



Newsletter of the Unesco Land Subsidence International Initiative

Vol.29, August 2022/Mid-September 2022

Postdoc Position in the Netherlands (Delft)

★ Postdoc Researcher Redesigning Deltas

Delft University of Technology ;, Netherlands

✉ Email

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Updated: about 1 hour ago
 Job Type: FullTime
 Deadline: 28 Sep 2022

We are inviting applications for four 3 year Postdoc positions in the Department of Urbanism on the theme Redesigning Deltas (www.redesigningdeltas.org) and funded by the Sector Plan Design Engineering Sciences. Urbanized delta landscapes are among the most challenging urban regions in the world considering their vulnerability to flooding, rapid urbanization, land subsidence, salinization and, increasingly, changing environmental conditions as a result of climate change. The threat of water comes from flood risks of rivers, rising sea levels, and extreme rainfall. And at the same time draughts during increasingly hot summers provide challenges due to declining groundwater tables that pose a threat to building foundations and ecological systems. Addressing the complexity of urban deltas needs integrated solutions and transformative approaches that create new opportunities for improving the quality of life for all. Based on the Delft Approach to urban and landscape design, the Redesigning Deltas programme will address the current status and future challenges of our deltas, centred on knowledge-based design approaches to jointly identify long-term transformative pathways that guide short-term design interventions to sustainable and socially inclusive and fair deltas. We are seeking job applications from ambitious and motivated early career researchers, who have just finished their PhD, with an interest in the interactions between spatial design, critical design thinking, and cross-disciplinary studies to come to an approach for questioning, understanding and changing socio-ecological relations shaping delta futures.

If you want to apply for these Postdoc positions, please submit a motivation letter, a detailed CV, contact details of three references, and one or two short research proposals (each maximum 1 A4). The research proposals should address the main challenges for the Redesigning Deltas programme, and contribute to the development of a design discourse and research through design applications. Proposals could address various issues, such as the possible spatial impact of the climate change on long-term intervention and adaptation strategies in the delta. And the extent to which developments and transitions in the area of, for example, energy and climate adaptation will affect each other in the short and long term. Proposals could also address the transition from hard technical solutions to soft solutions for the water safety of the delta. Another topic of interest is the sponge cities approach to store and manage water in urban areas and integrate these solutions in the current built environment, while producing co-benefits in terms of ecosystem services and spatial quality. Proposals are also invited which address issues around social and spatial justice in the design process towards sustainable deltas, and involving citizens in the design process, including people's experiences, emotions and perceptions towards acceptable design solutions.

Successful candidates will develop their own research programme under the guidance of a senior academic within the Department of Urbanism. They will be asked to contribute to the teaching programmes of the Department for a maximum of 1 day a week, as teaching experience will increase the employability of the candidates. A selection of candidates can be considered for a tenured position as Assistant Professor in the Department at the end of the Postdoc position.

<https://scholarshipdb.net/jobs-in-Netherlands/Postdoc-Researcher-Redesigning-Deltas-Delft-University-Of-Technology=mzmOaowp7RGUYQAlkGUTnw.html>

New Literature

Iran, Ardabil Plain

Ghorbani, Z., Khosravi, A., Maghsoudi, Y. et al. Use of InSAR data for measuring land subsidence induced by groundwater withdrawal and climate change in Ardabil Plain, Iran. *Sci Rep* 12, 13998 (2022). <https://doi.org/10.1038/s41598-022-17438-y>

Iran, Dehgolan aquifer

Karimi, D., Bahrami, J., Mobaraki, J. et al. Groundwater sustainability assessment based on socio-economic and environmental variables: a simple dynamic indicator-based approach. *Hydrogeol J* (2022). <https://doi.org/10.1007/s10040-022-02512-6>

Japan, Agenda for Sustainable Water Supply

https://www.jica.go.jp/english/our_work/thematic_issues/water/tn44q1000000pbp0-att/agenda_03.pdf

Mexico, Coastal Plane of Tabasco

Pérez-Falls, Z.; Martínez-Flores, G.; Sarychikhina, O. Land Subsidence Detection in the Coastal Plain of Tabasco, Mexico Using Differential SAR Interferometry. *Land* 2022, 11, 1473.

<https://doi.org/10.3390/land11091473>

<https://www.mdpi.com/2073-445X/11/9/1473>

Mexico, Mexico City

SOLANO-ROJAS, Darío et al. Relation between terrane subsidence InSAR-GPS and depression of the static level in Wells of the Mexico City metropolitan area. *Bol. Soc. Geol. Mex* [online]. 2015, vol.67, n.2, pp.273-283. ISSN 1405-3322.

https://www.scielo.org.mx/scielo.php?pid=S1405-33222015000200011&script=sci_abstract&tlng=en

Mexico, Western Michoacan

Villaseñor-Reyes, C.I., Hernández-Madrigal, V.M. & Figueroa-Miranda, S. Identification and assessment of land subsidence development in rural areas using PS interferometry: a case study in Western Michoacan, Mexico. *Environ Earth Sci* 81, 417 (2022). <https://doi.org/10.1007/s12665-022-10545-z>

