DLR-DFD-GZS-MGV

Publications (since 2013)

Peer-reviewed Journals

2017

1. Leichtle T, Geiß C, Wurm M, Lakes T & Taubenböck H (2017): *Unsupervised change detection in VHR remote sensing imagery – an object-based clustering approach in an urban environment.* International Journal of Applied Earth Observation & Geoinformation, 54, pp. 15-27.
2. Wei C, Taubenböck H & Blaschke T (2017): *Measuring urban agglomeration using city-scale daysmetric population map: a study in the Pearl River Delta, China.* Habitat International. 59, pp. 32-43.

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3. Geiß C, Klotz M, Schmitt A & Taubenböck H (2016): *Object-based morphological profiles for classification of remote sensing imagery.* IEEE Transactions on Geoscience and Remote Sensing, vol. 54(10), pp. 5952-5963.
4. Taubenböck H, Standfuß I, Klotz M & Wurm M (2016): *The physical density of the city – Deconstruction of the delusive density measure with evidence from two European megacities.* ISPRS Internatl. Journal of Geo-Information, 5(11), pp. 1-24.
5. Wurm M, Schmitt A & Taubenböck H (2016): *Building types classification using shape-based features and linear discriminant functions.* IEEE Journal of Selected Topics in Applied Earth Observation & Remote Sensing. vol.9, no. 5, pp.1901-1912.
6. Georg I, Blaschke T & Taubenböck H (2016): *New spatial dimensions of global cityscapes: From reviewing existing concepts to conceptual spatial approaches.* International Journal of Geographical Sciences. 26(3), pp. 355-380.
7. Klotz M, Kemper T, Geiß C, Esch T & Taubenböck H (2016): *How good is the map? A multi-scale cross-comparison framework for global settlement layers: evidence from Central Europe.* Remote Sensing of Environment, 178, pp. 191.212.
8. Geiß C, Schauß A, Riedlinger T, Dech S, Zelaya C, Guzmann N, Hube M, Arsanjani J & Taubenböck H (2016): *Joint Use of Remote Sensing Data and Volunteered Geographic Information for Exposure Estimation: Evidence from Valparaíso, Chile.* Natural Hazards. Online first.
9. Geiß C, Jilge M, Lakes T & Taubenböck H (2016): *Estimation of seismic vulnerability levels of urban structures by joint exploitation of in-situ data and multi-sensor remote sensing.* IEEE Journal of Selected Topics in Applied Earth Observation & Remote Sensing. vol.9, no. 5, pp.1913-1936.
10. Georg I, Blaschke T & Taubenböck H (2016): *A global inventory of urban corridors based on perceptions and night-time light imagery.* ISPRS Internatl. Journal of Geo-Information. 5(12), pp. 1-19.
11. Schreyer J, Geiß C & Lakes T (2016): *TanDEM-X for large-area modeling of 3D urban vegetation – Evidence from Berlin, Germany.* IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
12. Krehl A, Siedentop S, Taubenböck H & Wurm M (2016): *A comprehensive view on urban spatial structure: Urban density patterns of German city regions.* ISPRS International Journal of Geo-Information. 5(6), 76; pp. 1-21.

