

Dr.-Ing. Susanne Wenzel

Curriculum Vitae

Contact Information

Work Address

Office address Forschungszentrum Jülich, Institute of Neuroscience and Medicine, Structural and functional organisation of the brain (INM-1), Big Data Analytics Group, 52428 Jülich, Germany

University of Bonn, Institute of Geodesy and Geoinformation, Photogrammetry Group, Nussallee 15, 53115 Bonn, Germany

Email s.wenzel@fz-juelich.de
 wenzel@igg.uni-bonn.de

Homepage <http://www.ipb.uni-bonn.de/people/susanne-wenzel/>

Personal Record

Date of birth 26.04.1978
Place of birth Berlin, Germany
Nationality German
Family status Married, two children

Education

- 06/16 Dr.-Ing. in Geodesy - *summa cum laude*, University of Bonn, Institute of Geodesy and Geoinformation, Photogrammetry Group, Germany, under supervision of Prof. Dr.-Ing. Dr. h.c. mult. Wolfgang Förstner, PhD Thesis: '*High-Level Facade Image Interpretation using Marked Point Processes*'
- 12/06 Dipl.-Ing. in Geodesy, University of Bonn, Germany, Graduation as her year's best student, Thesis: '*Detektion wiederholter und symmetrischer Strukturen von Objekten in Bildern*'
- 10/02 Interim Examination in Geodesy (Vordiplom), Technical University of Berlin, Germany
- 02/00 Survey technician (Vermessungstechnikerin), Senate Department of Urban Development, Department for Geodesy and Geoinformation, Germany

Affiliations

- since 02/18 Scientific coordinator, project manager, Forschungszentrum Jülich, Institute of Neuroscience and Medicine, Big Data Analytics Group, Germany
- 02/18-08/18 Postdoctoral researcher and teaching assistant, University of Bonn, Institute of Geodesy and Geoinformation, Photogrammetry Group, Germany
- 10/15-02/18 Study program coordinator and postdoctoral researcher, University of Bonn, Institute of Geodesy and Geoinformation, Photogrammetry Group, Germany
- 01/07-09/15 Research assistant, University of Bonn, Institute of Geodesy and Geoinformation, Photogrammetry Group, Germany

- 03/00-08/00 Technical assistant, *Senate Department of Urban Development, Department for Geodesy and Geoinformation, Germany*
- 09/97-02/00 Professional training for surveying technician, *Senate Department of Urban Development, Department for Geodesy and Geoinformation, Germany*

Awards

- 2014 Faculty Teaching Award
- 2007 'Turbo-Preis' of Society for Geodesy, Geoinformation and Land Management (DVW)
- 2007 'Harbert Buchpreis' of Society for Geodesy, Geoinformation and Land Management (DVW) for the best student in 2007 in Geodesy and Geoinformation
- 2007 Faculty Award for the best student in 2007 in Geodesy and Geoinformation

Teaching Activities

Lectures

- Summer term 2018 'Photogrammetry I', *University of Bonn*, BSc, Lecture, 3h/week
- Winter term 2017/18 'Photogrammetry II', *University of Bonn*, BSc, Lecture, 2h/week
- Winter term 2013/14 'Photogrammetry and Remote Sensing', *University of Bonn*, MSc, Lecture (shared), 3h/week
- Winter term 2009/10 'Photogrammetry II', *University of Bonn*, BSc, Lecture, 2h/week

Exercises

- Since 2009 'Photogrammetry I & II', *University of Bonn*, BSc, 2h/week
- Winter term 2013/14 'Photogrammetry and Remote Sensing', *University of Bonn*, MSc, lecture (shared), 2h/week
- Summer term 2008 'Projective Geometry', *University of Bonn*, MSc, 2h/week
- Winter term 2007/08 '3D Coordinatesystems', *University of Bonn*, BSc, 1h/week

Supervision

- 2017/18 Katharina Franz, Ocean Eddy Identification and Tracking using Neural Networks, *Master's Thesis - in progress*
- 2017 Anne Braakmann-Folgmann, Sea Surface Height Prediction using Recurrent Neural Networks, *Master's Thesis*
- 2017 Anika Bettge, Deep Self-taught Learning for Remote Sensing Image Classification, *Master's Thesis*
- 2017 Jana Kierdorf, Spektrales Clustering mittels Sparse Representation-basierten Graphen, *Bachelor's Thesis*
- 2017 Martin Obersheimer, Untersuchung von Form-Deskriptoren als Merkmale für die Detektion der Stämme von Unkräutern und Nutzpflanzen, *Bachelor's Thesis*
- 2016 Johannes Kinast, Untersuchung latenter Spuren auf variablen Spurenlägern mit hyperspektralen Bildgebungsverfahren, *Bachelorarbeit*

