

PD Dr. Hannes Taubenböck

Professional work experience

- since 2019 **Private lecturer** at the Institute for Geography and Geology at Julius-Maximilians University Würzburg
- since 2013 **Head of the research group** of the „City & Society“ group at the German Remote Sensing Data Center (DFD) of the German Aerospace Center (DLR)
- 2010 – 2012 **Scientific officer** and **deputy head of the research group** „Urban areas and land management“ at DLR-DFD
- 2007 – 2010 **Scientific officer (Post-Doc)** at the Institute for Geography and Geology at Julius-Maximilians University Würzburg
- 2005 – 2007 **PhD candidate** at DLR-DFD

Education

- 2019 **Habilitation** (Dr. rer. nat. habil.) at Julius-Maximilians University Würzburg
Habilitation: Remote Sensing for the Analysis of Global Urbanization
- 2008 **PhD** (Dr. rer. nat.) at Julius-Maximilians University Würzburg
Dissertation: Vulnerabilitätsabschätzung der Megacity Istanbul mit Methoden der Fernerkundung (Abschluss: magna cum laude)
- 1999 – 2004 **Study** of Geography with minors remote sensing, environmental planning and geoinformatics at the Ludwig-Maximilians-University and Technical University Munich
Diplomarbeit: Evaluierung von Standort-Informations-Systemen für Industrie- und Handelskammern unter Einbeziehung von GIS Technologie und GeoWebServices. (Abschluss: 1,3)

International Expertise (selected)

- 2019 **Guest scientist** at the London School of Economics (LSEcities), London, UK.
- since 2017 **Chair** of the *Joint Urban Remote Sensing* Konferenz

Publications (peer-reviewed) (selected)

- 2019 Taubenböck H, Weigand M, Esch T, Staab J, Wurm M, Mast J & Dech S (2019): *A new ranking of the world's largest cities - Do administrative units obscure morphological realities?* Remote Sensing of Environment. vol. 232.
- Taubenböck H, Gerten C, Rusche K, Siedentop S & Wurm M (2019): *Patterns of Eastern European Urbanisation in the Mirror of Western Trends – Convergent, Unique or Hybrid?* Environment and Planning B: Urban Analytics and City Science. vol. 46(7) pp. 1206-1225.
- Taubenböck H, Wurm M, Geiß C, Dech S & Siedentop S (2019): *Urbanization between compactness and dispersion – Designing a spatial model for measuring 2D binary settlement landscape configurations.* International Journal of Digital Earth. vol. 12(6), pp. 679-698.

- 2018 Taubenböck H, Kraff N & Wurm M (2018): *The Morphology of the Arrival City – A global categorization based on literature surveys and remotely sensed data*. Applied Geography 92, pp. 150-167.
- Taubenböck H, Wurm M, Geiß C, Dech S & Siedentop S (2018): *Urbanization between compactness and dispersion – Designing an spatial model for measuring 2D binary settlement landscape configurations*. International Journal of Digital Earth. DOI: 10.1080/17538947.2018.1474957.
- Taubenböck H, Staab J, Zhu X, Geiß C, Dech S & Wurm M (2018): *Are the poor digitally left behind? Analyzing urban divides using remote sensing and twitter data*. ISPRS Internatl. Journal of Geo-Information. vol. 7(8), 304, pp. 1-18.
- 2017 Taubenböck H, Ferstl J & Dech S (2017): *Regions set in stone – Classifying and categorizing regions in Europe by settlement patterns derived from EO-data*. ISPRS Internatl. Journal of Geo-Information, 6(2), pp. 1-27.
- Taubenböck H, Standfuß I, Wurm M, Krehl A & Siedentop S (2017): *Measuring morphologic polycentricity – A comparative analysis of urban mass concentrations using remote sensing data*. Computers, Environment and Urban Systems, vol. 64, pp 42-56.
- .2016 Taubenböck H, Standfuß I, Klotz M & Wurm M (2016): *The physical density of the city – Deconstruction of the delusive density measure with evidence from European megacities*. ISPRS Internatl. Journal of Geo-Information, 5(11), pp. 1-24.
- 2015 Taubenböck H & Wiesner M (2015): *The spatial network of megaregions – Types of connectivity between cities based on settlement patterns derived from EO-data*. Computers, Environment & Urban Systems. vol. 54, pp. 165-180.
- Taubenböck H & Wurm M (2015): *Wo beginnt die Stadt? Urbane Fernerkundung für stadtgeographische Forschung*. disP – The Planning Review. pp. 74-85.
- 2014 Taubenböck H & Kraff N (2014): *The physical face of slums – A structural comparison of slums in Mumbai, India based on remotely sensed data*. Journal of Housing & the Built Environment. vol. 29, issue 1, pp. 15-38.
- Taubenböck H, Wiesner M, Felbier A, Marconcini M, Esch T & Dech S (2014): *New dimensions of urban landscapes: The spatio-temporal evolution from a polynuclei area to a mega-region based on remote sensing data*. Applied Geography. vol. 47, pp. 137-153.
- Taubenböck H & Geiß C (2014): *Vulnerability and resilience research – a critical perspective*. Int J Disaster Risk Sci Vol. 5, pp. 86-87.
- 2013 Taubenböck H, Klotz M, Wurm M, Schmieder J, Wagner B, Wooster M & Esch T (2013): *Central Business Districts: Delineation in mega city regions using remotely sensed data*. Remote Sensing of Environment 136, pp. 386-401.
- Taubenböck H & Strunz G (2013): *Editorial: Widening a narrow road: Remote sensing contributing to the multi-faceted problem of earthquake risk reduction*. Natural Hazards. vol. 68, Issue 1, pp. 1-5
- Taubenböck H, Goseberg N, Lämmel G, Setiadi N, Schlurmann T, Nagel K, Siegert F, Birkmann J, Traub KP, Dech S, Keuck V, Lehmann F, Strunz G & Klüpfel H (2013): *Risk Mitigation at the „Last-Mile“: From Science to Action by the example of Padang, Indonesia*. Natural Hazards. vol. 65(1), pp. 915-945.
- 2012 Taubenböck H, Esch T, Felbier A, Wiesner M, Roth A & Dech S (2012): *Monitoring of mega cities from space*. In: Remote Sensing of Environment, vol. 117, pp. 162-176.
- Taubenböck H, Felbier A, Esch T, Roth A & Dech S (2012): *Pixel-based classification algorithm for mapping urban footprints from radar data – a case study for RADARSAT-2*. Can. J. Remote Sensing, vol 38, no. 3, pp. 211-222.
- 2011 Taubenböck H, Esch T, Felbier A, Roth A & Dech S (2011): *Pattern-based accuracy assessment of an urban footprint classification using TerraSAR-X data*. IEEE Geoscience and Remote Sensing Letters. vol. 8; No. 2; pp. 278-282.
- Taubenböck H, Wurm M, Netzband M, Zwenzner H, Roth A, Rahmann A & Dech S (2011): *Flood risks in urbanized areas – Multi-sensoral approaches using remotely sensed data for risk management*. Nat. Hazards & Earth Sys. Sci., vol. 11, pp. 431-444.

