



Newsletter of the Unesco Land Subsidence International Initiative

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Job Offer in Delft (the Netherlands)

Assistant Professor Coastal Subsidence

Deadline Januari 16th, 2023

<https://www.academictransfer.com/nl/320587/assistant-professor-coastal-subsidence/>

Call for Abstracts

Restoration and Management of **Peatlands for Climate Mitigation**: Unravelling Biophysical and Socioecological Drivers of Change

<https://www.frontiersin.org/research-topics/50886/restoration-and-management-of-peatlands-for-climate-mitigation-unravelling-biophysical-and-socioecol#overview>

SPECIAL ISSUE

Special Issue "Climatic and Anthropogenic Impacts on Groundwater Resources and Adaptation Strategies"

A special issue of Sustainability (ISSN 2071-1050). This special issue belongs to the section "Sustainable Water Management".

Deadline for manuscript submissions: **30 June 2023**

https://www.mdpi.com/journal/sustainability/special_issues/7HEZFIXCE5

NEW LITERATURE

Yuanzhe Wu et al.,

Bibliometric Analysis of Interferometric Synthetic Aperture Radar (InSAR) Application in Land Subsidence from 2000 to 2021

https://www.researchgate.net/publication/365276166_Bibliometric_Analysis_of_Interferometric_Synthetic_Aperture_Radar_InSAR_Application_in_Land_Subsidence_from_2000_to_2021

Iran, Hormozgan Province

Mohammadifar, A., Gholami, H. & Golzari, S. Stacking- and voting-based ensemble deep learning models (SEDL and VEDL) and active learning (AL) for mapping land subsidence. Environ Sci Pollut Res (2022). <https://doi.org/10.1007/s11356-022-24065-7>

Italy, Po Delta

Fabris, M. et al., An Integrated InSAR and GNSS Approach to Monitor Land Subsidence in the Po River Delta (Italy). Remote Sens. 2022, 14, 5578. <https://doi.org/10.3390/rs14215578>

https://mdpi-res.com/d_attachment/remotesensing/remotesensing-14-05578/article_deploy/remotesensing-14-05578.pdf?version=1667574911

Italy, Ravenna

Francesca Grassi, Francesco Mancini, Elisa Bassoli & Loris Vincenzi (2022) Contribution of anthropogenic consolidation processes to subsidence phenomena from multi-temporal DInSAR: a GIS-based approach, GIScience & Remote Sensing, 59:1, 1901-1917, DOI: 10.1080/15481603.2022.2143683

<https://www.tandfonline.com/doi/full/10.1080/15481603.2022.2143683>

Kenya, Vanga

Amon Kibiwot Kimeli et al.,

Surface elevation changes in an estuarine mangrove forest in Vanga, Kenya: Implications for management and mitigation of sea-level rise

<https://www.frontiersin.org/articles/10.3389/fmars.2022.932963/full>

Nigeria, Lagos

L. O. Ohenhen et al.,

Land Subsidence Hazard and Building Collapse Risk in the Coastal City of Lagos, West Africa

<https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2022EF003219>

PR Cina, Chaobai River alluvial fan

Deng, S., Yang, H., Chen, X. & Wei, X. (2022). Probabilistic analysis of land subsidence due to pumping by Biot poroelasticity and random field theory. Journal of Engineering and Applied Science, 69(1).

<https://dx.doi.org/10.1186/s44147-021-00066-0>

PR China, Eastern Beijing Plane

Liu, Y. et al., Characterizing Spatiotemporal Patterns of Land Subsidence after the South-to-North Water Diversion Project Based on Sentinel-1 InSAR Observations in the Eastern Beijing Plain. *Remote Sens.* 2022, 14, 5810. <https://doi.org/10.3390/rs14225810>
https://mdpi-res.com/d_attachment/remotesensing/remotesensing-14-05810/article_deploy/remotesensing-14-05810.pdf?version=1668677315

PR China, Shandong Province

Wang, H., Jia, C., Ding, P. et al. Analysis and Prediction of Regional Land Subsidence with InSAR Technology and Machine Learning Algorithm. *KSCE J Civ Eng* (2022). <https://doi.org/10.1007/s12205-022-1067-4>

