

Curriculum Vitae

Dr Daniel Florian Feldmeyer

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Date of birth: 11.02.1987

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Personal statement

Interdisciplinary researcher and project leader strongly focused on data-driven analysis and evidence-based decision-making. Experienced in managing collaborative research initiatives, securing funding, and delivering high-impact results across diverse thematic areas. Skilled mentor and intercultural communicator, committed to inclusive teamwork and capacity building.

Competencies

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| • Risk and impact assessment | • Python, R | • Innovative |
| • Geospatial data analytics | • High-Performance & Distributed Computing | • Strategic |
| • Sensitivity and uncertainty analysis | • GIS, Geodata | • Pragmatic |

Practical experience

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| 12/23 - | Postdoctoral Research Associate Princeton University <ul style="list-style-type: none">• Member of the Princeton Sustainability Advisory Committee• Project lead for multiple applied research initiatives on social vulnerability, resilience, and sustainability• Contributed to proposal writing and strategic planning for funded research consortia• Scientific publications, conference participation |
| 04/22 – 11/22 | Project Manager & Data Engineer Fichtner IT Consulting <ul style="list-style-type: none">• R&D Project: DigIPlat - "Digital solutions for the interoperability of flexibility platforms". Germany, Austria, Switzerland.• Commercial projects• Project acquisition• Developing AI strategy for renewable energy |
| 12/16 - 06/21 | Research Associate University Stuttgart, Institute of Spatial Planning (100%/50%) <ul style="list-style-type: none">• The PhD-position was based on third party funding and hence comparable to a full-time job at a research institute or consulting company, resulting in comparable practical experience. The thesis development and writing took place in my spare time.• Teaching |

- Spatial projects with GIS
 - Introduction to R
- Successfully completed German and international research projects
 - Project management
 - Stakeholder workshops
 - Web platform development
 - Conducting surveys
 - Qualitative and quantitative analysis
 - Reporting
 - Publication and presentation of results
- Proposal development for German and international projects
 - Idea/innovation development
 - Project conceptualization
 - Project planning
 - Funding acquisition
- Publications and conferences
 - Presenting project results to international experts

03/15 - 06/15 Research Associate at University of Natural Resources and Life Sciences, Vienna

- Data modelling and programming
- Time, cost and project management

03/12 - 07/12 Internship PE International, sustainability consulting company, Stuttgart, Germany

- Project consulting work

Education

12/16- 03/21 PhD, University Stuttgart, Institute of Spatial Planning (magna cum laude)

- Thesis title: "Development, mapping and validation of resilience and vulnerability indicators across spatial scales for climate related hazards"
 - Indicator development across spatial scales
 - Qualitative and quantitative methods
 - Applied Machine Learning algorithms
 - Novel validation methods
 - Novel method to derive socio-economic indicators based on OpenStreetMap

10/12- 02/15 Double Degree Dipl.-Ing. & M.Na.R.M. & E.E. Natural Resources Management and Ecological Engineering (with distinction)
University of Natural Resources and Life Sciences, Vienna, Austria &
Lincoln University, New Zealand

- Thesis: Developing a multi-directional flow algorithm for ArcGIS with Python to determine the residual torrential risk in selected Austrian catchments.

10/08 - 03/12 B.Sc. Agricultural Science, University of Hohenheim, Germany

10/07 - 02/08 Study of B.Sc. level mathematical sciences and informatics, Friedrich-Alexander-University Erlangen, Germany

Skills

Computer literacy	MS Office	Expert level
	ArcGIS/QGIS	Expert level
	Python	Expert level
	R & Shiny	Expert level
	PostgreSQL/PostGIS	Advanced level
	Machine learning (i.a. TensorFlow)	Expert level
Languages	German	Mother tongue
	English	Fluent (reading, speaking, writing)
	Spanish	Intermediate (speaking, reading); basic (writing)
	Russian	Intermediate (reading, speaking); basic (writing)