- 2010 Taubenböck H, Esch T, Wurm M, Roth A & Dech S (2010): *Object-based feature extraction using high spatial resolution satellite data of urban areas*. Journal of Spatial Science, vol. 55, no. 1, pp. 117-133.
- 2009 Taubenböck H, Goseberg N, Setiadi N, Lämmel G, Moder F, Oczipka M, Klüpfel H, Wahl R, Schlurmann T, Strunz G, Birkmann J, Nagel K, Siegert F, Lehmann F, Dech S, Gress A, Klein R (2009): *Last-Mile preparation for a potential disaster – Interdisciplinary approach towards tsunami early warning and an evacuation information system for the coastal city of Padang, Indonesia*. Nat. Hazards & Earth Sys. Sci., vol. 9, pp. 1509-1528.
- Taubenböck H, Wegmann M, Roth A, Mehl H & Dech S (2009): *Urbanization in India – Spatiotemporal analysis using remote sensing data*. Computers, Environment and Urban Systems, vol. 33, pp 179-188.
- 2008 Taubenböck H, Post J, Roth A, Zosseder K, Strunz G & Dech S (2008): *A conceptual vulnerability and risk framework as outline to identify capabilities of remote sensing*. Nat. Hazards and Earth Sys. Sci., vol. 8, no. 3, pp. 409-420.
- 2007 Taubenböck H, Roth A, Dech S & Mehl H (2007): *The capabilities of remote sensing to support disaster management: A case study of the district Üsküdar in Istanbul, Turkey*. Turkish Journal of Disaster; 2(1). pp.6.
- 2006 Taubenböck H, Habermeyer M, Roth A & Dech S (2006): *Automated allocation of highly-structured urban areas in homogeneous zones from remote sensing data by Savitzky-Golay Filtering and curve sketching*. IEEE Geoscience & Remote Sensing Letters. Vol. 3, Issue 4, pp. 532-536.

Publications (Books)

- 2019 Taubenböck H (2019): *Remote Sensing for the Analysis of Global Urbanization*. Research Report 2019-10. ISSN 1434-8454. Habilitation thesis, University Würzburg. 600 p.
- 2015 Taubenböck H, Wurm M, Esch T & Dech S (Hrsg.) (2015): *Globale Urbanisierung – Perspektive aus dem All*. Berlin Heidelberg, SpringerSpektrum. S. 297.
- 2010 Taubenböck H & Dech S (Hrsg.) (2010): *Fernerkundung im urbanen Raum – Erdbeobachtung auf dem Weg zur Planungspraxis*. Wissenschaftliche Buchgesellschaft Darmstadt. August 2010. S. 192.
- 2008 Taubenböck H (2008): *Vulnerabilitätsabschätzung der Megacity Istanbul mit Methoden der Fernerkundung*. Dissertation. Universität Würzburg; p. 178. ISBN-10: 3639083180.

Guest Editor

- 2017 Taubenböck H & Geiß C (2017): *Special Issue in the Journal "Natural Hazards"*. Title: "Geospatial data for multiscale mapping and characterization of elements at risk." Volume 86, issue 1.
- 2013 Taubenböck H & Strunz G (2013): *Special Issue in the Journal "Natural Hazards"*. Title: "Remote Sensing contributing to mapping earthquake vulnerability and effects" Volume 68, issue 1 ISSN: 0921-030X (Print) 1573-0840 (Online)