

Bodo Bookhagen

Curriculum Vitae

Educational Background

- 2005 **Dr. rer. nat. Geoscience**, *Institute of Geoscience, University of Potsdam, Germany.*
- 2000 **Diplom Geowissenschaften**, *Institute of Geoscience, University of Potsdam, Germany.*
- 1998 **Vordiplom Geophysik und Informatik**, *University of Potsdam, Germany.*

Employment History

- 2017-2018 **Varahamihira Ministry of Science Chari Professor**, *Indian Technology Institute (IIT) Gandhinagar, Visiting Professor.*
- 2014-2020 **Chair of Geological Remote Sensing (W3)**, *Institute for Earth- and Environmental Science (now: Institute of Geosciences), University of Potsdam.*
- 2014-2020 **Affiliated Assoc. Professor**, *Geography Dept., UC Santa Barbara.*
- 2011-2014 **Assoc. Professor (tenured)**, *Geography Dept., UC Santa Barbara.*
- 2008-2014 **Affiliated Faculty**, *Dept. of Earth Sciences, UC Santa Barbara.*
- 2008-2011 **Asst. Professor**, *Geography Dept., UC Santa Barbara.*
- 2006-2007 **Postdoctoral researcher**, *GES, Stanford University.*
- 2005-2006 **Assistant Researcher**, *Institute for Crustal Studies, UC Santa Barbara.*
- 2002-2004 **Research Assistant**, *University of California, Berkeley.*
- 2001-2002 **DAAD Stipend**, *University of California, Berkeley.*
- 2001-2005 **DFG PhD student**, *University of Potsdam.*
- 1996-2001 **Computer coder at a private computer company**, *Berlin, Germany.*

Theses

PhD Thesis

TITLE Late Quaternary Climate Changes in the NW Himalaya
ADVISOR Professor Manfred R. Strecker
FUNDING AGENCY DFG

Research Interests

- Remote Sensing**
- Passive Microwaves: rainfall, snow-water equivalent and soil moisture
 - SAR coherence and interferometry
 - Pointclouds, lidar, and Structure-from-Motion
- Digital Data Processing**
- Pointcloud classification and machine learning
 - Image processing, filtering, and classification
 - Clustering of time series and geographic data
 - Identification of hydroclimatic and geomorphic extreme events in space and time
- Earth Surface Processes**
- Sediment Transport: Field- and spaceborne measurements
 - Cosmogenic Nuclides: surface exposure dating, erosion-rate measurements
 - Decadal to Centennial surface deformation

Professional Affiliations

AGU (2000-2020), EGU (2000-2020), AGG (2007-2016), DGV (2005-2020)

Honors

- 2005 **DFG Bernd Rendel-Preis.**
2004 **Publikationspreis Leibnizkolleg Potsdam.**

Grants and Funding

- 2017–2021 **DFG**, *Erstellen einer jährlichen und langzeitigen Zeitreihe von Bergstürzen und Hangerosion in den NW Argentinischen Anden*, 358k €, BO 2933/31.
- 2015–2021 **DFG**, *Surface Processes, Tectonics and Georesources*, 250k €, IRTG IGK2018.
(2 subprojects in the DFG Graduate School)
- 2019–2020 **BMBF**, *LIDAR - Landslides, satellites, and drones in Argentina*, 50k €, 01DN18046 CLIENT II.
2019 **EFRE Infrastruktur**, *Computer Cluster*, 80k €.
2019 **EFRE Infrastruktur**, *Drohne2019: Fixed-Wing UAV*, 190k €.
- 2019–2020 **BMBF**, *ORYCS: Options for sustainable land use adaptations in savanna systems*, 120k €.
(subproject)
- 2018–2021 **BMBF**, *DIGENTI - Digitaler Entscheidertisch für das Naturgefahrenmanagement auf Basis von Satellitendaten und VGI (Volunteered Geographic Information)*, 150k €, 50RP1502.
- 2015–2019 **NSF**, *Bedrock nitrogen and the Earth system: From geobiological mechanisms to climate change forecasts*, \$406k, 1411309.
- 2011–2016 **NSF**, *The Pamir Frontal Thrust System: Rates, Style, and Controls on Deformation*, \$275k, 1050070.
- 2010–2015 **NSF**, *Climate Variability and Impacts on Regional Surface Runoff in High Asia Mountains*, \$563k, 1116105.
- 2010–2013 **NASA**, *Volumetric Glacial Changes in the Central Andes During the Past Four Decades: Climate Change, Debris Coverage, or ENSO Variability?*, \$90k, NNX11AL4GH.
- 2009–2012 **NASA**, *ASTER-Derived River Widths and Their Spatial Implications for Erosion in the Tectonically Active Himalaya*, \$90k, NNX09ACxxx.
- 2009–2012 **NASA**, *Quantification of Climate-Erosion Coupling in the Himalaya*, \$253k, NNX08AG05G.
- 2010–2015 **NSF**, *Orogeny, Orography, and unsteady erosion: evolution of the Himalaya*, \$280k, 0819874.