Key publications

- Feldmeyer, D., Birkmann, J., McMillan, J., Stringer, L., Leal Filho, W., Djalante, R., Pinho, P., Liwenga, E. (2021) Global vulnerability hotspots: differences and agreement between international indicator-based assessments. Climatic Change 169.1 (2021): 1-22.DOI: <https://doi.org/10.1007/s10584-021-03203-z>.
- Wilden, D., Feldmeyer, D., (2021) Empirical validated indicator set for measuring knowledge and action changes in the light of urban climate resilience. City and environment interactions, Volume 10. DOI: 10.1016/j.cacint.2021.100060
- Feldmeyer, D.; Wilden, D.; Kind, C.; Kaiser, T.; Goldschmidt, R.; Diller, C.; Birkmann, J. (2019b): Indicators for Monitoring Urban Climate Change Resilience and Adaptation. Sustainability 11 (10), p. 2931. DOI: 10.3390/su11102931.

Extracurricular activity

Member of the Princeton Sustainability Advisory Committee

- Contributing to the development of long-term institutional sustainability strategies
- Advising on climate and equity priorities in university operations and research

Supplement:

- ANNEX I: Conferences
- ANNEX II: Publication
- ANNEX III: Research projects

ANEX I: Conferences

- Kind, C., Kaiser, T., **Feldmeyer, D.**, Wilden, D. (2019) “Framing and monitoring urban climate resilience in German municipalities – insights from an ongoing research project” 4th European Climate Change Adaptation conference 28 - 31 May, Lisbon, Portugal
- **Feldmeyer, D.**, Sauter, H., & Birkmann, J. (2019) “An open risk index with learning indicators from OSM-tags, developed by machine learning and trained with the world risk index” FOSS4G 2019 26 – 30 August, Bucharest, Rumania DOI: 10.5194/isprs-archives-XLII-4-W14-37-2019
- Sauter, H., **Feldmeyer, D.**, & Birkmann, J. (2019) “Exploratory study of urban resilience in the region of Stuttgart based on OpenStreetMap and literature resilience indicators” FOSS4G 2019 26 – 30 August, Bucharest, Rumania DOI: 10.5194/isprs-archives-XLII-4-W14-213-2019
- Wilden, D., **Feldmeyer, D.**, Birkmann, J., Diller, C. (2018) “A conceptual integrative approach to monitoring, evaluation and validation of Climate Change Adaptation measures for urban resilience” 8th International Conference on Building Resilience Lisbon, Portugal
- Sauter, H., **Feldmeyer, D.**, Birkmann, J. (2018) “Enhancing the spatial and temporal resolution of the WorldRiskIndex with new data sources” FOSS4G 2018 27 – 31 August, Dar es Salaam, Tanzania
- **Feldmeyer, D.** (2018) “Development of human vulnerability: learning from past trends for future directions” 5th International climate Change Adaptation Conference 18 – 21 June, Cape Town, South Africa

ANEX II: Publication

- **Feldmeyer, D.**, Nowak, W., Jamshed, A., Birkmann, J. (2021) **An empirically developed vulnerability and resilience index based on damage data and OpenStreetMap**. Science of Total Environment 774(3). DOI: 10.1016/j.scitotenv.2021.145734
- **Feldmeyer, D.**, Birkmann, J., McMillan, J., Stringer, L., Leal Filho, W., Djalante, R., Pinho, P., Liwenga, E. (2021) **Global vulnerability hotspots: differences and agreement between international indicator-based assessments**. Climatic Change 169.1 (2021): 1-22.DOI: <https://doi.org/10.1007/s10584-021-03203-z>.
- Birkmann, J., **Feldmeyer D.**, McMillan, J. M., Solecki, W., Totin, E., Roberts, D., Trisos, C., Jamshed, A., Boyd, E., Wrathall, D. (2021) **Regional clusters of vulnerability show the need for transboundary cooperation**. Environmental Research Letters, 16, 9. DOI: 10.1088/1748-9326/ac1f43
- Birkmann, J., Jamshed, A., McMillan, J. M., **Feldmeyer, D.**, Totin, D., Solecki, W., Ibrahim, Z., Roberts, D., Kerr, R. B., Poertner, H., Pelling, M., Djalante, R., Garschagen, M., Filho, W., Guha-Sapir, D., Alegría, A. (2021) **Understanding human vulnerability to climate change: A global perspective on index validation for adaptation planning**. Science of The Total Environment, Volume 803, 2022. DOI: 10.1016/j.scitotenv.2021.150065
- Lecina-Diaz, J., Martínez-Vilalta, J., Alvarez, A., Banqué, M., Birkmann, J., **Feldmeyer, D.**, Vayreda, J., Retana, J. (2021) **Characterizing forest vulnerability and risk to climate-change hazards**. Frontiers in Ecology and the Environment. DOI: <https://doi.org/10.1002/fee.2278>
- Wilden, D., **Feldmeyer, D.**, (2021) **Empirical validated indicator set for measuring knowledge and action changes in the light of urban climate resilience**. City and environment interactions, Volume 10. DOI: 10.1016/j.cacint.2021.100060
- Jamshed, A.; Birkmann, J.; Ahmad Rana, I.; **Feldmeyer, D.** (2020a): **The effect of spatial proximity to cities on rural vulnerability against flooding: An indicator based approach**. In Ecological indicators 118, p. 106704. DOI: 10.1016/j.ecolind.2020.106704.

