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24.03.1966, female, married, 3 children

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Academic qualifications:

Habilitation Landscape Patterns in Space, Time and Scale – Analysing, Quantifying, Assessing and Modelling in Landscapes (cumulative), *venia legendi*: Faculty of Mathematics and Natural Sciences II, Geography, Humboldt University Berlin, 2015, Elmar Kulke

Doctorate Raum-zeitliches Monitoring von Landschaftsstrukturen in der Tagebauregion Südraum Leipzig mit Methoden der Fernerkundung und Geoinformation. (cumulative, magna cum laude), Rheinischen Friedrich-Wilhelms University of Bonn – Institute of Geography, 2000

Other advanced qualifications Diploma Biology Sciences, KMU Leipzig, 1990

Postgraduate professional career:

1990 - 1991 Scientist at the Institute of Toxicology, Graupa, Germany

1991 - 1993 Lecturer, state-certified environmental protection technician with IHK degree (topics: Landscape ecology, environmental toxicology, nature conservation, landscape planning, environmental law)

1993 – 2000	Scientist, UFZ (non permanent position)
2000 - now	Senior Scientist, UFZ (permanent position)
2006 – 2020	Senior Scientist & Group Leader Hyperspectral RS, UFZ (Installation, operationalisation and application of the UFZ's own hyperspectral sensors AISA- DUAL, HySPEX (400-2500nm) on various platforms: Aircraft ultralight, Cessna, Piper, Lifting platform, spectral laboratory)
2010	Lecture, Scientist at ARA -Airborne Research Australia, Australia
2015 – 2016	OECD Fellowship, Carleton University Ottawa (Prof. Dr. Lenore Fahrig, Dep. Landscape Ecology, Prof. Dr. Douglas M. King, Dep. Remote Sensing), Canada
2015 – now	PD, Doцент at Humboldt University Berlin, Geography Department, Germany
2022	Rehabilitated from the HU Berlin to the MLU Halle, PD, Doцент at Martin-Luther University Halle, Mat.-Nat.Faculty III
2023	Honorary Professor at FH-Dessau, "Data mining and Remote Sensing", Anhalt University of Applied Sciences Institute for Geoinformation and Surveying (in progress).
2023	Habilitated Associate Professor (Visiting Professor), Institute of Cartography and Geoinformatics, Faculty of Informatics, Eötvös Loránd University, Budapest, Hungaria (in progress).

Research topics:

- Trait ecology, spectral traits in social-ecological systems, biodiversity, geodiversity, Land-Use Intensity (LUI, Urban-LUI)
- Ecosystem Integrity – RS/Modelling service – ESIS – Developing, Implementation
- Quantification of land-use-intensity (LUI) and hemeroby with RS
- Pattern-process interaction and its scale effects in communities, habitats, bioms
- Vegetation pattern as sensor for soil characteristics and soil moisture patterns
- Coupling terrestrial sensor networks with RS data of drones, airborne and speceborne sensors
- Hyperspectral remote sensing, RS
- Installation, operationalisation of hyperspectral sensors AISA- DUAL, HySPEX (400-2500nm) on various platforms: Aircraft ultralight, Cessna, Piper, Lifting platform, spectral laboratory
- Data Science and landscape ecology, geoecology
- Semantic Data Integration, Linked Open Data (LOD)

- Licence of Microlight, drone
- Distance learning databases,

Others:

Journals / series: Reviewer for research proposals: DFG, UBA, FWO-Research Foundation Flanders; Reviewer for Journals: **Nature Communication, Nature Ecology and Evolution, Scientific Reports**, Remote Sensing of Environment, Remote Sensing, Sensors, International Journal of Applied Earth Observation and Geoinformation, Journal of the Indian Society of Remote Sensing Journal of Photogrammetry, Remote Sensing and Geoinformation Science, Plos One, Ecosphere, Methods in Ecology and Evolution, Ecological Indicators, Landscape Ecology, Environmental Monitoring and Assessment, Agriculture, Ecosystems & Environment, Forest, Environmental Modelling & Software, Forest Ecology and Management, Springer, Editor in Chief (2014-2016) Landscape Online, Editor in Chief for 6 Special Issues – Remote Sensing.

Gremia & Networks (selected): Data Pool Initiative: International Data Pool Initiative for the Bavarian National Park, (2019-now); GeoBon - Member of the working group: Remote Sensing for EBV- Essential Biodiversity Variables, (2014-now); SoilBon (2021-now); IALE International Association of Landscape Ecology (1999-now), board member, Germany (2013-2016) of IALE-Germany, Foundation, Working Group, "Data Science in environmental research, planning and evaluation", DGPF German Society for Photogrammetry, Remote Sensing and Geoinformation e.V. GfÖ Society for Ecology, NFDI4BioDiversity, NFDI4Earth, Space2Agriculture, (2020 – now); eLTER

- Long-term Ecological, critical zone and socio-ecological Research, Netzeckbüro Wald (2021 – now), iDIV-Member (requested), sTRAITS (Working Group of iDiv) – (in decision)

Publications

H-index GS: 34; i-10: 61, citations – 5479, (02.02.2022)

ISI listed and peer reviewed (complete list)

(2023)

- 1) Xie, C.; Wang, J.; Haase, D.; Wellmann, T.; **Lausch, A., 2023.** Measuring spatio-temporal heterogeneity and interior characteristics of green spaces in urban neighborhoods: A new approach using gray level co-occurrence matrix. *Sci. Total Environ.* 158608. <https://doi.org/10.1016/j.scitotenv.2022.158608>

(2022)

- 2) Helfenstein, J.; Bürgi, M.; Debonne, N.; Dimopoulos, T.; Diogo, V.; Dramstad, W.; Edlinger, A.; Garcia-Martin, M.; Hernik, J.; Kizos, T... **Lausch, A.** et al. Farmer surveys in Europe suggest that specialized, intensive farms were more likely to perceive negative impacts from COVID-19. *Agron. Sustain. Dev.* **2022**, 42, 84.
- 3) **Lausch, A.**; Schaepman, M.E.; Skidmore, A.K.; Catana, E.; Bannehr, L.; Bastian, O.; Borg, E.; Bumberger, J.; Dietrich, P.; Glässer, C.; et al. Remote Sensing of Geomorphodiversity Linked to Biodiversity—Part III: Traits, Processes and Remote Sensing Characteristics. *Remote Sens.* **2022**, 14, 2279.
- 4) Prokoph, S.; Cheema, J.; Kirmer, A.; **Lausch, A.**; Bannehr, L. Monitoring von blütenreichen Flächen mittels Fernerkundung. *DGPF* **2022**, 30, 220–236.