Pakistan, Lahore

Hussain, M.A.; Chen, Z.; Zheng, Y.; Shoaib, M.; Ma, J.; Ahmad, I.; Asghar, A.; Khan, J. PS-InSAR Based Monitoring of Land Subsidence by Groundwater Extraction for Lahore Metropolitan City, Pakistan. *Remote Sens.* 2022, 14, 3950. <https://doi.org/10.3390/rs14163950>

<https://www.mdpi.com/2072-4292/14/16/3950>

Pakistan, Rawalpindi, Islamabad

Khan, J.; Ren, X.; Hussain, M.A.; Jan, M.Q. Monitoring Land Subsidence Using PS-InSAR Technique in Rawalpindi and Islamabad, Pakistan. *Remote Sens.* 2022, 14, 3722.

<https://doi.org/10.3390/rs14153722>

<https://www.mdpi.com/2072-4292/14/15/3722>

PR China, Beijing

Duan, G., Gong, H., Chen, B. et al. Spatiotemporal heterogeneity of land subsidence in Beijing. *Sci Rep* 12, 15120 (2022). <https://doi.org/10.1038/s41598-022-16674-6>

<https://www.nature.com/articles/s41598-022-16674-6>

PR China, Dezhou City

Rui Hao et al.,

Analysis of the factors resulting in the acceleration of land subsidence in the central area of Dezhou city, China

DOI: 10.1007/s12665-022-10518-2

https://www.researchgate.net/publication/362364308_Analysis_of_the_factors_resulting_in_the_acceleration_of_land_subsidence_in_the_central_area_of_Dezhou_city_China

PR China, Turpan-Hami Basin

Wang, Y. et al., A Strategy for Variable-Scale InSAR Deformation Monitoring in a Wide Area: A Case Study in Turpan–Hami Basin, China.

Remote Sens. 2022, 14, 3832.

<https://doi.org/10.3390/rs14153832>

<https://www.mdpi.com/2072-4292/14/15/3832/pdf?version=1659965758>

PR China, Yellow River

Duan, H. et al., Fast InSAR Time-Series Analysis Method in a Full-Resolution SAR Coordinate

System: A Case Study of the Yellow River Delta. *Sustainability* 2022, 14,10597.

<https://doi.org/10.3390/su141710597>

<https://www.mdpi.com/2071-1050/14/17/10597/pdf?version=1661429263>

Spain, Guadelentín Basin

Liuru Hu et al.,

Analysis of regional large-gradient land subsidence in the Alto Guadalentín Basin (Spain) using open-access aerial LiDAR datasets

October 2022 *Remote Sensing of Environment* 280(1):113218

DOI: 10.1016/j.rse.2022.113218

https://www.researchgate.net/publication/362779040_Analysis_of_regional_large-gradient_land_subsidence_in_the_Alto_Guadelentín_Basin_Spain_using_open-access_aerial_LiDAR_datasets

Thailand,

Intui, S et al., Evaluation of Land Subsidence during Groundwater Recovery. Appl. Sci. 2022, 12, 7904.

<https://doi.org/10.3390/app12157904>

<https://www.mdpi.com/2076-3417/12/15/7904/pdf?version=1659787715>

Intui, S. et al., Sustainability of Soil/Ground Environment Under Changes in Groundwater Level in Bangkok Plain, Thailand. Sustainability 2022, 14, 10908.