2010–2011 **NSF**, *RAPID: Fires in coastal California: Watershed and ecological responses to an acute environmental disturbance*, \$150k, 0952599.




Service

At the University of Potsdam, BB designed and currently runs an international MSc program [Remote Sensing, geoinformation, and Visualization]. This MSc is an interdisciplinary program bridging the disciplines of geography, geosciences, and computer sciences. BB serves as the head of the examination board of the BSc/MSc Geowissenschaften, MSc Remote Sensing, geoinformation and Visualization, MSc Geoinformation und Visualisierung, and the BSc International Field Geosciences [link]. BB serves as the head of the Study Commission of the [MSc Remote Sensing, geoinformation, and Visualization]. BB maintains a geochemical laboratory for surface-exposure dating and makes this facility available to the national and international community. He previously designed and build up similar chemical laboratories at Stanford University and UC Santa Barbara.

Review

Peer reviews for funding agencies (NSF, NASA, DFG, SNF) and peer reviews for journals (Science, nature communication, nature geoscience, nature climate change, Science Advances, Journal of Geophysical Research, Earth and Planetary Science Letters, Geomorphology, Earth Surface Processes and Landforms, and other journals).

Publications

133 peer reviewed journal articles, h factor 59, 11831 citations (Google Scholar). Additional citation information and metrics are available on [ Google Scholar], [ ORCID], and [ Publons or Researcher-ID]. All DOIs below are clickable and contain the corresponding link.

Edited Books

Himalayan Weather and Climate and their Impact on the Environment, Editors: Dimri, A.P., Bookhagen, B., Stoffel, M., Yasunari, T., Springer, ISBN 978-3-030-29683-4, [book link]

Peer Reviewed Book Chapters

- 2019 T.T. Smith and B. Bookhagen. "Remotely sensed rain and snowfall in the Himalaya". In: *Himalayan Weather and Climate and their impact on the environment*. Ed. by A. P. Dimri, B. Bookhagen, M. Stoffel, and T. Yasunari. Springer Climate. Springer, pp. 225–249. ISBN: 978-3-319-21650-8. DOI: 10.1007/978-3-319-21650-8_11.
- 2017 Bodo Bookhagen. "The Influence of Hydrology and Glaciology on Wetlands in the Himalayas". In: *Bird Migration across the Himalayas: Wetland Functioning Amidst Mountains and Glaciers*. Ed. by HHT Prins and T Namgail, pp. 175–188. ISBN: 978-1-107-11471-5. DOI: 10.1017/9781316335420.014.
- 2016 B. Bookhagen and M.R. Strecker. "Modern Andean rainfall variation during ENSO cycles and its impact on the Amazon Basin". In: *Amazonia: Landscape and Species Evolution: A look into the past*. Ed. by C. Hoorn, H. Vonhof, and F. Wesselingh. Blackwell Publishing, Oxford, pp. 63–174. ISBN: 9781405181136. DOI: 10.1002/9781444306408.ch14.
- Bodo Bookhagen. "Glaciers and Monsoon Systems". In: *Monsoons and Climate Change: Observations and Modeling*. Ed. by L. Carvalho and C. Jones. Springer, pp. 63–174. DOI: 10.1007/978-3-319-17220-0_15.
- 2015 N. Boers, A. Rheinwalt, B. Bookhagen, N. Marwan, and J. Kurths. "A Complex Network Approach to Investigate the Spatiotemporal Co-variability of Extreme Rainfall". In: *Machine Learning and Data Mining Approaches to Climate Science*. Ed. by Lakshmanan V., Gilleland E., McGovern A., and Tingley M. Springer, pp. 119–139. DOI: doi.org/10.1007/978-3-319-17220-0_15.

