

# Curriculum vitae



## Dr. rer. nat. Michael Dietze

Post Doctoral Researcher  
Section 4.6 Geomorphology  
GFZ German Research Centre for Geosciences

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Born 16.11.1979, Annaberg, Germany  
Married, two children (2010, 2014)

## APPOINTMENTS AND TRAINING

Since 2021	<b>University of Bonn</b> Interim professorship on Hydrology
2016	<b>Royal Netherlands Institute for Sea Research, Texel</b> Visiting scientist (6 months)
2013–2020	<b>GFZ German Research Centre for Geosciences, Potsdam</b> Post Doc/Senior researcher Project Manager Horizon 2020 MSC ITN SUBITOP
2008	<b>CICESE, Ensenada, Mexico</b> Research stay (3 months)
2006–2013	<b>Technische Universität Dresden</b> Teaching and Post Doc (landscape evolution modelling) PhD thesis (Dietze, M. 2012. Stone pavements and soil development due to arid landscape dynamics) Study of relevant parts of B.Sc. Physics
2000–2006	<b>Technische Universität Dresden</b> Study of Geography (minors: Appl. geology, Soil science), Diploma thesis (2006), Sehr gut
1996–1999	<b>Abitur</b> Berufliches Schulzentrum Annaberg-Buchholz
1986–1996	<b>Grund/Realschule</b> B. Uthmann Annaberg-Buchholz

## AWARDS & HIGH- LIGHTS

2019	Shortlist & interview Chair of Physical Geography, Graz University
2017	Research Highlight Article: Seismic monitoring of small alpine rockfalls – validity, precision and limitations (ESurf)
2013	Best PhD thesis award, German Society of Geomorphology

## FUNDING

2020	SNF Morphodynamics on proglacial forefields, as partner
2019	NERC Bedload quantification in large rivers, as partner (59k €)
2018	Helmholtz Expedition Fund, Arctic river sediment fluxes, PI (8k €)
2018	AlpSenseBench, surveying mass wasting, as partner (700k €)
2014	DFG Wissenschaftsnetzwerk Luminescence, as partner (24k €)
2013	Helmholtz Expedition Fund, Exploration of Alpine rockfalls. PI (6k €)
2008	DFG Travel Grant, GSA Annual Meeting, Houston (1k €)

## MANAGEMENT & STEERING

<b>Boards and Panels</b>	European Geosciences Union Programme Committee Deutscher Arbeitskreis für Geomorphologie, Advisory Board GFZ software strategy board Exotic Seismic Source Characterization Focus Group
<b>Communication (Science)</b>	Software Carpentry Chair, Potsdam branch (2018-2020) EGU2020/21 Townhall Meetings "Data handling" & "Editorial Jobs"
<b>GFZ institutional activities</b>	Department speaker in software development strategies GFZ data management strategy group member Coordination & implementation scientific hardware development
<b>Management of the Horizon 2020 ITN SUBITOP</b>	Coordination of interaction between institutions and private sector Finance and human resources management Organisation of conferences, workshops, short courses Interaction with the European Commission
<b>During earlier positions</b>	EGU Geomorphology Early Career Scientist representative Deutscher Arbeitskreis für Geomorphologie, JG Speaker Conception, implementation and evaluation of courses

## MEDIA & OUTREACH

<b>Interviews</b>	Introduction to Geosciences, GFZ outreach (2018) Rockfall experiment Demmin, Kulturradio (2017) R package EMMAgeo, GFZ outreach channel (2016)
<b>Television</b>	Hochvogel failure monitoring, BR, Arte (2018/19/20) Permafrost & Reintal connectivity observatory, ZDFinfo (2018) GFZ Career Day, dual career chair (2018) Rügen cliff dynamics project, NDR, GFZ Youtube channel (2017)
<b>Newspaper</b>	Numerous interviews and reports (see personal website)