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13. 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.
14. Geiß C, Wurm M, Breunig M, Felbier A & Taubenböck H (2015): *Normalization of TanDEM-X DSM data in urban environments with morphological filters.* IEEE Transactions on Geoscience & Remote Sensing, vol. 53, no. 8, pp. 4348-4362.
15. Wurm M, Schmitt A & Taubenböck H (2015): *Building types classification using shape-based features and linear discriminant functions.* Journal of Selected Topics in Applied Earth Observation & Remote Sensing,. published online first. pp.12.
16. Taubenböck H & Wurm M (2015): *Wo beginnt die Stadt? Urbane Fernerkundung für stadtgeographische Forschung.* disP – The Planning Review. pp. 74-85.
17. Geiß C, Jilge M, Lakes T & Taubenböck H (2015): *Estimation of seismic vulnerability levels of urban structures by joint exploitation of in-situ data and multi-sensor remote sensing.* Journal of Selected Topics in Applied Earth Observation & Remote Sensing, published online first. pp. 23.
18. Geiß C & Taubenböck H (2015): *Object-based Post-classification Relearning.* IEEE Geoscience and Remote Sensing Letters. vol 12., no. 11, pp. 2336-2340.
19. Jain M, Knieling J & Taubenböck H (2015): *Urban transformation in the National Capital Territory of Delhi, India: The emergence and growth of slums?* In: Habitat International 48, pp. 87-96.
20. Kinkeldey C, Schiewe J, Gerstmann H, Götze C, Kit O, Lüdeke M, Taubenböck H & Wurm M (2015): *Evaluating the use of uncertainty visualization for exploratory analysis of land cover change: A qualitative expert user study.* Computers & Geosciences. vol. 84. pp. 46-53.
21. Turner W, Rondinini C, Pettorelli N, Mora B, Leidner A K, Szantoi Z, Buchanan G, Dech S, Dwyer J, Herold, M, Koh L P, Leimgruber P, Taubenböck H, Wegmann M, Wikelski M & Woodcock C (2015): *Free and open satellite data are key to biodiversity conservation*. Biological Conservation 182, pp. 173-176.
22. Hideomi G, Post, J, Stein, E, Martinis S, Twele A, Mück M, Geiß C, Koshimura S & Matsuoka M (2015): *A Method for Detecting Buildings Destroyed by the 2011 Tohoku Earthquake and Tsunami Using Multitemporal TerraSAR-X Data.* IEEE Geoscience and Remote Sensing Letters, 12 (6), pp 1277-1281.
23. Aubrecht C, Meier P & Taubenböck H (2015): *Speeding up the clock in remote sensing – Identifying the 'black spots' in exposure dynamics by capitalizing on the full spectrum of joint high spatial and temporal resolution.* In: Natural Hazards pp. 6. Online-first.

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24. Wurm M, d'Angelo P, Reinartz P & Taubenböck H (2014): *Investigating the applicability of Cartosat-1 DEMs and topographic maps to localize large-area urban mass concentrations.* Journal of Selected Topics in Applied Earth Observation & Remote Sensing. Vol. 7, Issue 11, Published online first.
25. 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.
26. Geiß C, Taubenböck H, Post J, Tisch A, Tyagunov S & Lakes T (2014): *Assessment of buildings' seismic vulnerability from space.* Earthquake Spectra. vol 30, no. 4, pp. 1553-1583.
27. 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.
28. Geiß C, Aravena Pelizari P, Marconcini M, Sengara W, Edwards M, Lakes T & Taubenböck H (2014): *Estimation of seismic building structural types using multi-sensor remote sensing and machine learning techniques.* ISPRS J of Photogrammetry & Remote Sensing. in press.

29. Taubenböck H & Geiß C (2014): *Vulnerability and resilience research – a critical perspective.* Int J Disaster Risk Sci Vol. 5, pp. 86-87.
30. Fina S, Krehl A, Siedentop S, Taubenböck H, Wurm M (2014): *Dichter dran! Neue Möglichkeiten der Vernetzung von Geobasis-, Statistik- und Erdbeobachtungsdaten zur räumlichen Analyse und Visualisierung von Stadtstrukturen mit Dichteoberflächen und –profilen*. Raumforschung und Raumordnung, vol.72, pp. 179-194.