- 2012 M.R. Strecker, G.E. Hilley, B. Bookhagen, and E.R. Sobel. "Structural, geomorphic and depositional characteristics of contiguous and broken foreland basins: examples from the eastern flanks of the central Andes in Bolivia and NW Argentina". In: *Recent Advances in Tectonics of Sedimentary Basins*. Ed. by C. Busby and A. Azor. Blackwell Publishing, Oxford. ISBN: 9781405194655. DOI: 10.1002/9781444347166.ch25.
- 2006 R.N. Alonso, B. Bookhagen, B. Carrapa, I. Coutand, M. Haschke, G.E. Hilley, Schoenbohm, E. R. L. Sobel, M.R. Strecker, M.H. Trauth, and A. Villanueva. "Tectonics, Climate, and Landscape Evolution of the Southern Central Andes: The Argentine Puna Plateau and adjacent Regions between 22 and 30° S". In: *The Andes*. Ed. by O. Oncken, M. Strecker, G. Franz, and V. Ramos. Springer, pp. 265–283. ISBN: 978-3-540-48684-8. DOI: 10.1007/978-3-540-48684-8_12.

Peer Reviewed Journal Articles

- 2021 [136] S. Olivotos, S. Niedermann, T. Flügel, V. Mouslopoulou, S. Merchel, F. Cotterill, **Bodo Bookhagen**, A. Gärtner, G. Georg Rugel, A. Scharf, M.-J. Nadeau, R. Braucher, and M. Seiler. "Quaternary landscape evolution in a tectonically active rift basin (paleo-lake Mweru, south-central Africa)". In: *Geomorphology*. DOI: 10.1016/j.geomorph.2021.107669.
- [135] Taylor T. Smith and **Bodo Bookhagen**. "Climatic and Biotic Controls on Topographic Asymmetry at the Global Scale". In: *Journal of Geophysical Research-Earth Surface* 126.1. DOI: 10.1029/2020JF005692.
- [136] K. Stuebner, **Bodo Bookhagen**, M. Gadoev, Merchel, and J. S. Lachner. "Unravelling the Pleistocene glacial history of the Pamir Mountains, Central Asia". In: *Quaternary Science Reviews*. DOI: 10.1016/j.quascirev.2021.106857.
- 2020 [134] Fabiana Castino, **Bodo Bookhagen**, and A. de la Torre. "Atmospheric dynamics of extreme discharge events from 1979 to 2016 in the southern Central Andes". In: *Climate Dynamics* 55.11, pp. 3485–3505. ISSN: 1432-0894. DOI: 10.1007/s00382-020-05458-1.
- [133] Robert Milewski, Sabine Chabrillat, and **Bodo Bookhagen**. "Analyses of Namibian Seasonal Salt Pan Crust Dynamics and Climatic Drivers Using Landsat 8 Time-Series and Ground Data". In: *Remote Sensing* 12.3. DOI: 10.3390/rs12030474.
- [132] Stephanie Olen and **Bodo Bookhagen**. "Applications of SAR Interferometric Coherence Time Series: Spatiotemporal Dynamics of Geomorphic Transitions in the South-Central Andes". In: *Journal of Geophysical Research: Earth Surface* 125.3. e2019JF005141, e2019JF005141. DOI: 10.1029/2019JF005141.
- [131] Benjamin Purinton and **Bodo Bookhagen**. "Multiband (X, C, L) radar amplitude analysis for a mixed sand- and gravel-bed river in the eastern Central Andes". In: *Remote Sensing of Environment* 246, p. 111799. ISSN: 0034-4257. DOI: 10.1016/j.rse.2020.111799.
- [130] Taylor T. Smith and **Bodo Bookhagen**. "Assessing Multi-Temporal Snow-Volume Trends in High Mountain Asia From 1987 to 2016 Using High-Resolution Passive Microwave Data". In: *Frontiers in Earth Science* 8, p. 392. ISSN: 2296-6463. DOI: 10.3389/feart.2020.559175.
- [129] Iris van der Veen, Francien Peterse, Jesse Davenport, Bernd Meese, **Bodo Bookhagen**, Christian France-Lanord, Ansgar Kahmen, Hima J. HassenruckGudipati, Ananta Gajurel, Manfred R. Strecker, and Dirk Sachse. "Validation and calibration of soil 2H and brGDGTs along (E-W) and strike (N-S) of the Himalayan climatic gradient". In: *Geochimica et Cosmochimica Acta* 290, pp. 408–423. ISSN: 0016-7037. DOI: 10.1016/j.gca.2020.09.014.
- [128] Katalyn A. Voss, **Bodo Bookhagen**, Dirk Sachse, and Oliver A. Chadwick. "Variation of deuterium excess in surface waters across a 5000-m elevation gradient in eastern Nepal". In: *Journal of Hydrology* 586, p. 124802. ISSN: 0022-1694. DOI: 10.1016/j.jhydro.2020.124802.
- 2019 [127] Niklas Boers, Bedartha Goswami, Aljoscha Rheinwalt, **Bodo Bookhagen**, Brian Hoskins, and Juergen Kurths. "Complex networks reveal global pattern of extreme-rainfall teleconnections". In: *nature* 566.7744, pp. 373+. ISSN: 0028-0836. DOI: 10.1038/s41586-018-0872-x.

