

Ruichen Zhou

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Education

Ph.D. in Surveying and Mapping University of Chinese Academy of Sciences, <i>Supervisor: Haoming Yan, Researcher</i>	2024–Present
M.S. in Surveying and Mapping Engineering Shandong University of Science and Technology, <i>Supervisor: Jinyun Guo, Prof.</i>	2021–2024
B.S. in Surveying and Mapping Engineering Linyi University	2017–2021

Publications

- Zhou, R.**, Guo, J., Ya, S., Sun, H., and Liu, X. (2025). SDUST2023VGGA: A Global Ocean vertical gradient of gravity anomaly model determined from multidirectional data from mean sea surface. *Earth System Science Data*. (Accept)
- Zhou, R.**, Guo, J., Ya, S., Sun, H., & Liu, X. (2024). SDUST2023VGGA (V1.0) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.14177000>
- Zhou, R.**, Liu, X., Guo, J., Hwang, C., Jia, Y., Chang, X., & Sun, H. (2024). Inverting vertical gravity anomaly gradients using multidirectional data from mean sea surface model: A case of Arabian Sea. *Earth, Planets and Space*, 76(1). doi:10.1186/s40623-024-02105-5
- Zhou, R.**, Liu, X., Li, Z., Sun, Y., Yuan, J., Guo, J., & Ardalan, A A. (2023). On performance of vertical gravity gradient determined from CryoSat-2 altimeter data over Arabian Sea. *Geophysical Journal International*, 234(2), 1519-1529. doi:10.1093/gji/ggad153

Programs

NSFC Project , <i>Researcher</i> Waveform Reprocessing for Coastal Satellite Altimetry Using Singular Spectrum Analysis	2021–2024
NSFC Major Project , <i>Researcher</i> Fine Modeling of Global Seabed Topography for Gravity Field Applications	2021–2024
NSFC Project , <i>Researcher</i> New Method for All-Weather Measurement of Deflection of the Vertical Using 3D Laser Tracking Technology	2021–2024

Skills

Programming Languages: Python (NumPy, Pandas, TensorFlow, PyTorch), MATLAB (Signal processing, Geophysical simulations), C# (WinForms, .NET)

Data Processing & Machine Learning: Machine Learning (Regression, Clustering, Neural networks), Deep Learning (CNNs, RNNs), Statistical Analysis (Multivariate analysis, Hypothesis testing, Time series analysis), Data Visualization (Matplotlib, Seaborn, Tableau)

Tools & Technologies: Git, Docker, GMT, ArcGIS, Google Earth Engine, Jupyter Notebooks, LaTeX

Interests

Research on applying deep learning to satellite altimetry and remote sensing data for enhanced environmental and geophysical analysis.