<https://doi.org/10.3390/su141710908>

Turkey, Konya

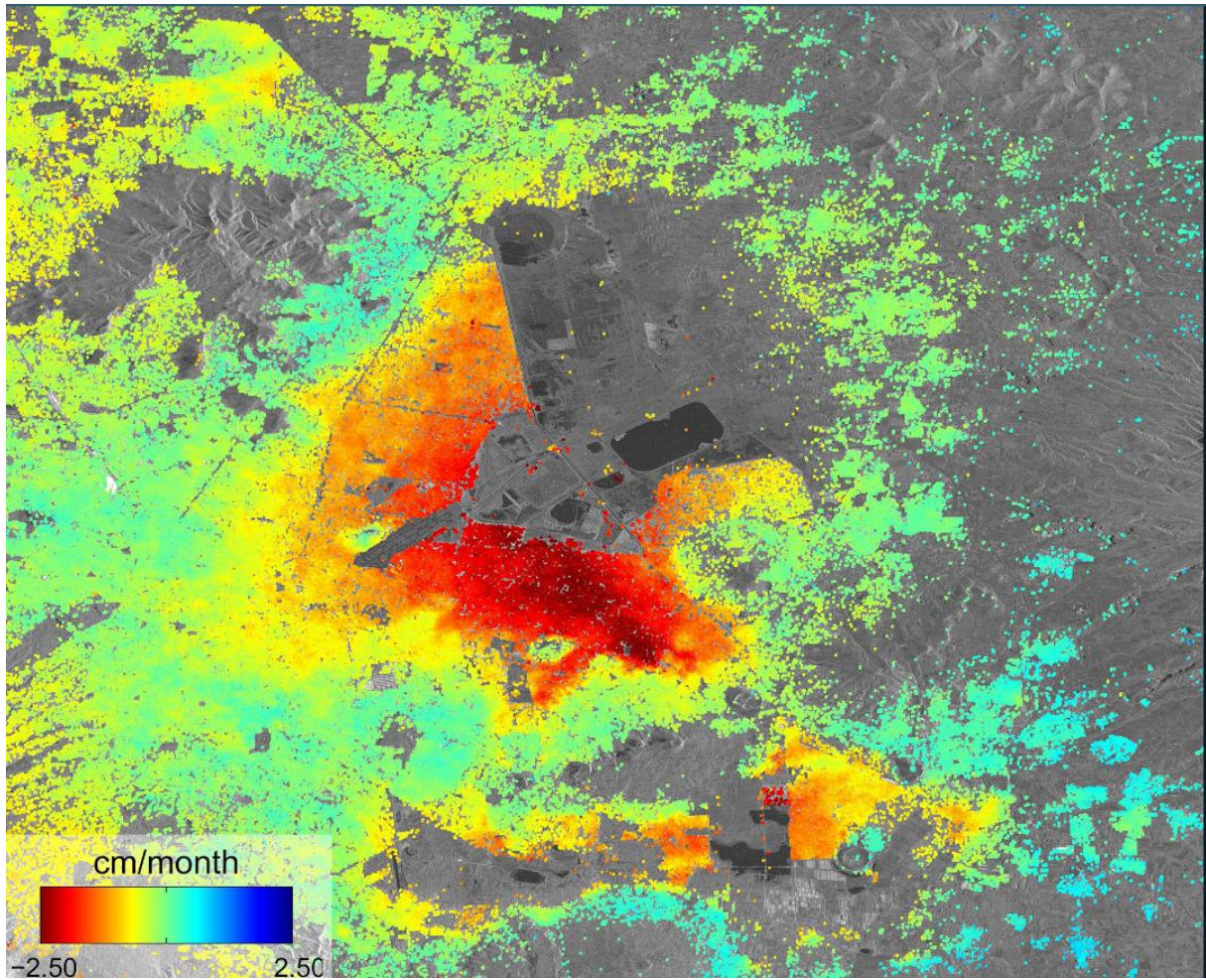
Nurdan Şireci et al.,

Long-term spatiotemporal evolution of land subsidence in Konya metropolitan area (Turkey) based on multisensor SAR data

<https://hal.archives-ouvertes.fr/hal-03744686v1>

Maps

Mexico, Mexico City



https://www.esa.int/ESA_Multimedia/Images/2014/12/Mexico_City_subsidence

USA, California

<https://data.cnra.ca.gov/dataset/gspmd>

Mining

PR China, Jining

Xue, Y., Chen, H., Kong, F. et al. Land subsidence calculation model under the coupling effect of groundwater and coal mining. *Earth Sci Inform* (2022). <https://doi.org/10.1007/s12145-022-00855-y>

PR China, Shandong Province

Chen, Y. et al., Assessment and Effect of Mining Subsidence on Farmland in Coal–Crop Overlapped Areas: A Case of Shandong Province, China. *Agriculture* 2022, 12, 1235. <https://doi.org/10.3390/agriculture12081235>

<https://www.mdpi.com/2077-0472/12/8/1235/pdf?version=1660666239>

PR China, Wangjiata Mine

Zhou, D., Wang, L., An, S. et al. Integration of unmanned aerial vehicle (UAV)-based photogrammetry and InSAR for mining subsidence and parameters inversion: a case study of the Wangjiata Mine, China. *Bull Eng Geol Environ* 81, 343 (2022). <https://doi.org/10.1007/s10064-022-02845-2>

From the Press

USA, California

Central Valley subsidence could last longer than expected

<https://www.asce.org/publications-and-news/civil-engineering-source/civil-engineering-magazine/article/2022/08/central-valley-subsidence-could-last-longer-than-expected>

Calif. launches mapping tool for groundwater sustainability projects

<https://www.waterworld.com/drinking-water/press-release/14281108/calif-launches-mapping-tool-for-groundwater-sustainability-projects>

Peat

Indonesia, Sintang Regency

Deha Agus Umarhadi et al.,

Monitoring tropical peatlands subsidence by time-series interferometric synthetic aperture radar (InSAR) technique

September 2022

DOI: 10.1016/B978-0-12-823457-0.00013-6

In book: Radar Remote Sensing

https://www.researchgate.net/publication/363240680_Monitoring_tropical_peatlands_subsidence_by_time-series_interferometric_synthetic_aperture_radar_InSAR_technique

Special Issue Remote Sensing

Special Issue "InSAR Imaging of Coastal Geohazards"

Deadline for manuscript submissions: 30 April 2023 |

https://www.mdpi.com/journal/remotesensing/special_issues/PC1DT94320