- [126] Maximilian Brell, Karl Segl, Luis Guanter, and **Bodo Bookhagen**. “3D hyperspectral point cloud generation: Fusing airborne laser scanning and hyperspectral imaging sensors for improved object-based information extraction”. In: *ISPRS Journal of Photogrammetry and Remote Sensing* 149, pp. 200–214. ISSN: 0924-2716. DOI: 10.1016/j.isprsjprs.2019.01.022.
- [125] Frederic Brieger, Ulrike Herzs Schuh, Luidmila A. Pestryakova, **Bodo Bookhagen**, Evgenii S. Zakharov, and Stefan Kruse. “Advances in the Derivation of Northeast Siberian Forest Metrics Using High-Resolution UAV-Based Photogrammetric Point Clouds”. In: *Remote Sensing* 11.12. ISSN: 2072-4292. DOI: 10.3390/rs11121447.
- [124] Fiona J. Clubb, **Bodo Bookhagen**, and Aljoscha Rheinwält. “Clustering River Profiles to Classify Geomorphic Domains”. In: *Journal of Geophysical Research-Earth Surface* 124.6, pp. 1417–1439. ISSN: 2169-9003. DOI: 10.1029/2019JF005025.
- [123] David Loibl, **Bodo Bookhagen**, Sebastien Valade, and Christoph Schneider. “OSARIS, the “Open Source SAR Investigation System” for Automatized Parallel InSAR Processing of Sentinel-1 Time Series Data With Special Emphasis on Cryosphere Applications”. In: *Frontiers in Earth Science* 7. ISSN: 2296-6463. DOI: 10.3389/feart.2019.00172.
- [122] Silke Merchel, Andreas Gaertner, Sabrina Beutner, **Bodo Bookhagen**, and Amelie Chabilan. “Attempts to understand potential deficiencies in chemical procedures for AMS: Cleaning and dissolving quartz for Be-10 and Al-26 analysis”. In: *Nuclear Instruments & Methods in Physics Research Section B-beam Interactions with Materials and Atoms* 455, pp. 293–299. ISSN: 0168-583X. DOI: 10.1016/j.nimb.2019.02.007.
- [121] Benjamin Purinton and **Bodo Bookhagen**. “Introducing PebbleCounts: a grain-sizing tool for photo surveys of dynamic gravel-bed rivers”. In: *Earth Surface Dynamics* 7.3, pp. 859–877. ISSN: 2196-6311. DOI: 10.5194/esurf-7-859-2019.
- [120] Aljoscha Rheinwält, Bedartha Goswami, and **Bodo Bookhagen**. “A Network-Based Flow Accumulation Algorithm for Point Clouds: Facet-Flow Networks (FFNs)”. In: *Journal of Geophysical Research-Earth Surface* 124.7, pp. 2013–2033. ISSN: 2169-9003. DOI: 10.1029/2018JF004827.
- [119] Taylor T. Smith, Aljoscha Rheinwält, and **Bodo Bookhagen**. “Determining the optimal grid resolution for topographic analysis on an airborne lidar dataset”. In: *Earth Surface Dynamics* 7.2, pp. 475–489. ISSN: 2196-6311. DOI: 10.5194/esurf-7-475-2019.
- [118] Kanayim Teshebaeva, Helmut Echtler, **Bodo Bookhagen**, and Manfred Strecker. “Deep-seated gravitational slope deformation (DSGSD) and slow-moving landslides in the southern Tien Shan Mountains: new insights from InSAR, tectonic and geomorphic analysis”. In: *Earth Surface Processes and Landforms* 44.12, pp. 2333–2348. ISSN: 0197-9337. DOI: 10.1002/esp.4648.
- [117] Syee Weldeab, Carsten Ruehlemann, **Bodo Bookhagen**, Francesco S. R. Pausata, and Fabiola M. Perez-Lua. “Enhanced Himalayan Glacial Melting During YD and H1 Recorded in the Northern Bay of Bengal”. In: *Geochemistry Geophysics Geosystems* 20.5, pp. 2449–2461. ISSN: 1525-2027. DOI: 10.1029/2018GC008065.
- [116] Maryam Ramezani Ziarani, **Bodo Bookhagen**, Torsten Schmidt, Jens Wickert, Aleidro de la Torre, and Rodrigo Hierro. “Using Convective Available Potential Energy (CAPE) and Dew-Point Temperature to Characterize Rainfall-Extreme Events in the South-Central Andes”. In: *Atmosphere* 10.7. DOI: 10.3390/atmos10070379.
- 2018 [115] Djordje Grujic, Gwladys Govin, Laurie Barrier, **Bodo Bookhagen**, Isabelle Coutand, Beth Cowan, Michael T. Hren, and Yani Najman. “Formation of a Rain Shadow: O and H Stable Isotope Records in Authigenic Clays From the Siwalik Group in Eastern Bhutan”. In: *Geochemistry Geophysics Geosystems* 19.9, pp. 3430–3447. DOI: 10.1029/2017GC007254.
- [114] Jessica Ann Thompson Jobe, Tao Li, **Bodo Bookhagen**, Jie Chen, and Douglas Burbank. “Dating growth strata and basin fill by combining Al-26/Be-10 burial dating and magnetostratigraphy: Constraining active deformation in the Pamir-Tian Shan convergence zone, NW China”. In: *Lithosphere* 10.6, pp. 806–828. ISSN: 1941-8264. DOI: 10.1130/L727.1.