## SERVICE

<b>Editor, journals</b>	Earth Surface Processes and Landforms (GE), Earth Surface Dynamics (GE), Geochronology (AE)
<b>Review, journals</b>	Earth Surface Processes and Landforms, Earth Surface Dynamics, Geophysical Research Letters, Journal of Geophysical Research, Remote Sensing, Annals of Geomorphology, Landslides, Catena, Nature Scientific Reports, Energies, Science Advances, Soils Science Society of America Journal, Journal of Arid Lands, Quaternary International, Quaternary Geochronology, Bulletin of the Seismological Society of America.
<b>Review, theses</b>	3 Doctoral theses, 30 MSc theses, > 100 BSc and study theses
<b>Supervision</b>	25 MSc, 35 BSc theses, > 55 study theses, 25 internships
<b>Organisation</b>	European Geosciences Union-wide short course chair (since 2019) European Geosciences Early Career Scientists speaker (2017-2020) Coordinator seismic devices GFZ-Section 4.6 (since 2013) Speaker/Advisory board Young Geomorphologists (2011-2015) Coordinator Scientific Geography Lecture, TU Dresden (2010-2013)
<b>Meetings, organ.</b>	AK Geomorphology Lunch Seminar Series (2021) TopoEurope2019 conference Granada (2019) First EGU Galileo Conference on Environmental Seismology (2017) EGU Annual Meeting, Sessions about concepts in geosciences, R, Modelling & Experiments, Arid zone dynamics, (since 2012) SUBITOP Conferences, Workshops & Short Course (2016, 17) Annual Meeting German Society of Geomorphology (2007, 14, 17-19)

## COLLABORATIONS AND NETWORK

<b>Global</b>	NIOZ Texel (NL), Desert Research Institute Reno (US), WSL Zürich (CH), Ben Gurion University (IL), Fundacion Cambugán (EC), National University of Taiwan (TW), INRS Quebec (CA), Uni Lausanne (CH), Inversité Grenoble Alpes (FR), Observatoire de Paris (FR), CICESE Ensenada (MX), Turku University (FI), Umea University (SE), Washington State University (US), Edinburgh University (UK).
<b>Germany</b>	GFZ Potsdam (landscape evolution, hydrology, remote sensing, Earth system modelling, seismology, geophysics and further sections), Alfred-Wegener-Institute (permafrost dynamics). Universities in Munich (rock mechanics group), Dresden (Geodesy), Gießen, Leipzig, Aachen, Bayreuth, Trier, Augsburg, Köln, Tübingen, Greifswald, Berlin, Heidelberg, Potsdam HZDR Freiberg, LIAG Hannover, Bundesanstalt für Gewässerkunde, National Parks Jasmund, Müritzt, Sächsische Schweiz

## TRAINING IN TEACHING

2021	Courses on online lecturing, demonstrating, examining (Bonn University, eCampus course series).
2018	Course "Communicating science to stake holders (Rome, run by EGU communications officer, 2 days)
2009	Course "Grundlagen der Hochschuldidaktik" (TU Dresden, 3 days)

## COURSES TAUGHT

(Some courses include assignments to parts of full lectures over a semester)

<b>Lectures</b>	Remote Sensing & Geophysics (TUD, BSc, guest lect., upcoming) Innovative field methods (MSc, guest lecturer) Mensch-Umwelt-Beziehungen (MSc) Feld- und Labormethoden in der Geographie (BSc, BEd)
<b>Laboratory seminars and practices</b>	Mineralogical analysis techniques Petrology and mineralogy Pedologic laboratory seminar (with diverse colleagues)

## COURSES TAUGHT

(Some courses include assignments to parts of full lectures over a semester)

### Seminars

Aufbauseminar Physische Geographie (BSc)  
MSc seminar Physical Geography (guest lecturer)  
Landscape sensitivity (MSc)  
Geomorphology (Dipl., MSc, BSc, teaching degree)  
Data management (BSc)  
Geo data analysis (BSc)  
GIS and data modelling (BSc)  
Environmental information systems (Dipl.)  
GFZ Student Lunch (MSc, PhD)