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- 5) Hellwig, F.M.; Stelmaszczuk-Górska, M.A.; Dubois, C.; Wolsza, M.; Truckenbrodt, S.C.; Sagichewski, H.; Chmara, S.; Bannehr, L.; **Lausch, A.**; Schullius, C. Mapping European Spruce Bark Beetle Infestation at Its Early Phase Using Gyrocopter-Mounted Hyperspectral Data and Field Measurements. *Remote Sens.* **2021**, 13, 4659.
- 6) Baatz, R., Franssen, H.J.H., Euskirchen, E., Sihi, D., Dietze, M., Ciavatta, S., Fennel, K., Beck, H., De Lannoy, G., Pauwels, V.R.N., Raiho, A., Montzka, C., Williams, M., Mishra, U., Poppe, C., Zacharias, S., **Lausch, A.**, Samaniego, L., Van Looy, K., Bogena, H., Adamescu, M., Mirtl, M., Fox, A., Goergen, K., Naz, B.S., Zeng, Y., Vereecken, H., **Reanalysis in Earth System Science: Towards Terrestrial Ecosystem Reanalysis. Rev. Geophys.** **2021 (ISI = 20.00).**
- 7) Andrew K. Skidmore , Nicholas C. Coops, Elnaz Neinavaz, Abebe Ali, Michael E. Schaepman, Marc Paganini, W. Daniel Kissling, Petteri Vihervaara, Roshanak Darvishzadeh, Hannes Feilhauer, Miguel Fernandez, Néstor Fernández, Noel Gorelick, Ilse Geizendorffer, Uta Heiden, Marco Heurich, Donald Hobern, Stefanie Holzwarth, Frank E. Muller-Karger, Ruben Van De Kerchove, **Angela Lausch**, Pedro J Leitão, Marcelle C. Lock, Caspar A. Múcher, Brian O'Connor, Duccio Rocchini, Woody Turner, Jan-Kees Vis, Tiejun Wang, Martin Wegmann, Vladimir

Wingate. **Priority list of biodiversity metrics to observe from space. *Nature Ecology & Evolution*, 2021, doi:10.1038/s41559-021-01451-x (ISI = 15.46).**

- 8) Hermanns, F.; Pohl, F.; Rebmann, C.; Schulz, G.; Werban, U.; Lausch, A. Inferring Grassland Drought Stress with Unsupervised Learning from Airborne Hyperspectral VNIR Imagery. *Remote Sens.* 2021, 13, 1885.
- 9) Andersson, E.; Haase, D.; Anderson, P.; Cortinovis, C.; Goodness, J.; Kendal, D.; **Lausch, A.**; McPhearson, T.; Sikorska, D.; Wellmann, T. **What are the traits of a social-ecological system: towards a framework in support of urban sustainability. *npj Urban Sustain.* 2021, 1, 14. (new Nature-Portfolio paper)**
- 10) Zhou, T.; Geng, Y.; Ji, C.; Xu, X.; Wang, H.; Pan, J.; Bumberger, J.; Haase, D.; **Lausch, A.** Prediction of soil organic carbon and the C:N ratio on a national scale using machine learning and satellite data: A comparison between Sentinel-2, Sentinel-3 and Landsat-8 images. *Sci. Total Environ.* **2021**, 755, 142661.
- 11) Feilhauer, H.; Zlinszky, A.; Kania, A.; Foody, G.M.; Doktor, D.; **Lausch, A.**; Schmidlein, S. Let your maps be fuzzy!—Class probabilities and floristic gradients as alternatives to crisp mapping for remote sensing of vegetation. *Remote Sens. Ecol. Conserv.* **2021**, 7, 292–305.

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- 12) **Lausch, A.**; Schaepman, M.E.; Skidmore, A.K.; Truckenbrodt, S.C.; Hacker, J.M.; Baade, J.; Bannehr, L.; Borg, E.; Bumberger, J.; Dietrich, P.; et al. Linking the Remote Sensing of Geodiversity and Traits Relevant to Biodiversity—Part II: Geomorphology, Terrain and Surfaces. *Remote Sens.* **2020**, 12, 3690.
- 13) Wellmann, T.; **Lausch, A.**; Andersson, E.; Knapp, S.; Cortinovis, C.; Jache, J.; Scheuer, S.; Kremer, P.; Mascarenhas, A.; Kraemer, R.; et al. Remote sensing in urban planning: Contributions towards ecologically sound policies? *Landsc. Urban Plan.* **2020**, 204, 103921.
- 14) Wellmann, T.; **Lausch, A.**; Scheuer, S.; Haase, D. Earth observation based indication for avian species distribution models using the spectral trait concept and machine learning in an urban setting. *Ecol. Indic.* **2020**, 111, 106029.
- 15) Zhou, T.; Geng, Y.; Chen, J.; Liu, M.; Haase, D.; **Lausch, A.** Mapping soil organic carbon content using multi-source remote sensing variables in the Heihe River Basin in China. *Ecol. Indic.* **2020**, 114, 106288.
- 16) Zhou, T.; Geng, Y.; Chen, J.; Pan, J.; Haase, D.; **Lausch, A.** High-resolution digital mapping of soil organic carbon and soil total nitrogen using DEM derivatives, Sentinel-1 and Sentinel-2 data based on machine learning algorithms. *Sci. Total Environ.* **2020**, 138244.

(2019)

- 17) **Lausch, A.**; Baade, J.; Bannehr, L.; Borg, E.; Bumberger, J.; Chabrilliat, S.; Dietrich, P.; Gerighausen, H.; Glässer, C.; Hacker, J.; et al. Linking Remote Sensing and Geodiversity and Their Traits Relevant to Biodiversity—Part I: Soil Characteristics. *Remote Sens.* **2019**, 11, 2356.

- 18) Kabisch, N.; Selsam, P.; Kirsten, T.; **Lausch, A.**; Bumberger, J. A multi-sensor and multi-temporal remote sensing approach to detect land cover change dynamics in heterogeneous urban landscapes. *Ecol. Indic.* 2019, 99, 273–282.
- 19) Schulz, H., Beck, W., Lausch, A., **2019**. Atmospheric depositions affect the growth patterns of Scots pines (*Pinus sylvestris* L.) – a long-term cause-effect monitoring study using biomarkers. *Environmental Monitoring and Assessment*, 191: 159, <https://doi.org/10.1007/s10661-019-7272-z>.