- [113] Lisa V. Luna, **Bodo Bookhagen**, Samuel Niedermann, Georg Rugel, Andreas Scharf, and Silke Merchel. "Glacial chronology and production rate cross-calibration of five cosmogenic nuclide and mineral systems from the southern Central Andean Plateau". In: *Earth and Planetary Science Letters* 500, pp. 242–253. ISSN: 0012-821X. DOI: 10.1016/j.epsl.2018.07.034.
- [112] Bernd Meese, **Bodo Bookhagen**, Stephanie M. Olen, Frauke Barthold, and Dirk Sachse. "The effect of Indian Summer Monsoon rainfall on surface water delta D values in the central Himalaya". In: *Hydrological Processes* 32.24, pp. 3662–3674. ISSN: 0885-6087. DOI: 10.1002/hyp.13281.
- [111] Markus Nennewitz, Rasmus C. Thiede, and **Bodo Bookhagen**. "Fault activity, tectonic segmentation, and deformation pattern of the western Himalaya on Ma timescales inferred from landscape morphology". In: *Lithosphere* 10.5, pp. 632–640. ISSN: 1941-8264. DOI: 10.1130/L681.1.
- [110] Stephanie Olen and **Bodo Bookhagen**. "Mapping Damage-Affected Areas after Natural Hazard Events Using Sentinel-1 Coherence Time Series". In: *Remote Sensing* 10.8. ISSN: 2072-4292. DOI: 10.3390/rs10081272.
- [109] Orkan Ozcan, **Bodo Bookhagen**, and Nebiye Musaoglu. "Impact of the Ataturk Dam Lake on Agro-Meteorological Aspects of the Southeastern Anatolia Region, Turkey". In: *Journal of the Indian Society of Remote Sensing* 46.3, pp. 471–481. ISSN: 0255-660X. DOI: 10.1007/s12524-017-0703-9.
- [108] Benjamin Purinton and **Bodo Bookhagen**. "Measuring decadal vertical land-level changes from SRTM-C (2000) and TanDEM-X (similar to 2015) in the south-central Andes". In: *Earth Surface Dynamics* 6.4, pp. 971–987. ISSN: 2196-6311. DOI: 10.5194/esurf-6-971-2018.
- [107] Taylor T. Smith and **Bodo Bookhagen**. "Changes in seasonal snow water equivalent distribution in High Mountain Asia (1987 to 2009)". In: *Science Advances* 4.1. ISSN: 2375-2548. DOI: 10.1126/sciadv.1701550.
- [106] Jessica A. Thompson, Jie Chen, Huili Yang, Tao Li, **Bodo Bookhagen**, and Douglas Burbank. "Coarse- versus fine-grain quartz OSL and cosmogenic Be-10 dating of deformed fluvial terraces on the northeast Pamir margin, northwest China". In: *Quaternary Geochronology* 46, pp. 1–15. ISSN: 1871-1014. DOI: 10.1016/j.quageo.2018.01.002.
- 2017 [105] Maximilian Brell, Karl Segl, Luis Guanter, and **Bodo Bookhagen**. "Hyperspectral and Lidar Intensity Data Fusion: A Framework for the Rigorous Correction of Illumination, Anisotropic Effects, and Cross Calibration". In: *IEEE Transactions on Geoscience and Remote Sensing* 55.5, pp. 2799–2810. ISSN: 0196-2892. DOI: 10.1109/TGRS.2017.2654516.
- [104] Aaron Bufe, David P. S. Bekaert, Ekbal Hussain, **Bodo Bookhagen**, Douglas W. Burbank, Jessica A. Thompson Jobe, Jie Chen, Tao Li, Langtao Liu, and Weijun Gan. "Temporal changes in rock uplift rates of folds in the foreland of the Tian Shan and the Pamir from geodetic and geologic data". In: *Geophysical Research Letters* 44.21, pp. 10977–10987. ISSN: 0094-8276. DOI: 10.1002/2017GL073627.
- [103] Aaron Bufe, Douglas W. Burbank, Langtao Liu, **Bodo Bookhagen**, Jintang Qin, Jie Chen, Tao Li, Jessica A. Thompson Jobe, and Huili Yang. "Variations of Lateral Bedrock Erosion Rates Control Planation of Uplifting Folds in the Foreland of the Tian Shan, NW China". In: *Journal of Geophysical Research-Earth Surface* 122.12, pp. 2431–2467. ISSN: 2169-9003. DOI: 10.1002/2016JF004099.
- [102] Forest Cannon, Leila M. V. Carvalho, Charles Jones, Jesse Norris, **Bodo Bookhagen**, and George N. Kiladis. "Effects of topographic smoothing on the simulation of winter precipitation in High Mountain Asia". In: *Journal of Geophysical Research-atmospheres* 122.3, pp. 1456–1474. ISSN: 2169-897X. DOI: 10.1002/2016JD026038.
- [101] Fabiana Castino, **Bodo Bookhagen**, and M. R. Strecker. "Rainfall variability and trends of the past six decades (1950-2014) in the subtropical NW Argentine Andes". In: *Climate Dynamics* 48.3-4, pp. 1049–1067. ISSN: 0930-7575. DOI: 10.1007/s00382-016-3127-2.