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31. Geiß C & Taubenböck H (2013): *Remote Sensing contributing to assess earthquake risk – from a literature review towards a road map.* In: Natural Hazards. Volume 68, Issue 1, pp. 7-48.
32. Taubenböck H, Klotz M, Wurm M, Schmieder J, Wagner B, Wooster M, Esch T & Dech S (2013): *Delineation of Central Business Districts in mega city regions using remotely sensed data.* Remote Sensing of Environment, 136, 386-401.
33. Turner W, Buchanan G, Rondinini C, Dwyer J, Pin Koh L, Leidner A, Leimgruber P, Mora B, Pettorelli N, Szantoi Z, Taubenböck H, Wegmann M, Wikelski M (2013): *Satellites: make data freely accessible.* Nature, vol. 498, June 2013, Corresponce, p. 37.
34. Taubenböck H & Strunz G (2013): *Editorial: Widening a narrow road: Remote sensing contributing to the multi-faceted problem of earthquake risk reduction.* In: Natural Hazards. Volume 68, Issue 1, pp. 1-5.
35. Mück M, Taubenböck H, Post J, Wegscheider S, Strunz G, Sumaryono, Ismail FA (2013): *Assessing building vulnerability to earthquake and tsunami hazard using remotely sensed data.* In: Natural Hazards. Volume 68, Issue 1, pp. 97-114.
36. Wegscheider S, Schneiderhan T, Mager A, Zwenzner H, Post J & Strunz G (2013): *Rapid mapping in support of emergency response after earthquake events.* In: Natural Hazards. Volume 68, Issue 1, pp. 181-195.
37. Jain M, Siedentop S, Taubenböck H & Namperumal S (2013): *From Suburbanisation to Counterurbanisation? Investigating urban dynamics in the National Capitol Region Delhi, India.* Environment and Urbanization Asia, 4(2), pp. 247-266.
38. 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.
39. Esch T, Marconcini M, Felbier A, Roth A, Heldens W, Huber M, Schwinger M, Taubenböck H, Müller A & Dech S (2013): *Urban footprint processor – Fully automated processing chain generating settlement masks from global data of the TanDEM-X mission.* In: IEEE Geoscience and Remote Sensing Letters. Vol 10, no. 6, November 2013, pp. 1617-1621.

Non-reviewed Journals

1. Mück M, Helmschrot J, Zimba H, Wallner M, Hipondoka M, Mufeti P, Meinhard M (2015): *Remote sensing applications for assessing water-related risks and its interdependencies with land cover change and biodiversity in southern Africa.* GLP News, November 2015, pp. 57-61.
2. von Sassen S & Taubenböck H (2015): *Urbane Fernerkundung.* GISbusiness, vol. 4, pp. 38-41.
3. Taubenböck H (2013): *Die Ruhe vor dem Sturm: Chinas Weg in ein urbanes Zeitalter.* In: Standort. Vol. 37, issue 1, pp. 56-61.
4. Taubenböck H & Wurm M (2013): *Die Frucht des Paradieses – Reflektionen über den Besuch einer Favela in Sao Paulo.* In: Standort. Vol. 37, issue 4. pp. 270-275.

Book Publications

1. Taubenböck H, Wurm M, Esch T & Dech S (Hrsg.) (2015): *Globale Urbanisierung – Perspektive aus dem All.* Berlin Heidelberg, SpringerSpektrum. S. 297.

Guest Editors

1. Taubenböck H & Strunz G (2013): *Remote Sensing contributing to mapping earthquake vulnerability and effects.* Special Issue in Natural Hazards: Volume 68, issue 1 ISSN: 0921-030X (Print) 1573-0840 (Online) August 2013.

PhD Thesis

1. Wurm M (2013): *Verknüpfung von Fernerkundungsdaten und Survey-Daten (SOEP und BASE-II) in städtischen Räumen für sozialwissenschaftliche Analysen.* Graz University of Technology. April 2013.
2. Geiß C (2014): *Seismic vulnerability assessment of built environments with remote sensing*. Humboldt-Universität Berlin. Dezember 2014.