### Field seminars

Soil geography (Dipl., BSc, teaching degree)  
Quaternary slope deposits (Dipl., MSc)  
Geomorphology & Geology in the field (BSc, teaching degree)  
Landscape analysis main seminar (BSc)

### External teaching

EGU Course Writing and maintaining R packages (w. S. Kreutzer)  
EGU Course End-member modelling analysis (w. E. Dietze)  
Introduction to R and end-member modelling (w. E. Dietze, Cologne University, 2 days)  
Luminescence data analysis with R (Mannheim, Berlin, 1 day)  
Introduction to R (Kassenärztliche Bundesvereinigung, Berlin, 3 days)  
Software Carpentry, courses and management (3 days)

### Field trips

Ambas Californias (with A. Kleber, Mexico part, 12 days)  
Kirgistan (with L. Maerker, 23 days)  
From the Erzgebirge to the Baltic Sea (with C. Roettig, 10 days)  
The Reintal seismic observatory (with A. Schöpa, 2 days)  
Landscape dynamics Erzgebirge (for GFZ Ph.D. group, 2 days)  
Central and Western Erzgebirge (mit L. Maerker, 4 days)

## POTENTIAL COURSES

(Beyond expected curricula, descriptions in German but courses can be given in English, as well)

### Quantitative methods in Geosciences (Vorlesung mit Übung/Praktikum, BA)

Grundlagen- und optional Weiterführungsveranstaltung für Bachelor und/oder Masterstudiengänge mit naturwissenschaftlichem Fokus. Methoden der Geländeinstrumentierung, Beprobungs- & Experimentdesign, Datenmanagement, Auswertungsstrategien. Bevorzugt in Kooperation mit anderen Professuren.

### Geoscientific data analysis (Vorlesung/Übung/Praktikum, BA o. MSc)

Grundlagenveranstaltung zur quantitativen Datenanalyse. Einführung in grundlegende Techniken im Umgang mit digitalen Daten, Strategien zur Datenhomogenisierung, Ansätze moderner Alternativen der Datenvisualisierung. Ausgerichtet an den Bedürfnissen der Fakultät und außeruniversitärer Arbeitgeber.

### Environmental Seismology (MSc-Vertiefungsveranstaltung)

Integrative Kernveranstaltung, die neben Geophysik- und Datenverarbeitungsgrundlagen eigene Instrumentierung und Auswertung beinhaltet. Teilnehmer sollen eigene Projekte entwickeln, die in andere Fachbereiche vermitteln.

### Data management strategies in Earth Sciences (Vorlesung/BA- oder MSc)

Einführung in und Konfrontation mit Gründen für die Notwendigkeit einer strukturierten, skalierbaren, nachhaltigen, transparenten Datenmanagementstrategie. Explizite praktische Aufgaben zur Handhabung physischer und digitaler Daten, Metadatenverwaltung, und Workflow-Dokumentation.

### Dissemination of scientific research (MSc-Seminar)

Adäquate Kommunikation wissenschaftlicher Ergebnisse ist heute ein essentieller Bestandteil wissenschaftlicher Arbeit. Die Veranstaltung vermittelt Konzepte und praktische Ansätze für diverse Adressaten. Die Veranstaltung ist fachübergreifend und stellt gerade damit wichtige Synergien und Vernetzungen bei den Teilnehmern her.