- [100] Fabiana Castino, **Bodo Bookhagen**, and Manfred R. Strecker. "Oscillations and trends of river discharge in the southern Central Andes and linkages with climate variability". In: *Journal of Hydrology* 555, pp. 108–124. ISSN: 0022-1694. DOI: 10.1016/j.jhydro.2017.10.001.
- [99] Matthias Huss, **Bodo Bookhagen**, C. Huggel, D. Jacobsen, R. S. Bradley, J. J. Clague, M. Vuille, W. Buytaert, D. R. Cayan, G. Greenwood, B. G. Mark, A. M. Milner, R. Weingartner, and M. Winder. "Toward mountains without permanent snow and ice". In: *Earths Future* 5.5, pp. 418–435. ISSN: 2328-4277. DOI: 10.1002/2016EF000514.
- [98] Julia Neelmeijer, Mandi Motagh, and **Bodo Bookhagen**. "High-resolution digital elevation models from single-pass TanDEM-X interferometry over mountainous regions: A case study of Inylchek Glacier, Central Asia". In: *ISPRS Journal of Photogrammetry and Remote Sensing* 130, pp. 108–121. ISSN: 0924-2716. DOI: 10.1016/j.isprsjprs.2017.05.011.
- [97] A. B. Neely, **Bodo Bookhagen**, and D. W. Burbank. "An automated knickzone selection algorithm (KZ-Picker) to analyze transient landscapes: Calibration and validation". In: *Journal of Geophysical Research-Earth Surface* 122.6, pp. 1236–1261. ISSN: 2169-9003. DOI: 10.1002/2017JF004250.
- [96] Jesse Norris, Leila M. V. Carvalho, Charles Jones, Forest Cannon, **Bodo Bookhagen**, Elisa Palazzi, and Adnan Ahmad Tahir. "The spatiotemporal variability of precipitation over the Himalaya: evaluation of one-year WRF model simulation". In: *Climate Dynamics* 49.5-6, pp. 2179–2204. ISSN: 0930-7575. DOI: 10.1007/s00382-016-3414-y.
- [95] Benjamin Purinton and **Bodo Bookhagen**. "Validation of digital elevation models (DEMs) and comparison of geomorphic metrics on the southern Central Andean Plateau". In: *Earth Surface Dynamics* 5.2, pp. 211–237. ISSN: 2196-6311. DOI: 10.5194/esurf-5-211-2017.
- [94] Taylor T. Smith, **Bodo Bookhagen**, and Aljoscha Rheinwalt. "Spatiotemporal patterns of High Mountain Asia's snowmelt season identified with an automated snowmelt detection algorithm, 1987-2016". In: *Cryosphere* 11.5, pp. 2329–2343. ISSN: 1994-0416. DOI: 10.5194/tc-11-2329-2017.
- [93] Stefanie Tofelde, Taylor F. Schildgen, Sara Savi, Heiko Pingel, Andrew D. Wickert, **Bodo Bookhagen**, Hella Wittmann, Ricardo N. Alonso, John Cottle, and Manfred R. Strecker. "100 kyr fluvial cut-and-fill terrace cycles since the Middle Pleistocene in the southern Central Andes, NW Argentina". In: *Earth and Planetary Science Letters* 473, pp. 141–153. ISSN: 0012-821X. DOI: 10.1016/j.epsl.2017.06.001.
- 2016 [92] Niklas Boers, **Bodo Bookhagen**, Norbert Marwan, and Juergen Kurths. "Spatiotemporal characteristics and synchronization of extreme rainfall in South America with focus on the Andes Mountain range". In: *Climate Dynamics* 46.1-2, pp. 601–617. ISSN: 0930-7575. DOI: 10.1007/s00382-015-2601-6.
- [91] Maximilian Brell, Christian Rogass, Karl Segl, **Bodo Bookhagen**, and Luis Guanter. "Improving Sensor Fusion: A Parametric Method for the Geometric Coalignment of Airborne Hyperspectral and Lidar Data". In: *IEEE Transactions on Geoscience and Remote Sensing* 54.6, pp. 3460–3474. ISSN: 0196-2892. DOI: 10.1109/TGRS.2016.2518930.
- [90] Fabiana Castino, **Bodo Bookhagen**, and M. R. Strecker. "River-discharge dynamics in the Southern Central Andes and the 1976-77 global climate shift". In: *Geophysical Research Letters* 43.22, pp. 11679–11687. ISSN: 0094-8276. DOI: 10.1002/2016GL070868.
- [89] Saptarshi Dey, Rasmus C. Thiede, Taylor F. Schildgen, Hella Wittmann, **Bodo Bookhagen**, Dirk Scherler, Vikrant Jain, and Manfred R. Strecker. "Climate-driven sediment aggradation and incision since the late Pleistocene in the NW Himalaya, India". In: *Earth and Planetary Science Letters* 449, pp. 321–331. ISSN: 0012-821X. DOI: 10.1016/j.epsl.2016.05.050.