(2018)

- 20) **Lausch, A.**; Bastian, O.; Klotz, S.; Leitão, P.J.; Jung, A.; Rocchini, D.; Schaepman, M.E.; Skidmore, A.K.; Tischendorf, L.; Knapp, S. Understanding and assessing vegetation health by in situ species and remote-sensing approaches. *Methods Ecol. Evol.* **2018**, 9, 1799–1809.
- 21) **Lausch, A.**; Borg, E.; Bumberger, J.; Dietrich, P.; Heurich, M.; Huth, A.; Jung, A.; Klenke, R.; Knapp, S.; Mollenhauer, H.; et al. Understanding Forest Health with Remote Sensing, Part III: Requirements for a Scalable Multi-Source Forest Health Monitoring Network Based on Data Science Approaches. *Remote Sens.* **2018**, 10, 1120.
- 22) Wellmann, T.; Haase, D.; Knapp, S.; Salbach, C.; Selsam, P.; **Lausch, A.** Urban land use intensity assessment: The potential of spatio-temporal spectral traits with remote sensing. *Ecol. Indic.* **2018**, 85, 190–203.
- 23) Duccio Rocchini, Sandra Luque, Nathalie, Lucy Bastin, Daniel Doktor, Nicol Faedi, Hannes Feilhauer, Jean-Baptiste Feret, Giles M. Foody, Yoni Gavish, Sergio Godinho, William E. Kunin, **Angela Lausch**, Leitão, P. J., Matteo Marcantonio, Markus Neteler, Carlo Ricotta, Sebastian Schmidtlein, Petteri Vihervaara, Martin Wegmann, Harini Nagendra, **2018**. Measuring β -diversity by remote sensing: A challenge for biodiversity monitoring. *Methods Ecol Evol.* 9 (8), 1787 – 1798, <https://doi.org/10.1111/2041-210X.12941>.

(2017)

- 24) **Lausch, A.**; Erasmi, S.; King, D.; Magdon, P.; Heurich, M. Understanding Forest Health with Remote Sensing-Part II—A Review of Approaches and Data Models. *Remote Sens.* **2017**, 9, 129.
- 25) Wollschläger, U.; Attinger, S.; Borchardt, D.; Brauns, M.; Cuntz, M.; Dietrich, P.; Fleckenstein, J.H.; Friese, K.; Friesen, J.; Harpke, A.; .. **Lausch, A.**, et al. The Bode hydrological observatory: a platform for integrated, interdisciplinary hydro-ecological research within the TERENO Harz/Central German Lowland Observatory. *Environ. Earth Sci.* **2017**, 76, 29.
- 26) Schmidt, J.; Fassnacht, F.E.; Neff, C.; **Lausch, A.**; Kleinschmit, B.; Förster, M.; Schmidtlein, S. Adapting a Natura 2000 field guideline for a remote sensing-based assessment of heathland conservation status. *Int. J. Appl. Earth Obs. Geoinf.* **2017**, 60, 61–71.

(2016)

- 27) Schmidt, J.; Fassnacht, F.E.; **Lausch, A.**; Schmidtlein, S., **2017**. Assessing the functional signature of heathland landscapes via hyperspectral remote sensing. *Ecological Indicators* 73, 505-512. [dx.doi.org/10.1016/j.ecolind.2016.10.017](https://doi.org/10.1016/j.ecolind.2016.10.017).
- 28) Pause, M.; Schweitzer, C.; Rosenthal, M.; Keuck, V.; Bumberger, J.; Dietrich, P.; Heurich, M.; Jung, A.; **Lausch, A.** In Situ/Remote Sensing Integration to Assess Forest Health—A Review. *Remote Sens.* **2016**, 8, 471.
- 29) Rocchini, D.; Boyd, D.S.; Féret, J.-B.; Foody, G.M.; He, K.S.; **Lausch, A.**; Nagendra, H.; Wegmann, M.; Pettorelli, N. Satellite remote sensing to monitor species diversity: potential and pitfalls. *Remote Sens. Ecol. Conserv.* **2016**, 2, 25–36.
- 30) Nathalie Pettorelli, Martin Wegmann, Andrew Skidmore, Sander Múcher, Terence P. Dawson, Miguel Fernandez, Richard Lucas, Michael E. Schaepman, Tiejun Wang, Brian O’Connor, Robert H.G. Jongman, Pieter Kempeneers, Ruth Sonnenschein, Allison K. Leidner, Monika Böhm, Kate S. He, Harini Nagendra, Grégoire Dubois, Temilola Fatoyinbo, Matthew C. Hansen, Marc Paganini, Helen M. de Klerk, Greg Asner, Jeremy Kerr, Anna B. Estes, Dirk S. Schmeller, Uta Heiden, Duccio Rocchini, Henrique M. Pereira, Eren Turak, Nestor Fernandez, **Angela Lausch**, Moses A. Cho, Domingo Alcaraz-Segura, Mélodie A. McGeoch, Woody Turner, Andreas Mueller, Véronique St-Louis, Johannes Penner and Gary N. Geller, Framing the concept of Satellite Remote Sensing Essential Biodiversity Variables: challenges and future directions. *Remote Sensing in Ecology and Conservation*, **2016**, 1-10, DOI: 10.1002/rse2.15.
- 31) **Lausch, A.**; Erasmi, S.; King, D.J.; Magdon, P.; Heurich, M. Understanding Forest Health with Remote Sensing -Part I—A Review of Spectral Traits, Processes and Remote-Sensing Characteristics. *Remote Sens.* **2016**, 8, 1029.
- 32) Luft, L.; Neumann, C.; Itzerott, S.; Lausch, A.; Doktor, D.; Freude, M.; Blaum, N.; Jeltsch, F. Digital and real-habitat modeling of *Hipparchia statilinus* based on hyper spectral remote sensing data. *Int. J. Environ. Sci. Technol.* 2016, 13.
- 33) **Lausch, A.**; Bannehr, L.; Beckmann, M.; Boehm, C.; Feilhauer, H.; Hacker, J.M.; Heurich, M.; Jung, A.; Klenke, R.; Neumann, C.; et al. Linking Earth Observation and taxonomic, structural and functional biodiversity: Local to ecosystem perspectives. *Ecol. Indic.* **2016**, 70.
- 34) Schima, R.; Mollenhauer, H.; Grenzdörffer, G.; Merbach, I.; **Lausch, A.**; Dietrich, P.; Bumberger, J. Imagine all the plants: Evaluation of a light-field camera for on-site crop growth monitoring. *Remote Sens.* **2016**, 8.

(2015)

- 35) **Lausch, A.**, Blaschke, T., Haase, D., Herzog, F., Syrbe, R.-U., Tischendorf, L., Walz, U., **2015**. Understanding and quantifying landscape structure – A review on relevant process characteristics, data models and landscape metrics. *Ecological Modelling* 295, 31-41, doi.org/10.1016/j.ecolmodel.2014.08.018.

