean waves (undergraduate level)	winter quarter, 2022
Guest lecturer of SIO 111 Ocean waves (undergraduate)	winter quarter, 2023
Guest lecturer of SIO 135/236 Satellite Remote Sensing (undergraduate/graduate level)	spring quarter, 2024

MENTORING

peer mentor for 2 graduate students	2020-2022
research mentor for 1 undergraduate, 1 graduate students	

PROFESSIONAL SERVICE

Proposal reviewer: NASA early career FINESST (2024)

Journal reviewer: GRL, IEEE TGRS, JGR ML, AGU Advances

Meeting convenor: 2023 AGU fall meeting convener; 2024 Scripps SWOT Workshop organizer

AGU Geodesy Executive Committee early career representative

2023-*now*

AGU Geodesy Executive Committee student representative

2022-2023

PRESENTATIONS

OSTST

2021, 2023

AGU fall meeting

2019, 2020, 2021, 2022, 2023

Ocean sciences meeting

2020, 2022

SWOT science team meeting

2022, 2024

Asia Ocean Geosciences Society

2017

FIELD WORK

GPS survey at Mexicali, Mexico

March 8-9, 2020

R/V Sally Ride at Fieberling Seamount chains

January 13-23, 2020

GPS survey at Ridgecrest, California

July 12, November 10-11, 2019

GPS survey at Painted Canyon, California

March 2-3, 2019

GPS survey at Palm desert, California

November 12-13, 2018