- [88] Saptarshi Dey, Rasmus C. Thiede, Taylor F. Schildgen, Hella Wittmann, **Bodo Bookhagen**, Dirk Scherler, and Manfred R. Strecker. “Holocene internal shortening within the northwest Sub-Himalaya: Out-of-sequence faulting of the Jwalamukhi Thrust, India”. In: *Tectonics* 35.11, pp. 2677–2697. ISSN: 0278-7407. DOI: 10.1002/2015TC004002.
- [87] Adam M. Forte, Kelin X. Whipple, **Bodo Bookhagen**, and Matthew W. Rossi. “Decoupling of modern shortening rates, climate, and topography in the Caucasus”. In: *Earth and Planetary Science Letters* 449, pp. 282–294. ISSN: 0012-821X. DOI: 10.1016/j.epsl.2016.06.013.
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- 2003 [6] A.G.N Bergner, M.H Trauth, and B Bookhagen. "Paleoprecipitation estimates for the Lake Naivasha basin (Kenya) during the last 175 k.y. using a lake-balance model". In: *Global and Planetary Change* 36.1, pp. 117–136. ISSN: 0921-8181. DOI: 10.1016/S0921-8181(02)00178-9.
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- [4] Martin H. Trauth, **Bodo Bookhagen**, Andrea B. Müller, and Manfred R. Strecker. "Late Pleistocene Climate Change and Erosion in the Santa Maria Basin, NW Argentina". In: *Journal of Sedimentary Research* 73.1, pp. 82–90. ISSN: 1527-1404. DOI: 10.1306/061702730082.
- 2001 [3] **Bodo Bookhagen**, Kirk Haselton, and Martin H Trauth. "Hydrological modelling of a Pleistocene landslide-dammed lake in the Santa Maria Basin, NW Argentina". In: *Palaeogeography, Palaeoclimatology, Palaeoecology* 169.1, pp. 113–127. ISSN: 0031-0182. DOI: 10.1016/S0031-0182(01)00221-8.