## EXPERTISE AND SKILLS

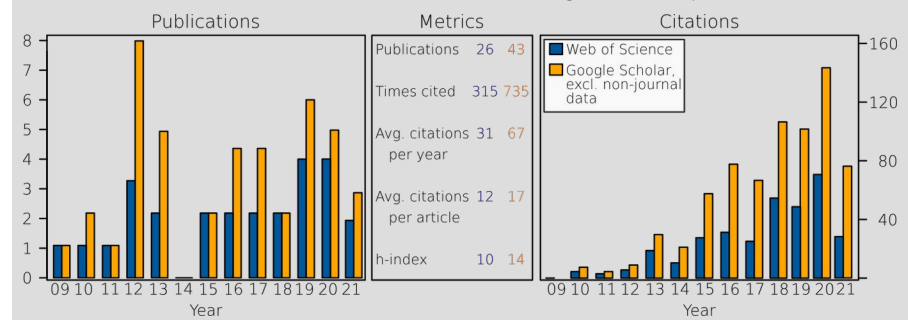
<b>Field</b>	Desert & alpine environment mapping, probing, process monitoring Seismic instrumentation of hillslopes, channels, coastal and biota-dominated systems.
<b>Computational</b>	Languages: R, Python, (Matlab, C++) Software development, Machine learning approaches Landscape evolution modelling (CHILD, CAESAR) Monte Carlo methods (error propagation, age models) Wind field modelling, Soil erosion modelling Spatial data analysis Modelling of sediment sections, propagation of analytic uncertainty
<b>Statistic</b>	Descriptive statistics (directional data, multivariate data) Geodata management and analysis, signal processing Eigen space-, frequency- and phase space analysis Measurement data handling, homogenisation and integration Luminescence data modelling and visualisation
<b>Experiments</b>	Experiment design, set-up, conduction and evaluation Run-off experiments, sediment structure formation, analogue models Natural scale seismic, hydrology, meteorology, soils physics
<b>Analytics</b>	Coordination/installation sediment laboratory, GFZ Potsdam XRD, DTA/DTG, Electron micro probe analysis, section microscopy Grain-size analysis (laser diffraction, image processing, classic)
<b>Solutions</b>	Real time data measurement & transmission (Taiwan, Rügen, Alps) Web-based early warning and rapid response systems

## PUBLICATION & CITATION SUMMARY

### Boundary condition information

Note that Google Scholar has stopped automatically counting my output from 2018 on in a systematic way, due to naming ambiguities, which imposes a growing underestimation for the last 3.5 years.

The total publication record contains 43 articles in international peer-reviewed journals. Citation data include 26 (Web of Science) and 43 (Google Scholar) publications.



## SOFTWARE DEVELOPMENTS

- 8 | **Dietze**, M. 2020. adcp: Acoustic Doppler Current Profiler data handling in R. R package version 0.1.0. Hosted on Github. <https://github.com/coffeemugger/adcp>
- 7 | **Dietze**, M. 2018. eseis: Environmental seismology toolbox. R package version 0.6.0. <https://cran.r-project.org/web/packages/eseis/index.html>
- 6 | **Dietze**, M., E Dietze. 2018. PUMAgeo: Propagation-of-Uncertainty Modelling Analysis for geoscientific data. R package version 0.1.0. Hosted on Github, private repository.
- 5 | **Dietze**, M. 2017. sandbox: Probablistic Numerical Modelling Of Sediment Properties. R package version 0.0.2. Hosted on Github, private repository.
- 4 | **Dietze**, M. 2015. grainsize: Grain-size data analysis functions. R package version 0.1.1. Hosted on Github. <https://github.com/coffeemugger/grainsize>
- 3 | **Dietze**, M. 2013. RCHILD: Functions for flexible use of the landscape evolution model CHILD. R package version 0.2.3. Hosted on Github. <https://github.com/coffeemugger/RCHILD>
- 2 | **Dietze**, M, E Dietze. 2016. EMMAgeo: End-Member Modelling of Grain-Size Data. R package version 0.9.6. <https://CRAN.R-project.org/package=EMMAgeo>
- 1 | Kreutzer, S, M **Dietze**, C Burow, M C Fuchs, C Schmidt, M Fischer and J Friedrich. 2016. Luminescence: Comprehensive Luminescence Dating Data Analysis. R package version 0.8.0. <https://CRAN.R-project.org/package=Luminescence>

# Record of funding and research projects

## ENVIRONMENTAL SEISMOLOGY

### Boundary condition information

Research institutes within the Helmholtz Association, like the GFZ Potsdam, are per definition *excluded from applying* for regular funding at the German Research Foundation – with the exception of special programmes like priority programmes and joint efforts in shared research projects. Thus, during my PostDoc career at GFZ Potsdam, this important funding resource is in general not applicable and I am restricted to Helmholtz-internal, collaborative, or internationally joint research funding opportunities. Likewise, my *H2020 project manager position* rendered a DFG grant for own position purpose ineligible.