- 36) **Lausch, A.**, Schmidt, A., Tischendorf, L., **2015**. Data mining and linked open data – A new perspective for data analysis in environmental research. *Ecological Modelling* 295, 5-17, <http://dx.doi.org/10.1016/j.ecolmodel.2014.09.018>.
- 37) **Lausch, A.**, Salbach, C., Doktor, D., Schmidt, A., Merbach, I., Pause, M., **2015**. Deriving phenology of barley with imaging hyperspectral remote sensing. *Ecological Modelling*. 295, 123-135, [doi.org/10.1016/j.ecolmodel.2014.10.001](http://dx.doi.org/10.1016/j.ecolmodel.2014.10.001).
- 38) Clasen, A., Somers, B., Pipkins, K., Tits, L., Segl, K., Brell, M., Kleinschmit, B., Spengler, D., **Lausch, A.**, Förster, M., **2015**. Spectral unmixing of forest crown components at close range, airborne and simulated EnMAP imaging scale. *Remote Sens.* **2015**, 7, 15361-15387; [doi:10.3390/rs71115361](http://dx.doi.org/10.3390/rs71115361).
- 39) Tarin Paz-Kagan, Eli Zaady, Christoph Salbach, Andreas Schmidt, **Angela Lausch**, Steffen Zacharias, Gila Natesco, Eyal Ben Dor, Arnon Karnieli. **2015**. Developing a Spectral Soil Quality Index (SSQI) Map using Imaging Spectroscopy. *Remote Sens.* 7(11), 15748-15781; [doi:10.3390/rs71115748](http://dx.doi.org/10.3390/rs71115748).
- 40) Carsten Neumann, Gabriele Weiss, Sebastian Schmidlein, Sibylle Itzerott, **Angela Lausch**, Daniel Doktor, Maximilian Brell. **2015**. Ecological Gradient-Based Habitat Quality Assessment for Spectral Ecosystem Monitoring. *Remote Sensing*, 7, 2871-2898; [doi:10.3390/rs70302871](http://dx.doi.org/10.3390/rs70302871).
- (2014)**
- 41) Feilhauer, H.; Doktor, D.; **Lausch, A.**, Schmidlein, S.; Schulz, G., Stenzel, S., **2014**. Mapping Natura 2000 habitats and their local variability with remote sensing. *Applied Vegetation Science*, 17 (4), 765-779, [Doi: 10.1111/avsc.12115](http://dx.doi.org/10.1111/avsc.12115).
- 42) Pause, M., **Lausch, A.**, Bernhardt, M., Hacker, J., Schulz, K., **2014**. Improving soil moisture retrieval from airborne L-band radiometer data by considering spatially varying roughness. *Canadian Journal of Remote Sensing* 40 (1), 15-25. [Doi: 10.1080/07038992.2014.907522](http://dx.doi.org/10.1080/07038992.2014.907522).
- 43) Rogass. C., Mielke M., Scheffler D., Nina K., Boesche N.K., **Lausch A.**, Lubitz C., Brell M., Spengler D., Eisele A., Segl K., Guanter L., **2014**. Reduction of uncorrelated striping noise - applications for hyperspectral pushbroom acquisitions. *Remote Sensing* 6, 11082-11106, [doi:10.3390/rs61111082](http://dx.doi.org/10.3390/rs61111082).
- 44) Doktor, D., **Lausch, A.**, Spengler, D., Thurner, M., **2014**. Extraction of plant physiological status from hyperspectral signatures using machine learning methods. *Remote Sensing* 6, 12247-12274, [doi:10.3390/rs61212247](http://dx.doi.org/10.3390/rs61212247).
- 45) Paasche, H., Eberle, D., Das, D., Cooper, A., Debba, P., Dietrich, P., Dudeni-Thlone, N., Gläßer, C., Kijko, A., Knobloch, A., **Lausch, A.**, Meyer, U., Stettler, E., Werban, U., **2014**. Are Earth Sciences lagging behind in data integration methodologies? *Environmental Earth Science*, 71 (4), 1997-2003, [Doi: 10.1007/s12665-013-2931-9](http://dx.doi.org/10.1007/s12665-013-2931-9).
- 46) Brosinsky, A., **Lausch A.**, Doktor, D., Salbach, C, Merbach, I. Gwilym-Margianto, S., Pause, M., **2014**. Analysis of spectral vegetation signal characteristics as a function of soil moisture

conditions using hyperspectral remote sensing. *Journal of the Indian Society of Remote Sensing*, 42 (2), 311-324. DOI:10.1007/s12524-013-0298-8.

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- 47) Lausch, A., Zacharias, S., Dierke, C., Pause, M., Kühn, I., Doktor, D., Dietrich, P., Werban, U., 2013. Analysis of vegetation and soil pattern using hyperspectral remote sensing, EMI and Gamma ray measurements. *Vadose Zone Journal* 12 (4), doi:10.2136/vzj2012.0217.
- 48) Lausch, A., Pause, M., Schmidt, A., Salbach, C., Gwilym-Margianto, S., Merbach, I., 2013. Temporal hyperspectral monitoring of chlorophyll, LAI and water content of barley during a growing season. *Canadian Journal of Remote Sensing* 39 (3), 191-207.
- 49) Lausch, A., Heurich, M., Gordalla, D., Dobner, H.-J., Gwilym-Margianto, S., Salbach, C., 2013. Forecasting potential bark beetle outbreaks based on spruce forest vitality using hyperspectral remote-sensing techniques at different scales. *Forest Ecology and Management* 308, 76-89, doi.org/10.1016/j.foreco.2013.07.043.
- 50) Lausch, A., Pause, M., Doktor, D., Preidl, S., Schulz, K., 2013. Monitoring and assessing of landscape heterogeneity at different scales. *Environmental Monitoring and Assessment*. 185, 11, 9419-9434. DOI:10.1007/s10661-013-3262-8
- 51) Lausch, A., Pause, M., Merbach, I., Zacharias, S., Doktor, D., Volk, M., Seppelt, R., 2013. A new multi-scale approach for monitoring vegetation using remote sensing-based indicators in laboratory, field and landscape. *Environmental Monitoring and Assessment* 185 (2), 1215-1235.
- 52) Lausch, A., Heurich, M., Fahse, L., 2013. Spatio-temporal infestations pattern of *Ips typographus* (L.) in Bavarian Forest National Park, Germany. *Ecological Indicators* 31, 73-81.

