



Newsletter of the Unesco Land Subsidence International Initiative

Vol.47, March 2024

Send your comments and suggestions to John.Lambert@deltares.nl

New Literature

Egypt, Giza

Abdelaziz Elfadaly et al.,

Multi-Sensor Satellite Images for Detecting the Effects of Land-Use Changes on the Archaeological Area of Giza Necropolis, Egypt

<https://www.researchgate.net/scientific-contributions/Naglaa-Zanaty-2278665743>

Iran, Semnan Plain

Akbari-Ariyami, H., Momeni, A., Khorasani, E. et al. Ground fissuring and evaluation of its hazard and risk for environmental management in Semnan plain, Iran. *Int. J. Environ. Sci. Technol.* (2024).

<https://doi.org/10.1007/s13762-024-05619-3>

Italy, Venice

David Kaniewski et al.,

Holocene Sea-level impacts on Venice Lagoon's coastal wetlands

<https://hal.inrae.fr/INRAEPACA/hal-04538817v1>

Cristina da Lio et al.,

Rethinking the resilience of salt marshes to land subsidence and sea-level rise: The RESTORE project approach

https://www.researchgate.net/publication/379597142_Rethinking_the_resilience_of_salt_marshes_to_land_subsidence_and_sea-level_rise_The_RESTORE_project_approach

Pakistan, Balochistan

Najeebullah Kakar et al.,

GNSS and Sentinel-1 InSAR Integrated Long-Term Subsidence Monitoring in Quetta and Mastung Districts, Balochistan, Pakistan

<https://www.mdpi.com/2072-4292/16/9/1521>

PR China, Beijing

Chaodong Zhou et al.,

Reduction of Subsidence and Large-Scale Rebound in the Beijing Plain after Anthropogenic Water Transfer and Ecological Recharge of Groundwater: Evidence from Long Time-Series Satellites InSAR

<https://www.mdpi.com/2072-4292/16/9/1528>

PR China, Guangming

Lin Zhu, Jiangtao Li, Huili Gong, Miao Ye, Zhenxue Dai, Xiaojuan Li, Pietro Teatini, Simulating earth deformation evolution caused by groundwater pumping through ordinary state-based Peridynamics method, *Journal of Hydrology*, 2024, 634, 131133. <https://doi.org/10.1016/j.jhydrol.2024.131133>

PR China, Shenzhen

Shuanglong Wang et al.,

Spatio-Temporal Characteristics of Land Subsidence and Driving Factors Analysis in Shenzhen

<https://www.mdpi.com/2073-4441/16/9/1200>

Senegal, Saint-Louis

Cheikh Omar Tidjani et al.,

The potential impact of rising sea levels and subsidence on coastal flooding along the northern coast of Saint-Louis, Senegal.

https://www.researchgate.net/publication/379688247_The_potential_impact_of_rising_sea_levels_and_subsidence_on_coastal_flooding_along_the_northern_coast_of_Saint-Louis_Senegal/references

Taiwan, Choushui River Alluvial Fan

Azeriansyah, Reyhan and Ching, Kuo-En and Lin, Cheng-Wei and Hsu, Kuo-Chin and Tsai, Pei-Ching and Yeh, Chao-Lung and Rau, Ruey-Juin, Unraveling the Heterogeneous Hydrogeological Characteristics in the Choushui River Alluvial Fan, Taiwan, Through Observations from the Multi-Layer Compaction Monitoring Wells. Available at SSRN: <https://ssrn.com/abstract=4788809> or <http://dx.doi.org/10.2139/ssrn.4788809>

Turkey, Gediz River basin

Yeting Li et al.,

Inferring the storage of aquifer systems from InSAR measurements via flow and geomechanical modelling

<https://www.researchgate.net/publication/380066134> Inferring the storage of aquifer systems from InSAR measurements via flow and geomechanical modelling

Vietnam, Mekong Delta

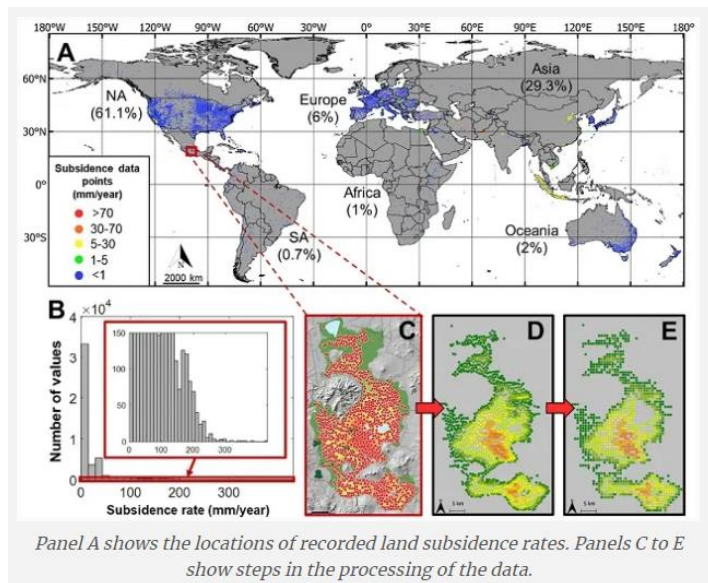
Minderhoud, P.S.J. et al.,

Improving Subsidence Modelling of Different Depth Domains in the Mekong Delta

<https://www.researchgate.net/publication/379457198> Improving Subsidence Modelling of Different Depth Domains in the Mekong Delta