### A library of the seismic signatures of Earth surface dynamics (since 2014)

Central scientific objective. Open reference of collectively contributed seismic and independently measured data for validation and statistic investigation of seismic properties of Earth processes.  
Expected outcomes: open web-based service, technical article, application article (2021)  
Funded by Helmholtz-internal financing mechanisms

### Energetic coupling of atmosphere and Earth surface by vegetation (since 2016)

Seismic data inversion, sap-flow and tree diameter monitoring and modelling of tree motion modi to quantify the amount and paths of energy transferred from the atmosphere to the ground.  
In collaboration with Andreas Güntner (GFZ), Martin Wilmking (Greifswald), Danica Roth (Colorado Schools of Mines).  
Expected outcomes: article (2021)  
Funded by Helmholtz-internal financing mechanisms

### Salmonid-driven river sediment mobilisation event quantification (since 2019)

Seismic detection, location and anatomy of salmonid-driven river bed material mobilisation during redd building period.  
In collaboration with James Losee (Washing. Dep. of Fish & Wildlife), Lina Polvi (Univ. of Umea), Daniel Palm (Swed. Univ. of Agric. Sci.)  
Outcomes: proof-of-concept article (subm.), follow-up proposal for long-term and broad scale ecological/hydrological study.  
Funded by Helmholtz-internal financing mechanisms

### Real-time sensing of fatigue and failure propagation, Hochvogel peak (since 2018)

Combined crack meter, seismic, and infra sound monitoring of crack opening patterns on an Alpine peak, rapidly preparing to fail.  
Expected outcomes: proof-of-concept article on near-real time early warning system (accepted), AlpSenseBench follow-up proposal.  
Co-funded within AlpSenseBench project (700k €)

### Unmixing fluvial turbulence and bedload flux from seismic data (2016-2019)

Application of Monte-Carlo modelling to seismic spectral data from natural-scale experiments and instrumented observatories.  
In collaboration with Christoph Sens-Schönfelder (GFZ), Florent Gimbert (CNRS, Grenoble), Johnathan Laronne (Ben Gurion Univ.), Eliisa Lotsari (Univ. of Turku) and Lina Polvi Sjöberg (Univ. of Umea)  
Outcomes: research articles (2019, 2020, subm.)  
Funded by Helmholtz Expedition Funds (8k €)

### Free & open software tailored to environmental seismology (since 2015)

Development during PostDoc position. Free and open package to run the workflow of seismic data preparation and analysis in R.  
Outcomes: R-package *eseis*, research article (2018)  
Funded by Helmholtz-internal financing mechanisms

### Sea cliff evolution and collapse susceptibility, Jasmund/Rügen (since 2017)

Seismic detection, location & description of failure events with rapid alarming. Seismic precursor activity screening, meteorologic and marine trigger monitoring. Ground property change monitoring.  
In collaboration with NP Jasmund staff, GFZ seismology groups.  
Outcomes: research article (2019, 2020), PhD project proposal (exp)  
Funded by Helmholtz-internal financing mechanisms

### Patterns and drivers of Alpine rockfall activity, Lauterbrunnen Valley (2014–2017)

First independent validation and exploration of seismic capabilities to resolve rockfalls < 1 m<sup>3</sup> under natural conditions. Multi seasonal space and time resolved rockfall activity and trigger mechanisms.  
In collaboration with Todd Ehlers (Tübingen).  
Outcomes: two articles in 2017  
Funded by Helmholtz Expedition Funds (6k €)

## SEDIMENTOLOGY & GEOCHRONOLOGY

### **The R-package sandbox – probabilistic sediment section modelling** (since 2017)

The first model framework that touches the idea of building a rule-based, probabilistic sediment section that can be virtually sampled prepared and measured to explore scientific hypothesis and invert real data for unknown input parameters, also beyond OSL dating. In collaboration with Margret Fuchs (HIF Freiberg).  
Expected outcomes: research article (2021).