Book contributions

2015

1. Taubenböck H, Wurm M, Esch T & Dech S (2015): *Motivation zu diesem Buch.* SpringerSpektrum. S. 1-2.
2. Taubenböck H & Wurm M (2015): *Globale Urbanisierung – Markenzeichen des 21. Jahrhunderts.* SpringerSpektrum. S. 5-10.
3. Klotz M, Wurm M & Taubenböck H (2015): *Werkzeugkasten urbaner Fernerkundung.* SpringerSpektrum. S. 29-38.
4. Esch T, Felbier A, Taubenböck H, Wurm M & Dech S (2015): *Die globale Vielfalt urbaner Siedlungsmuster.* SpringerSpektrum. S. 41-48.
5. Taubenböck H (2015): *Ohne Limit? Das Flächenwachstum der Megacities.* SpringerSpektrum. S. 49-58.
6. Wiesner M & Taubenböck H (2015): *Kompaktheit versus Dispersion – Messung und Bewertung von Siedlungsmuster der Erde.* SpringerSpektrum. S. 59-70.
7. Wurm M & Taubenböck H (2015): *Hier spielt die Musik – Räumlich differenziertes Siedlungswachstum in deutschen Ballungsräumen.* SpringerSpektrum. S. 83-92.
8. Klotz M, Wurm M & Taubenböck H (2015): *Urbane Strukturen der Macht.* SpringerSpektrum. S. 93-105.
9. Taubenböck H & Kraff N J (2015): *Das globale Gesicht urbaner Armut? Siedlungsstrukturen in Slums.* SpringerSpektrum. S. 107-119.
10. Wurm M & Taubenböck H (2015): *Die Morphologie deutscher Großstädte: Was die Dichte über die Struktur der Städte verrät.* SpringerSpektrum. S.127-133.
11. Taubenböck H, Kehrer J & Wurm M (2015): *Zu Stein gewordene Philosophien – Die Morphologie geplanter Wohnviertel.* SpringerSpektrum. S. 135-147.
12. Taubenböck H & Wurm M (2015): *Ich weiß, dass ich nichts weiß – Bevölkerungsschätzung in einer Megacity.* SpringerSpektrum. S. 171-178.
13. Wurm M, Göbel J, Taubenböck H & Wagner G G (2015): *Am Ende der Kernstadt – Vom Versuch des Objektiven durch das Subjektive.* SpringerSpektrum. S. 179-189.
14. Erbertseder T, Taubenböck H & Meyer-Arnek J (2015): *Dicke Luft – Stadtregionen als globale Zentren der Luftverschmutzung.* SpringerSpektrum. S. 191-203.
15. Geiß C, Aravena-Pelizari P & Taubenböck H (2015): *Stadt in Gefahr – Erdbeobachtung zur Abschätzung der Folgen von Naturgefahren.* SpringerSpektrum. S. 217-223.

16. Taubenböck H (2015): *Die Ruhe vor dem Sturm – Chinas Weg in ein urbanes Zeitalter.* SpringerSpektrum. S. 235-239.
17. Taubenböck H & Wurm M (2015): *Die Frucht des Paradieses – Reflektionen über den Besuch einer Favela in Sao Paulo.* SpringerSpektrum. S. 241-247.
18. Taubenböck H & Geile W (2015): *Die Morphologie des amerikanischen Traums – Ein Ausflug in die Vorstadt.* SpringerSpektrum. S. 253-257.
19. Taubenböck H, Wurm M, Esch T & Dech S (2015): *Globale Urbanisierung – Perspektive aus dem All: Der Versuch eines Resümees.* SpringerSpektrum. S. 289-291.
20. Oppelt N, Scheiber R, Gege P, Wegmann M, Taubenböck H & Berger M (2015): *Fundamentals of Remote Sensing for Terrestrial Applications: Evolution, Current State of the Art, and Future Possibilities.* In: Thenkabail P: *Remotely sensed data characterization, classification, and accuracies*. ISBN 9781482217865, CRC Press.