- 2015 Philipp Lottes, Bildbasierte Klassifikation von Zuckerrüben und Unkräutern für mobile Roboter, *Master's Thesis*
- 2015 Till Schubert, Investigation of Latent Traces Using Hyperspectral Imaging, *Bachelor's Thesis*
- 2014 Mareike Flick, Localization using Open Street Map Data, *Bachelor's Thesis*
- 2014 Katharina Franz, Bestimmung der Trajektorie des ATV-4 bei der Separation von der Ariane-5 Oberstufe aus einer Stereo-Bildsequenz, *Bachelor's Thesis*
- 2013 Eva Börgens, Anke Sausen, Relative Orientierung aus Kreisen, *Master's Project Projective Geometry und Statistics*
- 2012/13 Annemarie Kunkel, Detektion von Beeren in Bildern zur Ableitung phänotypischer Merkmale, *Master's Project*
- 2012/13 Christiane Staat, Klassifikation und Detektion von Weinbeeren in Bildern über Dictionary Learning, *Master's Project*
- 2012 Philip Alexander Becker, 3D Rekonstruktion symmetrischer Objekte aus Tiefenbildern, *Bachelor's Thesis*
- 2011 Bernd Uebbing, Untersuchung zur Nutzung wiederholter Strukturen für die 3D Rekonstruktion aus Einzelaufnahmen, *Bachelor's Thesis*
- 2009 Johannes Schneider, Untersuchung von Farbinvarianten für die Erzeugung von Merkmalsdeskriptoren, *Bachelor's Thesis*

Publications

- L. Drees, R. Roscher, and **S. Wenzel** (2018): 'Archetypal Analysis for Sparse Representation-based Hyperspectral Sub-Pixel Quantification', to appear in Photogrammetric Engineering & Remote Sensing.
- K. Franz, R. Roscher, A. Milioto, **S. Wenzel**, and J. Kusche (2018): 'Ocean Eddy Identification and Tracking using Neural Networks', accepted to IEEE International Geoscience and Remote Sensing Symposium (IGARSS), arXiv preprint arXiv:1803.07436.
- D. Bulatov, **S. Wenzel**, G. Häufel, and J. Meidow (2017): 'Chain-Wise Generalization of Road Networks Using Model Selection', ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences, pp. 59-66. doi:10.5194/isprs-annals-IV-1-W1-59-2017
- A. Bettge, R. Roscher, and **S. Wenzel** (2017): 'Deep self-taught learning for remote sensing image classification', Proc. Conference on Big Data from Space.
- A. Braakmann-Folgmann, R. Roscher, **S. Wenzel**, B. Uebbing, and J. Kusche (2017): 'Sea level anomaly prediction using recurrent neural networks', Proc. of the Conference on Big Data from Space.
- R. Roscher, L. Drees, and **S. Wenzel** (2017): 'Sparse representation-based archetypal graphs for spectral clustering', IEEE International Geoscience and Remote Sensing Symposium.
- R. Roscher, **S. Wenzel**, and B. Waske (2016): 'Discriminative Archetypal Self-taught Learning for Multispectral Landcover Classification', Proc. of Pattern Recognition in Remote Sensing (PRRS), Workshop at ICPR.
- T. Schubert, **S. Wenzel**, R. Roscher, and C. Stachniss (2016): 'Investigation of Latent Traces Using Infrared Reflectance Hyperspectral Imaging', ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences, pp. 97-102. doi:10.5194/isprs-annals-III-7-97-2016
- S. Wenzel** and W. Förstner (2016): 'Facade Interpretation Using a Marked Point Process', ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences, pp. 363-370. doi:10.5194/isprs-annals-III-3-363-2016

- S. Wenzel** and W. Förstner (2013): 'Finding Poly-Curves of Straight Line and Ellipse Segments in Images', *Photogrammetrie, Fernerkundung, Geoinformation (PFG)*, vol. 4, pp. 297-308, doi:10.1127/1432-8364/2013/0178
- S. Wenzel** and W. Förstner (2012): 'Learning a compositional representation for facade object categorization', *ISPRS Annals of Photogrammetry, Remote Sensing and the Spatial Information Sciences; Proc. of 22nd Congress of the International Society for Photogrammetry and Remote Sensing (ISPRS)*, pp. 197-202. doi:10.5194/isprsannals-I-3-197-2012
- S. Wenzel** and L. Hotz (2010): 'The Role of Sequences for Incremental Learning', *ICAART 2010 – Proceedings of the International Conference on Agents and Artificial Intelligence, Valencia, Spain*, pp. 434-439.
- S. Wenzel**, M. Drauschke, and W. Förstner (2008): 'Detection of repeated structures in facade images', *Pattern Recognition and Image Analysis*, vol. 18, iss. 3, pp. 406-411. doi:10.1134/S1054661808030073
- S. Wenzel** and W. Förstner (2008): 'Semi-supervised incremental learning of hierarchical appearance models', *21st Congress of the International Society for Photogrammetry and Remote Sensing (ISPRS)*, Beijing, China, p. 399–404 Part B3b-2.
- S. Wenzel**, M. Drauschke, and W. Förstner (2007): 'Detektion wiederholter und symmetrischer Strukturen in Fassadenbildern', *Publikationen der DGPF: Von der Medizintechnik bis zur Planetenforschung – Photogrammetrie und Fernerkundung für das 21. Jahrhundert*, Muttenz, Basel, pp. 119-126.
- S. Wenzel**, M. Drauschke, and W. Förstner (2007): 'Detection and Description of Repeated Structures in Rectified Facade Images', *Photogrammetrie, Fernerkundung, Geoinformation (PFG)*, vol. 7, pp. 481-490.
- S. Wenzel**, M. Drauschke, and W. Förstner (2007): 'Detection of repeated structures in facade images', *Proceedings of the OGRW-7-2007, 7th Open German/Russian Workshop on Pattern Recognition and Image Understanding*, Ettlingen, Germany. doi:10.1134/S1054661808030073