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- 53) Lausch, A., Pause, M., Merbach, I., Gwilym-Margianto, S., Schulz, K., Zacharias, S., Seppelt, R., 2012. Scale-specific hyperspectral remote sensing in environmental research, *Photogrammetrie Fernerkundung Geoinformation* 5, 0589-0602.
- 54) Pause, M., Schulz, K., Zacharias, S., Lausch, A., 2012. Near-surface soil moisture estimation by combining airborne L-band brightness temperature observations and imaging hyperspectral data at the field scale, *J. Applied Remote Sensing*, DOI:10.1117/1.JRS.6.063516.

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- 55) Lausch, A., Fahse, L., Heurich, M., 2011. Factors affecting the spatio-temporal dispersion of *Ips typographus* (L.) in Bavarian Forest National Park: - a long-term quantitative landscape-level analysis. *Forest Ecology and Management* 261 (2), 233-245.
- 56) Lautenbach, S., Kugel, C., Lausch, A., Seppelt, R., 2011. Analysis of historic changes in regional ecosystem service provisioning using land use data. *Ecological Indicators* 11 (2), 676-687.
- 57) Rogaß, C., Spengler, D., Bochow, M., Segl, K., Lausch, A., Doktor, D., Roessner S., Behling, R., Wetzels, H.-U, Kaufmann, H., 2011. Reduction of radiometric miscalibration – applications

to pushbroom sensors. *Sensors* 2011, 11(6), 6370-6395; doi:10.3390/s110606370, <http://www.mdpi.com/1424-8220/11/6/6370/>.

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58) Dormann, C.F., Schweiger, O., Arens, P., Augenstein, I., Aviron, S., Bailey, D., Baudry, J., Billeter, R., Bugter, R., Bukáček, R., Burel, F., Cerny, M., Cock, R.D., Blust, G.D., DeFilippi, R., Diekötter, T., Dirksen, J., Durka, W., Edwards, P.J., Frenzel, M., Hamersky, R., Hendrickx, F., Herzog, F., Klotz, S., Koolstra, B., **Lausch, A.**, Coeur, D.L., Liira, J., Maelfait, J.P., Opdam, P., Roubalova, M., Schermann-Legionnet, A., Schermann, N., Schmidt, T., Smulders, M.J.M., Speelmans, M., Simova, P., Verboom, J., Wingerden, W.V., & Zobel, M., 2008. **Prediction uncertainty of environmental change effects on temperate European biodiversity. *Ecology Letters*, 11, 235-244 (ISI = 9.5).**

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Peer-reviewed, non-ISI listed: (past five years)

- 1) Kabisch, N.; Kraemer, R.; Brenck, M.E.; Haase, D.; Lausch, A.; Luttkus, M.L.; Mueller, T.; Remmler, P.; von Döhren, P.; Voigtländer, J.; et al. A methodological framework for the assessment of regulating and recreational ecosystem services in urban parks under heat and drought conditions. Ecosyst. People 2021, 17, 464–475.
- 2) Pause, M.; Hahn, A.; Lausch, A. Verbesserung der Informationslage zur Flächennutzung mittels aktueller und zukünftiger Fernerkundungsdaten. In Flächennutzungsmonitoring XII mit Beiträgen zum Monitoring von Ökosystemleistungen und SDGs; Meinel, G.; Schumacher, U.; Behnisch, M.; Krüger, T., Ed.; Rhombos, IÖR Schriften 78: Berlin, 2020; pp. 241–250 ISBN 978-3-944101-78-1.

Books and book contributions: (past five years)

- 1) Borg, E.; Truckenbrodt, S.C.; Lausch, A.; Dietrich, P.; Schmidt, K. Remote Sensing. In Springer Handbook of Geographic Information; Kresse, W., Danko, D., Eds.; Springer: Cham., 2022 ISBN 978-3-030-53124-9.
- 2) Lausch, A.; Heurich, M.; Magdon, P.; Rocchini, D.; Schulz, K.; Bumberger, J.; King, D.J. A Range of Earth Observation Techniques for Assessing Plant Diversity. In Remote Sensing of Plant Biodiversity (Eds: Cavender-Bares, J.; Gamon, J.A.; Townsend, P.A.) Springer International Publishing: Cham, 2020; pp. 309–348, ISBN 978-3-030-33156-6.
- 3) Lausch, A. and Leitão, P.J., Monitoring Vegetation Diversity and Health through Spectral Traits and Trait Variations Based on Hyperspectral Remote Sensing. Volume I Title: Fundamentals, Sensor Systems, Spectral Libraries, and Data Mining for Vegetation. pp. 95-126. Book Title: "Hyperspectral Remote Sensing of Vegetation" (Second Edition, 4 Volume Set). Chapter 4 (of Volume I of Four-Volume Book): Publisher: CRC Press- Taylor and Francis group, Boca Raton, London, New York. 2018, pp. 296. (Editors: Thenkabail, P.S., Lyon).

Guest Editor for Special Issues:

1. "Thermal Infrared Remote Sensing for the Climate Adaption of Landscapes and Urban Areas", Guest editors: Marion Pause, Angela Lausch, Milena Markovics, Remote Sensing, 2022

2. "Remote Sensing of Inland Waters and Their Catchments", Guest editors: Angela Lausch, Jan Bumberger, Natascha Oppelt, Karsten Rinke, 2020
3. "Teaching and Learning in Remote Sensing", Guest editors: Marion Pause, Angela Lausch, Andras Jung, Sebastian Schellhammer, Remote Sensing, Permanent Special Issue
4. "Monitoring of Status and Disturbances of Bio-and Geodiversity and their Traits and Interactions using Remote Sensing" Guest editors: Angela Lausch, Andrew Skidmore, Michael Vohland, Natascha Oppelt, Jan Bumberger, 2021
5. "Remote Sensing of Forest Health", Guest editors: Angela Lausch, Marco Heurich, Remote Sensing, 2016

Patent (past five years)

1. Patent 1: (EP21172776.3) Mollenhauer, H.; Borg, E.; Truckenbrodt, S.; Mollenhauer, O.; Wrage-Mönnig, N.; Lausch, A.; (2021) *Anordnung und Verfahren zur Charakterisierung von Vegetation (EP21172776.3)*. European Patent Office. *URL, Patent für ein selbstkalibrierendes Hyperspectral (VNIR)/TIR Spectrometer, Weiterentwicklung geplant als Wireless Sensor Network, Integration in Bäumen, Forest Lysimeter;*
2. Patent 2: P17.546DE Eigenschaftsermittlung von Vegetationsproben mittels elektrischer Größen, Ermitteln einer (bevorzugt trockenen) Biomasse einer Vegetationsprobe. *Patent für ein selbstkalibrierendes Hyperspectral (VNIR)/TIR Spectrometer + Installation für ein Agrar-Lysimeter + spectrale Erfassung von Biomasse wurden entwickelt.*