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21. Taubenböck H, Esch T, Wiesner M, Felbier A, Marconcini M, Roth A & Dech S (2014): *Spatial dynamics and patterns of urbanization – the example of Chinese megacities using multi-temporal EO-data.* In: Weng Q (Eds): "Global Urban Monitoring and Assessment through Earth Observation". Taylor & Francis/ CRC Press, Boca Raton, Florida, USA.
22. Esch T, Marconcini M, Felbier A, Roth A & Taubenböck H (2014): *Mapping the global human settlements pattern using SAR data acquired by the TanDEM-X mission.* In: Weng Q (Eds): "Global Urban Monitoring and Assessment through Earth Observation". Taylor & Francis/ CRC Press, Boca Raton, Florida, USA.
23. Taubenböck H, Geiß C, Wieland M, Pittore M, Saito K, So E & Eineder M (2014): *Remote sensing for earthquake research: from pre-event risk analysis to post-event damage assessment and recovery monitoring.* In: Wyss M (eds.): "Earthquake hazard, risk and disasters*";* Elsevier. pp. 25-53.
24. Kubanek J, Nolte EM, Taubenböck H, Wenzel F & Kappas M (2014): *Capacities of remote sensing for population estimation in urban areas*. In: Bostenaru, M, Armas, I & Goretti, A: *Earthquake Hazard and Urban Planning*. Spinger, pp. 45-66.
25. Goseberg N, Lämmel G, Taubenböck H, Setiadi N, Birkmann J & Schlurmann T (2014): *The Last-Mile Evacuation project: A multi-disciplinary to evacuation planning and risk reduction in tsunami-threatened coastal areas.* In: F Wenzel & J Zschau (eds.) *Early Warning for Geological Disasters - Scientific Methods and Current Practice;* ISBN: 978-3-642-12232-3, Springer, New York, pp. 207-226.
26. Wurm M, Goebel G, Taubenböck H & Wagner GG (2014): *Erdbeobachtung als Instrument zur Ableitung räumlicher Kontextmerkmale für kleinräumige sozialwissenschaftliche Analysen*. In: Meinel G, Schumacher U, Behnisch M (Hrsg.) IÖR Schriften. Bd 65, S. 179-188.
27. Siedentop S, Krehl A, Taubenböck H & Wurm M (2014): *Großflächige Ableitung der Geschoßflächendichte für Regionen in Deutschland.* In: Meinel G, Schumacher U, Behnisch M (Hrsg.) IÖR Schriften. Bd *65, S.* 189-200.
28. UNESCO IOC-ICG guideline "*Tsunami Risk assessment and mitigation for the Indian Ocean*". Several contributions. (Mück M, Post J)

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29. Heldens W, Taubenböck H, Esch T, Heiden U, Wurm M (2013): *Analysis of thermal patterns in relation to urban structure types – a case study for the city of Munich.* In: Künzer C & Dech S (Eds.): *Thermal Infrared Remote Sensing*. pp. 475-494.

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2. Krehl A, Siedentop S, Taubenböck H & Wurm M (2016): *Consolidated assessment of urban spatial structure – how far can it be stretched? Evidence from German city regions*. Extended Abstract. European Regional Science Association (ERSA) Conference, Vienna, 23.-26.08.2016:

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3. Wurm M, Goebel J, Taubenböck H & Wagner GG (2015): *At the edge of the city center – Discrimination of the physical city center by subjective perception and satellite data.* Proc. IEEE-CPS Joint Urban Remote Sensing Event (JURSE), Lausanne, Switzerland.
4. Poncet Montanges A, Tuia D, Taubenböck H, Wurm M & Moser G (2015): *Classification of urban structural types with multisource data and structured models.* Proc. IEEE-CPS Joint Urban Remote Sensing Event (JURSE), Lausanne, Switzerland.
5. Hofmann P, Taubenböck H & Werthmann C (2015): *Monitoring and modelling of informal settlements – recent developments and challenges.* Proc. IEEE-CPS Joint Urban Remote Sensing Event (JURSE), Lausanne, Switzerland.
6. Schreyer, J./ Geiß, C./ Lakes, T. (2015): *TanDEM-X & UAV data for modeling 3D vegetation information in urban areas*. Proc. IEEE-CPS Joint Urban Remote Sensing Event (JURSE), Lausanne, Switzerland.