### **Modelling proxy uncertainty arising from age-depth models** (2019)

Interpretation of sediment proxy data should not only take into account analytical uncertainties but also those arising from the error range of the age-depth model, especially when handling flux data. PUMAgeo is a tool to robustly implement this step.  
In collaboration with E. Dietze(AWI), R. Donner (Uni Magdeburg)  
Outcomes: R-package PUMAgeo, research article (2019).

### **End-member modelling analysis application beyond grain-size data** (since 2017)

End-member modelling analysis is a flexible non-parametric approach to unmixing compositional data, such as grain-size samples. After the development of the R package EMMAgeo, the algorithm is being adopted and applied to numerous fields other than classic grain-size data sets, such as litho facies types, hydrographs, seismic spectra, REM-based continuous granulometries.  
Outcomes: collaborations, three articles (planned).

### **Assessing systematic & random uncertainty by Bayesian models** (2016)

The accuracy of OSL age-depth-relationships and their combination with ages is predominantly limited by the unknown amount of systematic errors. An inverse Bayesian approach tackles this and provides a ready to use function to be applied by other scientists. In collaboration with Christian Zeeden (Paris) and Sebastian Kreutzer (IRAMAT Bordeaux).  
Outcomes: research article (2017), international initiative (2018).  
Funded by DFG Networking Initiative (24k €).

### **The abanico plot – consistent visualisation of data with individual errors** (2014-16)

Many geochronologic data contain individual standard errors that ask for dedicated plots. We merged such a plot with other, intuitive visualisation techniques to the abanico plot, a new plot type. In collaboration with scientists from Freiberg, Bayreuth, Bordeaux.  
Outcomes: research article (2016).  
Funded by DFG Networking Initiative (24k €).

## DESERT ENVIRONMENTS

### **A new diffusive process that shapes stone-covered desert surfaces** (since 2014)

Current mechanisms cannot fully explain the "healing" of disturbed stone pavement surfaces. Laboratory experiments with instrumented equipment quantify boundary conditions and effectivity of rain-induced soil degassing as driving force for diffusive downslope clast movement and alignment.  
Expected outcomes: research article in (2020)

### **Environmental history recorded in aeolian dust under stone pavements** (2012-16)

Dust trapped by stone pavements forms a thickening deposit that can be exploited to quantitatively constrain environmental conditions under which the layers were formed during the Quaternary. In collaboration with Stephen Wells (NMT), scientists from Gießen and Dresden.  
Outcomes: research article (2016).

### **Progressive drying of Sahara inferred from Lake Yoa (Chad) sediments** (2011-13)

Annually laminated lake sediments from Ounianga Kebir allow high-resolution, precise reconstruction of environmental conditions and progressive climatic change in an African key environment. In collaboration with scientists from Quebec, Cologne, Leipzig, Ghent.  
Outcomes: research article (2013).