Selected presentations

Year	Topic	Organisers
2023	Data Mining and Remote Sensing	Presentation for Honorary Professor, FH Dessau, 24 th January, 2023
2023	EcoSystem Integrity – RS / Modelling -Service (ESIS) for monitoring bio- and geodiversity by spectral traits and RS approaches	Invitation workshop of Royal Society, England, Geodiversity for society 16-17th January 2023, Nottingham, UK
2022	EcoSystem Integrity – RS /Modelling-Service (ESIS) for monitoring bio- geodiversity & social ecological systems by traits, RS & data science approaches	World congress of International Association of Landscape Ecology (IALE), July, 2022, Warshaw
2022	Datascience, Remote Sensing, Traits for understanding and predicting Patterns in Data	Presentation at Institute of Cartography and Geoinformatics, Faculty of Informatics, Eötvös Loránd University, Budapest, Hungaria
2022	Data Science, Remote Sensing, Traits and Machine Learning for understanding and predicting Patterns in Data	Colloquium Lecture, FH Dessau, July, 2022
2022	EcoSystem Integrity – Sensor/EO-Service (ESIS) for monitoring Biodiversity- & Geodiversity & Social-Ecological Systems by Spectral Traits, Remote Sensing & Data Science approaches	Inauguration lecture, May, Martin Luther University, Halle
2022	EcoSystem Integrity RS/Modelling - Service (ESIS) for monitoring Vegetationsdiversity, Geodiversity & LUI	Drylands, Desserts & Desertification, The 8th International Conference November 27 - December 1, 2022, Israel
2022	EcoSystem Integrity RS/Modelling Service (ESIS)	November, UFZ-Workshop, Schierke, Germany
2022	EcoSystem Integrity – RS /Modelling-Service (ESIS) for monitoring bio- geodiversity & land use intensity (LUI) by traits, RS & data science approaches	July, International Data Pool Meeting for forest health, Forest, Bavarian National Park, Germany
2021	EcoSystem Integrity – Sensor /EO-Service (ESIS) for monitoring bio- geodiversity & human health with traits, remote sensing and data science approaches	Online, AGU, New Orleans, USA Prof. Garry Geller, NASA
2021	CoreForestHealth - COMprehensive assessment of the climate mitigation of EuRopEan FORESTs HEALTH through development of robust, resilient and transparent methodologies for high-resolution monitoring	Online, International Datapool Initiative – Forest, Bavarian National Park, Prof. Marco Heurich
2021	Monitoring intensity indices from remote sensing data – with special focus on VNIR and SWIR hyperspectral Information	Online, Veranstaltung der Nachwuchsgruppe (Nature based solution in cities), Dr. Nadja Kabisch
2020	Potentiale und praktische Aspekte von Thermal- und Hyperspektraldaten	IÖR, Flächennutzungssymposium, Dresden
2020	Monitoring bio- geodiversity and ecosystem health by traits, remote sensing and data science approaches	EGU, Wien
2020	Monitoring Status and Changes in Geo- Biodiversity, Urban Systems & Human health by Remote Sensing (RS) , Traits & Data Science - Focus on EnMAP - Mission	Invitation for W3 Professorship, GFZ, Potsdam
2019	Monitoring Bio- Geodiversity and Ecosystem health by Traits, Remote Sensing (RS) and Data Science approaches	IALE- Russia, Moskau
2019	Der hochschuleigene Forschungs-Gyrocopter D-MHSA: Sensoren, Datenerfassung, Analyse und Entwicklungen zur Erfassung von Forest heath mittels RGB, hyperspektral und TIR.	Universität Jena, Vorbereitungen zum Projektantrag, Prof. Christiane Schmulius

2019	Monitoring biodiversity and ecosystem health by traits, remote sensing and data science approaches	Workshop: Monitoring Land use intensity, Lund, Prof. Tobias Kümmerle
2019	Understanding of abiotic/ biotic and human induced traits and their interactions	IALE Europe, Milano, Italien
2018	Understanding vegetation health by remote sensing	iDiv Leipzig, Prof. Christian Wirth
2018	Data Science for better understanding - Biodiversity	GEOBON4RS, Workshop, Prof. Andrew Skidmore, Twente
2018	Data Science in Environmental Research	GFÖ Tagung, Wien
2018	Neuer Arbeitskreis: „Data Science in Umweltforschung, Planung & Bewertung“	IALE-Germany, Hannover, Bildung eines neue Arbeitskreises „Data Science in Landscape Ecology“
2018	Understanding Forest health by Remote Sensing (RS)	Einladungsvortrag und Podiumsdiskussion, UNESCO, Paris
2018	Assessment of water quality using remote sensing – interdisciplinary validation/calibration campaign at the regional scale	International Conference TERENO 2018, Berlin
2017	Quantifying taxonomic, structural and functional biodiversity with remote sensing	DLR workshop, 2017, Oberpfaffenhofen
2017	Nutzung der Kopplung von Fernerkundung und Wireless Sensor Networks zur Erfassung naturschutzrelevanter als auch bodenschutzrelevanter Strukturen, Prozesse und Funktionen	Workshop des LfUG, Sachsen, Werkstattgespräch „Anwendung der Fernerkundung für Landnutzung und Förderung“
2017	Urban land use intensity assessment – the potential of remote sensing	IALE 2017 European Congress,
2017	DataScience at the UFZ	Vortrag: Data Science at the UFZ
2017	Potenziale der Fernerkundung zur Bestimmung von Bodenparametern über Landnutzungsdaten	Workshop „Bewertung von Landnutzungsänderungen für das Monitoring von „Land Degradation Neutrality“ (LDN) in Deutschland Expertenworkshop, 27.03.2017, Berlin, Bundesumweltministerium
2016	Linking Earth Observation and taxonomic, structural and functional biodiversity: Local to ecosystem perspectives	Carleton University, Prof. Lenore Fahrig, Prof. Doug King, Ottawa, Canada
2016	Fernerkundung - Eigenschaften und Prozesse der Landbedeckung „Fernerkundung - Eigenschaften und Prozesse der Landbedeckung	Workshop zur Zusammenarbeit des LfULG Sachsen mit dem UFZ, LfULG Dresden
2016	Die Messung des Landschaftswandels Global	Einladungsvortrag, Umweltbeobachtungskonferenz 2016 – Ministerium, Österreich, Salzburg
2016	What brings us the next generation of remote sensing data in recording, understanding and predicting ecosystem functions	Canada Centre of Remote Sensing – CCSR, Ottawa, Canada
2016	Prospect and limitation to quantify biodiversity with Remote Sensing	EcoSummit, Montpellier, Frankreich
2016	Inter-Disziplinarität vs. Disziplinarität“ – Die Ohnmacht des Findens einer gemeinsamen Sprache zwischen den Disziplinen	IALE-Deutschland, Prora, Germany
2016	Applications of own airborne hyperspectral Sensor - AISA/HySpex - and drones in landscape research	Concordia University, Prof Dr. Jochen Jäger, Montreal, Canada
2016	Can we quantify biodiversity?	Carleton University, Prof. Lenore Fahrig, Prof. Doug King, Ottawa, Canada
2016	Quantifying plant species, communities with remote sensing	Workshop an der Eidgenössische Forschungsanstalt für Agrarökologie