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7. Wiesner M & Taubenböck H (2014): *Mega-regions: Mapping urban landscapes of a different magnitude based on EO-data.* CORP, Wien, 2014.
8. Krehl A, Siedentop S, Taubenböck H & Wurm M (2014): *Agglomerations economies shaping the spatial structure in German city regions.* AESOP, 2014.
9. Lesko L, Wurm M, Wiesner M, Mond, J-P & Taubenböck H (2014): *Vienna, Berlin, Warsaw – Comparison of spatial urban development patterns using remote sensing data and landscape metrics.* EARSeL eProceedings. ISBN 978-83-63245-65-8. pp. 9-14.
10. Felbier A, Esch T, Heldens W, Marconcini M, Zeidler J, Roth A, Klotz M, Wurm M & Taubenböck H (2014): *The global urban footprint –processing status and cross comparison to existing human settlement products.* IGARRS. Pp. 4816-4819.

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11. Taubenböck H, Klotz M, Wurm M, Schmieder J, Wagner B & Esch T (2013): *Delimiting Central Business Districts – A physical approach using remote sensing.* Proc. IEEE-CPS Joint Urban Remote Sensing Event (JURSE), Sao Paulo, Brazil; p. 4.
12. Wurm M, Taubenböck H, Esch T, Fina S & Siedentop S (2013): The changing face of urban growth. Proc. of JURSE, Sao Paulo, Brazil; p. 4.
13. Esch T, Felbier A, Heldens W, Marconcini M, Roth A & Taubenböck H (2013): *Spatially detailed mapping of settlement patterns using SAR data of the TanDEM-X mission.* Proc. IEEE-CPS Joint Urban Remote Sensing Event (JURSE), Sao Paulo, Brazil; p. 4.
14. Esch T, Taubenböck H, Chrysoulakis N, Sebenem Düzgün H, Tal A, Feigenwinter C & Parlow E (2013): *Exploiting Earth observation in sustainable urban planning and management – the GEOURBAN project.* Proc. IEEE-CPS Joint Urban Remote Sensing Event (JURSE), Sao Paulo, Brazil; p. 4.

15. Hummel H, Post J, Strunz G, Ludwig R, Hoffmann A, Benabdallah S (2013): *Setting up the water balance simulation model WaSiM for the assessment of climate change impacts in Chiba basin, Tunisia.* International Conference on Modeling, Simulation and Applied Optimization (ICMSAO 2013), 28-30 Apr 2013, Hammamet, Tunisia. ISBN 978-1-4673-5814-9.
16. Taubenböck H, Esch T, Wurm M & Heldens W (2013): *Application of RapidEye data for the derivation of urban geo-information products – an overview of first results.* RapidEye Workshop, Neustrelitz.
17. Ottinger M, Liu G, Taubenböck H & Künzer C (2013): *Monitoring dynamischer Landschaftsveränderungen im Gelbflussdelta mit multi-sensoralen Fernerkundungsdaten.* In: Geoinformationen für die Küstenzone, 4, pp. 285-292. Sokrates & Freunde GmbH. 4. Symposium Geoinformationen für die Küstenzone und 9. Workshop zur Nutzung der Fernerkundung, 24.-26. Okt. 2012, Hamburg, Deutschland. ISBN 978-3-9814234-0-2.
18. Taubenböck H & Esch T (2013): *Fernerkundung zur Kartierung von Küstenstädten.* In: Geoinformation für die Küstenzone , 4, pp. 223-232. Sokrates & Freunde GmbH. 4. Hamburger Symposium zur Küstenzone & 9. Workshop zur Nutzung der Fernerkundung, Hamburg. ISBN 978-3-9814234-0-2.

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