## Record of invited network activities

### INVITED LECTURES AND WORKSHOPS (SELECTION)

- 22 | **Dietze**, M. 2021. Listen to a spectre – the potential role of environmental seismology in desert process research. Invited contribution, *vEGU21*.
- 21 | **Dietze**, M. 2020. Insights to Earth surface dynamics from seismic sensors – the slope and fluvial domain. *University of Hull & Energy and Environment Institute*, UK.
- 20 | **Dietze**, M. 2019. Earth surface processes in transient landscapes – drivers, triggers, evolution – from peak to channel. *Professorship interview*, Universität Graz.
- 19 | **Dietze**, M. 2019. Let's shake the ground – Insights to drivers, triggers and mechanisms of cliff failures on Germany's largest island from environmental seismology. *Universität Greifswald*.
- 18 | **Dietze**, M. KL Cook, O Rach. 2019. Der Puls des Kliffs. Public lecture *National Park Centre Jasmund*, Rügen.
- 17 | **Dietze**, M. et al. 2019. The geomorphic "Shake Scape". *University of Göttingen*.
- 16 | **Dietze**, M. 2019. How much dust? And which dust? From grain-size data (and bulk density) to aeolian mass fractions. *DART conference*, Sopron, Hungary.
- 15 | **Dietze**, M. 2018. Environmental seismology – a novel tool to constrain hydraulic dynamics and sediment transport in large rivers. *University of Edinburgh*.
- 14 | **Dietze**, M, A Schöpa, JM Turowski, N Hovius. 2018. Environmental seismology – indispensable tool to constrain drivers, precursors and evolution of mass wasting processes. *Seismological Society of America conference*, May 2018, Florida.
- 13 | **Dietze**, M. 2018. R's role in geomorphometry and high resolution data handling. *EGU conference*, April 2018, Vienna.
- 12 | **Dietze**, M. 2017. Building and maintaining R packages. 1-day course *GFZ Potsdam*.
- 11 | **Dietze**, M. 2015. Quantifying Earth surface dynamics. Colloquium, *Freie Universität Berlin*.
- 10 | **Dietze**, M. 2015. Handling noise, uncertainty and their propagation. *Department Seminar, GFZ Potsdam*.
- 9 | **Dietze**, M. 2015. Earth surface dynamics of arid environments. Invited lecture, *Desert Research Institute*, Reno.
- 8 | **Dietze**, M, E Dietze. 2015. Introduction to R | End-Member Modelling Analysis with the R-package EMMAgeo. 2-day course, *Universität zu Köln*.
- 7 | **Dietze**, M, A Burtin, J M Turowski, N Hovius. 2015. Catchment-wide monitoring of Earth surface dynamics with environmental seismology. Invited lecture, *FACSIMILE Workshop*, Hannover.
- 6 | **Dietze**, M. 2014. Earth surface dynamics of arid landscapes - the experiment & model perspective on stone pavement evolution. Colloquium, *Universität Potsdam*.
- 5 | **Dietze**, M. 2014. Formation and environmental significance of stone pavements in deserts. Colloquium, *Universität Bayreuth*.
- 4 | **Dietze**, M. 2012. Environmental change in desert environments - the stone pavement perspective. Colloquium, *Martin-Luther-Universität Halle*.
- 3 | **Dietze**, M. 2011. Einführung in die Software R zur geowissenschaftlichen Datenanalyse. Workshop at Arbeitstreffen der Jungen Geomorphologen, *Freienorla*.
- 2 | **Dietze**, M. 2011. Landscape evolution in an extreme arid environment: the Valle de Barrancas Blancas, Chile. Kolloquium, *Technische Universität Dresden*.
- 1 | **Dietze**, M. 2009. Stone pavements as a dynamic feature in fragile, geomorphologically sensitive environments. Invited lecture, Workshop on *Geodynamics in fragile landscape systems of the Mediterranean*. Baeza, Spain.