		und Landbau, Zürich-Reckenholz (FAL), Zürich, Dr. Felix Herzog
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Third party funding of the past five years ((Co)PI: (Co)Principle Investigator, P: Partner; white: in works, in preparation; grey: running; dark grey: finalized)

Name	Role	From – to	Funder / programme	Budget €
Call: DLR, 2 Stage proposal Entwicklung eines Prototyps zum Aufbau eines ground truth – Sensor Netzwerkes basierend auf selbstkalibrierenden hyperspektral VNIR/TIR WSN- Lysimeter-Einheiten	PI	2022-2024	DLR 730.000 €	submitted (07.02.2022) 270.000 € / UFZ 1 x phd
Call: DLR, 2 Stage proposal Erfassung von Vorkommen und Bewertung des Gesundheitszustandes von Streuobstwiesen für ein Flächenkataster für Deutschland, basierend auf in- situ, Fernerkundung sowie Methoden des KI und neuester Ansätze der Musteranalyse	PI	2022-2024	DLR 772.000 €	submitted 262.000 € / UFZ 1 x phd
Call: Methods for assessing health- related costs of environmental stressors	P-Partner	2023-2025	HORIZON-HLTH- 2022-ENVHLTH- 04-01: 4 Mio. € Budget	in preparation (Deadline: 21. April 2022)
REFoPlan Lebensraum für Insekten in Agrarlandschaften Thema: „Rückzugsräume für die Biozönose in Agrarlandschaften: GIS- und fernerkundungsbasierte Erfassung und Bewertung potentieller Refugialflächen und Gewässerrandstreifen“	P - Partner	2022-2024	UBA	in preparation
SESSION - Surprising ES Opportunities from urban ecological infrastructures, (ANR DFG 2022 NLE)	PI – MLU (Prof. C. Fürsth) PI – (France) Prof. Dr. Paul Bois P P – (UFZ) (Banzhaf/Lausch)	2022-2024	DFG (France-Germany Cooperation) 623,029.5 € Budget	submitted
Geodiversity effects on biodiversity in response to climate change	PI	2023 - 2026	GIF-NEXUS (Israel-Germany Cooperation) 800.000 € Budget	submitted
CoreForestHealth, Comprehensive assessment of the climate mitigation of EuRopEan FORESTs HEALTH through development of robust, resilient and transparent methodologies for high- resolution monitoring,	Co-PI, Scientific lead / UFZ	Submission 14. September, 2021 2022 - 2024	EU - HORIZON- CL5-2021-D1-01, (Climate sciences and responses), 6 Mio. € Budget	1.060,255,00€/UFZ 2 x Phd 2 x PostDoc (rejected)
BrightFront, Breakthrough Technologies for Future construction	P - Partner	Submission 23. September, 2021 2022 - 2024	EU - HORIZON- CL4-2021-TWIN- TRANSITION-01) 10 Mio. € Budget	862.500,00€/UFZ 3 x Phd 1 x PostDoc (rejected)
ERA-PLANET, Essential Variables workflows for resource	P - Partner	2016 - 2022	H2020, ERA-NET	122.000,00 € 1 x Phd

efficiency and environmental management, Ga no 689443				
Quantifying land-use-intensity and hemeroby of landscapes by remote sensing	P - Partner	2018 - 2022	CSC Scholarship Program-china	145.000,00 € 1 x Phd
Spatio-temporal patterns of land use/cover changes and their ecological and environmental effects based on optical and SAR data: a case study of Eastern Europe	P - Partner	2018 - 2022	CSC Scholarship Program-china	145.000,00 € 1 x Phd
OECD – Fellowship: Quantifying land-use intensity with remote sensing – A new approach	PI	2015 - 2016	OECD	12.000,00 €
SaLMaR Nachhaltiges Land- und Wassermanagement in Talsperren Einzugsgebieten (Sustainable Land and Water Management of Reservoir Catchments)	P - Partner	2012 - 2015	BMBF, MniSW Bilaterales Projekt: Germany – Poland	110.000,00 € 1 x Phd
EnviMetal Vegetationsstress als Bio-Indikator von Bodenkontamination in Flussauen	P - Partner	2014 - 2016	BMWi	124.000,00 € 1 x Phd
DBU-Doktorandenstipendium Bildgebende Verfahren im Monitoring naturschutzrelevanter ökologischer Prozesse in Großschutzgebieten des Nationalen Naturerbes	P - Partner	2013 - 2016	DBU	141.400,00 € 1 x Phd
GREENVEINS. "Vulnerability of agro-ecosystems as influenced by 'green veining' and land-use intensity	Co-PI	2001 – 2004	EU FP5, partner (EVK2-CT-2000-00082)	552.430,00 € 3 x Phd
Methodik zur Erkundung der Biotop- und Landschaftsdiversität in der Braunkohletagebaufolgelandschaft mit Fernerkundungsmethoden	PI	1996 - 1999	Forschungsprojekt der DLR e.V. , FKZ 50 EE 95 12	250.000,00 € 1 x PostDoc
Sum (running and finalized projects, past 5 years)				2,722.155,00 Mio. €