Theses advising (only theses as main advisor are listed)

- 2021 27. Anna Rosner: *Dating glacial moraines on the volcanic Complex Quevar in NW Argentina using the cosmogenic nuclides ^{26}Al , ^{10}Be , and ^{21}Ne*
- 2020 26. Ifeyani Okaro: *The Sixth Sense of White Storks - Towards an E2E Service for Locust Threat Alarms*
25. Philipp Jordan: *Applications of pointcloud and full-waveform Lidar data for object detection*
24. Franziska Moulíji: *Eine Zeitreihenanalyse der Vegetationsänderung in den Anden von 1998 bis 2014*
23. Ariane Müting: *Generating high-resolution DEMs from tri-stereo satellite imagery: A geomorphologic case study in the Quebrada del Toro, NW Argentina*
22. Felix Keßler: *Near-real time detection of lake ice using Sentinel-1 data*
21. Sascha Rabinowitsch: *Die Ermittlung von Genauigkeiten und Anwendungsszenarios für fernerkundlich erhobene Punktwolken am Beispiel des Campus Golm*
20. Kristian Kragiel: *Terrestrial lidar scanning and point cloud classification of the Neues Palais, University of Potsdam*
- 2019 19. Elena Lefler: *Klassifikation der Seen auf dem Hochland von Tibet mittels Google Earth Engine*
18. Mohammad Zarch: *Ground Deformation Monitoring in Mining Areas on the Central Andean Plateau (Puna, Argentina) Using Sentinel-1 Data*

17. Nicole Mätzing: *Untersuchungen der organischen Kohlenstoffspezies im Grundwasser des Wasserwerks Potsdam-Rehbrücke in Bezug zu den geologischen, technischen und klimatischen Rahmenbedingungen*
16. Steffen Wellegehausen: *Quality assessment of structure from motion point clouds from river pebbles*
15. Maximilian Semler: *Kartierung von Bergstürzen und Massenbewegungen in den Nordwestargentinischen Anden mit SAR Kohärenzmessungen*
- 2017 14. Nicolas Werner: *Spatiotemporal patterns and driving factors of lake size variability since 1985, Central Andean Plateau, South America*
13. Björn Broschag: *Precision and Accuracy Assessment of glacier elevation changes from TanDEM-X data for the Batura glacier, Karakoram Himalaya*
12. Konstantin Etling: *From weather to climate: constraints for ecological models in Southern Africa*
11. Fabian Maschler: *Locality-based Clustering of Large Complex Networks for Climate Studies*
10. Erik Hoffmann: *Migrationsanalyse des Untergrundes mittels zweidimensionaler Kreuzkorrelation der Catamarca-Provinz in NW Argentinien, basierend auf zeitlich varianten Daten differenter Fernerkundungssysteme*
09. Markus Nennwitz: *Along strike variation of active fault arrays and their effect on landscape morphology in the northwestern Himalaya, MSc thesis published in Lithosphere*
- 2016 08. Lisa Luna: *A glacial chronology and cosmogenic nuclide cross-calibration from the central southern Andean Plateau (Puna, 24S), MSc thesis published in Earth and Planetary Science Letters*
07. Benjamin Purinton: *Validation of Digital Elevation Models (DEMs) & Derived Geomorphic Metrics on the Southern Central Andean Plateau, MSc thesis published in Earth Surface Dynamics*
06. René Böhm: *Untersuchungen der Flussbreite mittels hochauflösender Satelliten- und Luftbilder und Implikationen für die Geologie und Tektonik der NW Argentinischen Anden (Salta Provinz)*
05. Heidi Stage: *Kartierung der Gletscherflächen, Schneelinien und Permafrostgebiete in den Zentralanden über die letzten 30 Jahre mittels fernerkundlicher Methoden*
- 2015 04. Alexander Neely: *The Hillslope Signature of Knickpoints Resulting from Stream Capture, Coastal Processes, and Resistant Bedrock on Santa Cruz Island, CA: Insights from and Automated Knickpoint-Selection Algorithm, MSc thesis published in JGR-Earth Surface*
03. John Potapenko: *High-Resolution LiDAR Pointcloud Data Processing, Computation, and Visualization with Application to Erosion Analysis of the California Channel Islands*
- 2014 02. Taylor Smith: *Glacial Response to Climate Change in the Tien Shan Mountain Range of Central Asia, MSc thesis published in The Cryosphere*
- 2013 01. Maiana Hanshaw: *Glacial Areas, Lakes Areas, and Snowlines from 1975-2012: Status of the Cordillera Vilcanota, Including the Quelccaya Ice Cap, Northern Central Andes, Peru, MSc thesis published in The Cryosphere*

Organization of Workshops and Teaching Events

Only Workshops with BB as main organizer are listed.

2020 ● **Quantitative Geomorphology**, Feb 17-22, IIT Gandhinagar, India.
[github]

2019 ● **From point clouds and full-waveform data to DEM analysis**, Sep 30 - Oct 4, [github], University of Potsdam.

2018

Remote Sensing of Earth Surface Processes, *June 3-10*, founded by VW, Germany.
[link]

2017

PointCloudWorkshop, *June 7-10*, University of Potsdam, [github].

Invited Talks

More than 50 internationally invited talks.