Maps

New map shows global land subsidence rates



<https://www.spatialsource.com.au/new-map-shows-global-land-subsidence-rates/>

Mining

Germany, Kirchheller Heide and Hilsfeld Forest

Marcin Pawlik et al.,

Towards a Long-Term Unmanned Aerial Vehicle (UAV) Monitoring Framework for Post-Mining Effects: Prosper-Haniel Case

<https://www.mdpi.com/2673-6489/4/2/13>

Poland

Rafał Misa

Knothe's theory parameters - computational models and examples of practical applications

<https://bibliotekanauki.pl/articles/29278279>

JOBS

NUMERICAL METHODS FOR PDES AND UQ FOR HYDRAULIC AND GEOPHYSICAL MODELS

IMATI - CNR | Pavia (Remote possible)

Classification: Numerical Analysis and Scientific Computing

This is a temporary research position financed in a project about rainfall-runoff models coupled with groundwater flows and contaminant transport, and land subsidence.

The position is financed by European Union - NextGenerationEU through the PRIN 2022 PNRR project "Uncertainty Quantification of coupled models for water flow and contaminant transport" (P2022LXLYY).

Mentors: Lorenzo Tamellini, Andrea Bressan

Selected candidates will be interviewed on May 23, 2024

Starting date: no later than mid-September 2024

Duration: 14 months

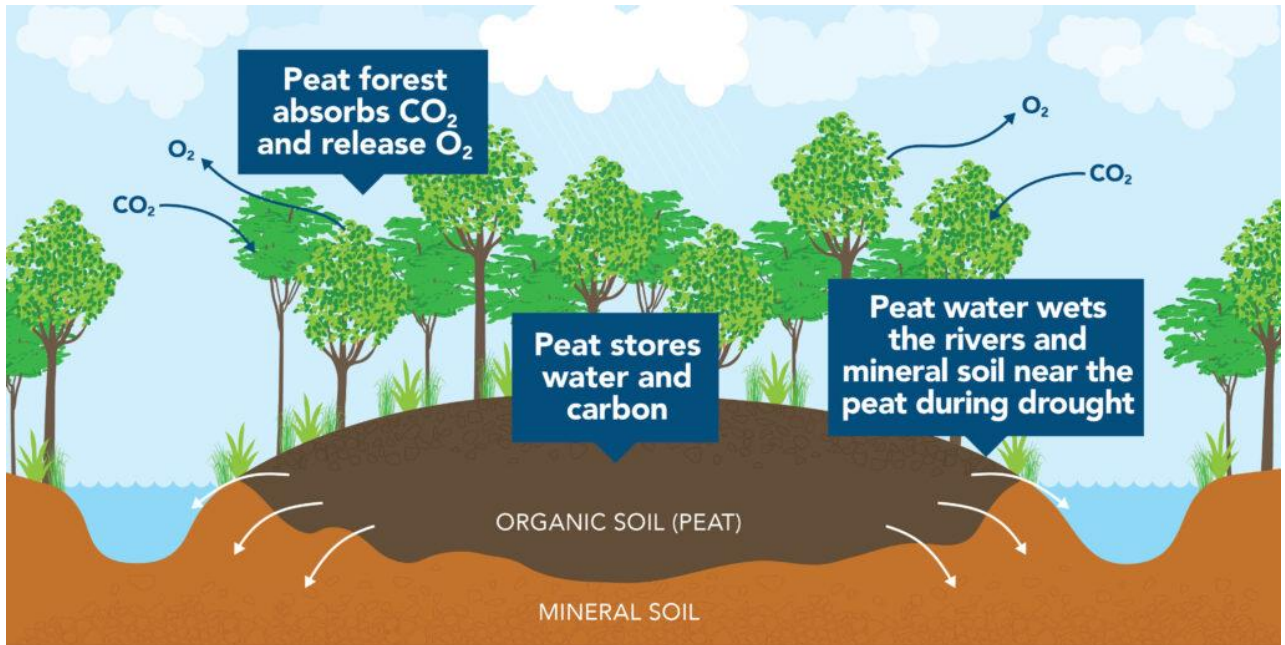
Salary: ~1400 EUR net per month

<https://euromathsoc.org/jobs/numerical-methods-for-pdes-and-uq-for-hydraulic-and-geophysical-models-1155>

From the Press

Indonesia, Peatlands

Fostering partnerships and community action to protect carbon-rich peatlands



<https://winrock.org/fostering-partnerships-and-community-action-to-protect-carbon-rich-peatlands/>

Mexico, Mexico City

Amid Water Crisis, Mexico City's Metro System Is Sinking Unevenly



<https://undark.org/2024/04/23/mexico-city-metro-sinking/>

USA, Arizona

ArcGIS Online Helps Detect and Analyze Land Subsidence in Arizona

<https://www.esri.com/about/newsroom/arcnews/arcgis-online-helps-detect-and-analyze-land-subsidence-in-arizona/>

Vietnam

CRMGG supports KIT with land subsidence measurements during pump tests

<https://igpvn.vn/en/english-crmgg-supports-kit-with-land-subsidence-measurements-during-pump-tests/>