Teaching activities

Year	SWS	Bsc./ Msc.	Topic	Institution
<i>Teaching assignment no longer required due to PD</i>				
2023/24	2	MSc	Data Science and Geoecology and Habitatmodelling	MLU Halle Math.-Nat. Fakultät III
2022/23	2	MSc	Data Mining and Remote Sensing	Anhalt University of Applied Sciences Institute for Geoinformation and Surveying, Dessau
2022/23	2	MSc	Land System Science 6 oder Digital Geography 6	MLU Halle Math.-Nat. Fakultät III
2022/23	2	MSc	Data Science and Geoecology	MLU Halle Math.-Nat. Fakultät III
2021/22	4	MSc	Landscape Ecology and Data Science	HU Berlin, Math.-Nat. Fakultät II
2020/21	4	MSc	Landscape Ecology and Data Science	HU Berlin, Math.-Nat. Fakultät II
2018/19	4	BSc	Functional landscape ecology using remote sensing and data science	HU Berlin, Math.-Nat. Fakultät II
2017/18	4	BSc	Landscape ecology	HU Berlin, Math.-Nat. Fakultät II
2016/17	4	BSc	Quantitative methods and models in landscape ecology with GIS and remote sensing	HU Berlin, Math.-Nat. Fakultät II
2015/16	4	BSc	Quantitative methods and models in landscape ecology with GIS and remote sensing	HU Berlin, Math.-Nat. Fakultät II
<i>Teaching assignment available</i>				
2014	2	BSc	Quantitative methods and models in landscape ecology with GIS and remote sensing	HU Berlin, Math.-Nat. Fakultät II
2014/15	2	BSc	Vegetation and habitat modelling with GIS and remote sensing	Universität Potsdam, Math.-Nat. Fakultät
2013/14	2	BSc	Landscape ecology	HU Berlin, Math.-Nat. Fakultät II
2013/14	2	BSc	Vegetation and habitat modelling with GIS and remote sensing	Universität Potsdam, Math.-Nat. Fakultät
2005/06	4	MSc	GIS in nature conservation	Fachhochschule Anhalt (FH), FB Landwirtschaft, Ökotropologie, Landespflege
2004/05	2	BSc	GIS and model-based landscape assessment	Universität Leipzig, Inst. für Geographie
2003/04	2	BSc	GIS and model-based landscape assessment	Universität Leipzig, Inst. für Geographie
2003/04	4	MSc	GIS in nature conservation	Fachhochschule Anhalt (FH), FB Landwirtschaft, Ökotropologie, Landespflege
2002/03	4	MSc	GIS in nature conservation	Fachhochschule Anhalt (FH), FB Landwirtschaft, Ökotropologie, Landespflege
<i>Individual courses without a teaching assignment</i>				

2013	90 min	BSc	Impact of land use and climate change on the pattern, configuration and composition of habitats and landscapes as well as species occurrence and dispersal" as part of the lecture course "Anthropogenic environmental impacts" by Prof. Dr. W. Kühling	MLU Halle
2012	90 min	BSc	Modeling the influence of structure, dynamics and scaling on species distribution" as part of the series of lectures "Anthropogenic environmental impacts" by Prof. Dr. W. Kühling	MLU Halle

Supervision - Bachelor, Diploma, Master, PhD students

1995ff Supervisor ~28 diploma & master, 3 bachelor, 12 doctoral theses
Reviewer and committee member: for ~15 doctoral theses

Phd Students

- 2023-2025 Florian Thürkow: Detektion von Feldhamster- und Feldmausbauen auf landwirtschaftlichen Nutzflächen mittels UAV (unmanned aerial vehicle)
- 2019-2022 Hannes Mollenhauer "An Earth Observation based standardisation approaches for long term ecological monitoring research" Humboldt Universität Berlin, UFZ-Doktorand
- 2019-2022 Uta Ködel "Combination of geophysical, gas-geochemical and remote sensing methods to characterize exchange processes between the compartments vadose zone, soil and lower atmosphere " Humboldt Universität Berlin, UFZ-Doktorandin
- 2019-2023 Sophie Prokoph "Quantifizierung der Landnutzungsintensität (LUI) mittels hyperspektraler sowie TIR Earth observation" Humboldt Universität Berlin, Doktorandin an der FH Anhalt – Dessau, Fachbereich 3 - Architektur, Facility Management und Geoinformation
- 2019-2022 Floris Hermanns "Monitoring and modelling of subsurface, vegetation and atmospheric interactions of heat, water and carbon fluxes with remote sensing" Humboldt Universität Berlin, UFZ-Doktorand
- 2019-2022 Thilo Wellmann "Urban ecological Earth Observation: New approaches for environmental planning integrating human well-being and nature protection." Humboldt Universität Berlin, DBU-Stipendium
- 2019-2022 Xie Chenghan: „Quantifying Land Use Intensity by Remote Sensing“ (Arbeitstitel), UFZ/Humboldt Universität Berlin
- 2022-2025 Mufeng Chen: Working title „ Influence of forest damage on the material balance in river catchments based on the HYPE model“ CSC Scholarship Program, 4 Years

(2022-2025) (1. supervisor Prof. Prof. Michael Rode Department Aquatic Ecosystem Analysis and Management (ASAM), 2 supervisor Angela Lausch), University Potsdam

(phd thesis completed)

- 2021 Tao Zhou: Spatio-temporal patterns of land use/cover changes and their ecological and environmental effects based on optical and SAR data: a case study of Eastern Europe UFZ/ Humboldt Universität Berlin, Stipendium by the CSC Scholarship Program, Nanjing Agricultural University
- 2019 Johannes Schmidt: Bildgebende Verfahren im Monitoring naturschutzrelevanter ökologischer Prozesse in Großschutzgebieten. (Arbeitstitel) PhD Stipendium bei der Deutschen Bundesstiftung Umwelt, StSP Forschung auf DBU Naturerbeflächen
- 2017 Anna Rickeit: Untersuchung von Prozess und Strukturdynamik in der Oranienbaumer Heide mit GIS und Fernerkundung, Fachhochschule Bernburg (aus gesundheitlichen Gründen abgebrochen)
- 2013 Rene Höfer: Remote sensing based derivation of urban structure types to assess hydro-meteorological impacts in highly dynamic urban agglomerations in Latin America. PhD thesis of the Albert-Ludwigs-University Freiburg, pp. 208
- 2011 Marion Pause: Soil moisture retrieval using high spatial resolution Polarimetric L-Band Multibeam Radiometer (PLMR) data at the field scale. PhD thesis in the Faculty for Geosciences at the Ludwig Maximilians University München. pp. 103

Suggestions for lectures/seminars/practical exercises

Bachelor's and Master's degree programmes (German or English)

- Data Science & Landscape Ecology/Geoecology
- Close-range, air- und space borne remote sensing, hyperspectral RS
- Landscape Ecology, Quantitative Landscape Ecology
- EcoSystem Integrity – Sensing/RS/Modeling and Monitoring
- Monitoring and Modeling of biodiversity, geodiversity, human health and their interactions
- Habitat-Modelling
- Data Mining- Modeling
- Modeling with databases
- Agent-based-, Process- and Simulations modeling
- Nature conservation, environmental toxicology, environmental planning