PR China, Shanghai

Sun, Q., Fang, J., Dang, X., Xu, K., Fang, Y., Li, X., and Liu, M.: Multi-scenario urban flood risk assessment by integrating future land use change models and hydrodynamic models, *Nat. Hazards Earth Syst. Sci.*, 22, 3815–3829, <https://doi.org/10.5194/nhess-22-3815-2022>, 2022
<https://nhess.copernicus.org/articles/22/3815/2022/>

PR China, Xi'an

Guangrong Li, Chaoying Zhao, Baohang Wang, Mimi Peng, Lin Bai,
Evolution of Spatiotemporal Ground Deformation over 30 Years in Xi'an, China, with Multi-Sensor SAR Interferometry, *Journal of Hydrology*, 2022, 128764, ISSN 0022-1694,
<https://doi.org/10.1016/j.jhydrol.2022.128764>.
(<https://www.sciencedirect.com/science/article/pii/S0022169422013348>)

PR China, Yellow River Plane

Guoyang Wang et al.,
Coastal subsidence detection and characterization caused by brine mining over the Yellow River Delta using time series InSAR and PCA
<https://www.sciencedirect.com/science/article/pii/S1569843222002655>

Taiwan, Taipei

Shih-Yuan Lin (2022) Urban hazards caused by ground deformation and building subsidence over fossil lake beds: a study from Taipei City, *Geomatics, Natural Hazards and Risk*, 13:1, 2890-2910, DOI: 10.1080/19475705.2022.2141139
<https://www.tandfonline.com/doi/full/10.1080/19475705.2022.2141139>

Thailand,

Charoenlerkthawin, W., Bidorn, K., Burnett, W.C. et al. Effectiveness of grey and green engineered solutions for protecting the low-lying muddy coast of the Chao Phraya Delta, Thailand. *Sci Rep* 12, 20448 (2022). <https://doi.org/10.1038/s41598-022-24842-x>

USA, Arizona

Sayantan Majumdar et al.,

Advancing Remote Sensing and Machine Learning-Driven Frameworks for Groundwater Withdrawal Estimation in Arizona: Linking Land Subsidence to Groundwater Withdrawals

<https://onlinelibrary.wiley.com/toc/10991085/0/ja>

USA, Houston

Guoquan Wang.,

Seasonal Subsidence and Heave Recorded by Borehole Extensometers in Houston.

<https://ascelibrary.org/doi/abs/10.1061/JSUED2.SUENG-1369>

MINING

Bangladesh, Barapukuria mine

Zhang, X., Yan, S., Tan, H. et al. A time function-based prediction model of mining subsidence: application to the Barapukuria coal mine, Bangla. Sci Rep 12, 18433 (2022).

<https://doi.org/10.1038/s41598-022-23303-9>

PR China

XiaojunZhu et al.,

Assessing the impacts of ecological governance on carbon storage in an urban coal mining subsidence area

<https://www.sciencedirect.com/science/article/abs/pii/S157495412200351X>

Monitoring

Federico Raspini et al.,

Review of satellite radar interferometry for subsidence analysis

DOI: 10.1016/j.earscirev.2022.104239

https://www.researchgate.net/publication/365087233_Review_of_satellite_radar_interferometry_f_or_subsidence_analysis

From the Press

Malaysia, Kelantan

Kelantan is not sinking, says Minerals and Geosciences Dept

<https://www.thestar.com.my/news/nation/2022/11/11/kelantan-is-not-sinking-says-minerals-and-geosciences-dept>

Report: Kelantan in danger of sinking like Jakarta if underground water extraction not controlled

<https://www.malaymail.com/news/malaysia/2022/11/10/report-kelantan-in-danger-of-sinking-like-jakarta-if-underground-water-extraction-not-controlled/38674>

USA, California

A Shift in Groundwater Perspective

Nov. 9, 2022

California finds that satellite technology can bring subsidence data to the surface through a technique known as InSAR.

<https://www.waterworld.com/water-utility-management/smart-water-utility/article/14284479/a-shift-in-groundwater-perspective>