## Record of publication activity

### MONOGRAPHS

- 44 | Kreutzer, S, C Burow, M **Dietze**, MC Fuchs, C Schmidt (in preparation, to be finished 2020). R.Luminescence – luminescence data handling with the R package 'Luminescence'. Book as part of DFG Scientific Network Project R.Lum.
- 43 | Kleber, A, B Terhorst, H Bullmann, D Hülle, M Leopold, S Müller, T Raab, D Sauer, T Scholten, M **Dietze**, P Felix-Henningsen, J Heinrich, E-D Spies, H Thiemeyer (2013). Chapter 2 - Subdued Mountains of Central Europe. In: Mid-Latitude Slope Deposits (Cover Beds). *Developments in Sedimentology* 66. 9-93. DOI: [10.1016/B978-0-444-53118-6.00002-7](https://doi.org/10.1016/B978-0-444-53118-6.00002-7)

### EDITED WORK

- 42 | Allstadt, K, M **Dietze**, A Schöpa, F Gimbert, J Turowski, F Walter. From process to signal – advancing environmental seismology. Special issue of *Earth Surface Dynamics*. [www.earth-surf-dynam.net/special\\_issue920.html](http://www.earth-surf-dynam.net/special_issue920.html)

### JOURNAL ARTICLES

- Cook KL, R Rekapalli, M **Dietze**, M Pilz, S Cesca, RN Purnachandra, D Srinagesh, H Paul, M Metz, T Dahm, P Mandal, G Suresh, F Cotton, VM Tiwari, N Hovius. Early Warning of Catastrophic Flow Events Using Regional Seismic Networks. In revision. *Science*.
- Buckel J, E Reinosch, A Voigtländer, M **Dietze**, M Bücken, N Krebs, R Schroeckh, R Mäusbacher, A Hördt. Insights to rockglacier evolution under semiarid climate in the Nyainqêntanglha range, Tibetan Plateau. In rev. *Journal of Geophys. Res. ES*.
- Dietze**, M, P Schulte, E Dietze. Application constraints of grain-size end-member modelling analysis. In revision. *Sedimentology*.
- 41 | Rao NP, R Rekapalli, D Srinagesh, VM Tiwari, N Hovius, KL Cook, M **Dietze** (2021). Seismological rockslide warnings in the Himalaya. *Science* 372. DOI: [10.1126/science.abi4819](https://doi.org/10.1126/science.abi4819)
- 40 | Lagarde, S, M **Dietze**, F Gimbert, JB Laronne, JM Turowski, E Halfi (2021). Grain-size distribution and propagation effects on seismic signals generated by bedload transport. *Water Resources Research*. DOI: [10.1029/2020WR028700](https://doi.org/10.1029/2020WR028700)
- 39 | Meijer, N, G Dupont-Nivet, N Barbolini, A Woutersen, A Rohrmann, Y Zhang, X-J Liu, A Licht, H Abels, C Hoorn, R Tjallingii, C Andermann, M **Dietze**, N Nowaczyk (2021). *Paleoceanography and Paleoclimatology*. DOI: [10.1029/2020PA003993](https://doi.org/10.1029/2020PA003993)
- 38 | **Dietze**, M, M Krautblatter, L Illien, N Hovius (2020). Seismic constraints on rock damaging of a failing Alpine peak: the Hochvogel, Allgäu. *Earth Surface Processes and Landforms* 46. DOI: [10.1002/esp.5034](https://doi.org/10.1002/esp.5034)
- 37 | Lotsari, E, M **Dietze**, M Kämäri, P Alho, E Kasvi (2020). Impacts of macro-turbulent flow on sediment transport potential of an arctic river during ice-covered and open-channel conditions. *Water* 12. DOI: [10.3390/w12071874](https://doi.org/10.3390/w12071874)
- 36 | **Dietze**, M, J Losee, L Polvi, D Palm (2020). A seismic monitoring approach to detect and quantify river sediment mobilisation by steelhead redd-building activity. *Earth Surface Processes and Landforms* 45. DOI: [10.1002/esp.4933](https://doi.org/10.1002/esp.4933)
- 35 | **Dietze**, M, KL Cook, L Illien, O Rach, S Puffpaff, I Stodian, N Hovius (2020). Impact of nested moisture cycles on cliff coast failure revealed by multi-seasonal seismic and topographic surveys. *Journal of Geophysical Research Earth Surface* 125. DOI: [10.1029/2019JF005487](https://doi.org/10.1029/2019JF005487)
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