- Jamshed, A.; Birkmann, J.; **Feldmeyer, D.**; Rana, I. (2020b): **A Conceptual Framework to Understand the Dynamics of Rural–Urban Linkages for Rural Flood Vulnerability**. In Sustainability 12 (7), p. 2894. DOI: 10.3390/su12072894.
- Jamshed, A.; Birkmann, J.; McMillan, J.; Rana, I.; **Feldmeyer, D.**; Sauter, H. (2020c): **How rural-urban linkages change after the extreme flood event? Empirical evidence from rural communities in Pakistan**. In Science of The Total Environment, p. 141462. DOI: 10.1016/j.scitotenv.2020.141462.
- **Feldmeyer, D.**, Meisch, C., Sauter, H., & Birkmann, J. (2020). **Using OpenStreetMap Data and Machine Learning to Generate Socio-Economic Indicators**. ISPRS International Journal of Geo-Information, 9(9), 498. DOI: <https://doi.org/10.3390/ijgi9090498>
- **Feldmeyer, D.**, Wilden, D., Jamshed, A., & Birkmann, J. (2020). **Regional climate resilience index: A novel multimethod comparative approach for indicator development, empirical validation and implementation**. Ecological Indicators, 119, 106861. DOI: <https://doi.org/10.1016/j.ecolind.2020.106861>
- **Feldmeyer, D.**; Wilden, D.; Kind, C.; Kaiser, T.; Goldschmidt, R.; Diller, C.; Birkmann, J. (2019b): **Indicators for Monitoring Urban Climate Change Resilience and Adaptation**. Sustainability 11 (10), p. 2931. DOI: 10.3390/su11102931.
- Sorg, L., Medina, N., **Feldmeyer, D.**, Sanchez, A., Vojinovic, Z., Birkmann, J., & Marchese, A. (2018). **Capturing the multifaceted phenomena of socio-economic vulnerability**. Natural Hazards, 92(1), 257-282. DOI: 10.1007/s11069-018-3207-1
- **Feldmeyer, D.**; Birkmann, J.; Welle, T. (2017): **Development of Human Vulnerability 2012–2017**. In Journal of Extreme Events 04 (04), p. 1850005. DOI: 10.1142/S2345737618500057.

ANEX III: Research projects

Princeton University

- Interagency cooperation between the Texas Water Development Board and University of Texas with Princeton University
- Natural Hazard Mitigation Needs Assessment – Phase II. US congressional study.
- NASA Accessible Loss Estimation Tools in Developing Nations.

University of Stuttgart

- Monitoring of Adaptation Measures and Urban Climate Resilience (MONARES)
- Inclusive urban risk and land management regarding spatially ubiquitous extreme events in rapidly growing medium-sized cities - Linking formal and informal strategies in Vietnam and the Philippines (Irima-extreme)
- Preparing for extreme and rare events in coastal regions (PEARL)
- Robustness, resilience and adaptivity of spatial and infrastructures (esp. critical infrastructures) - against extreme events
- Review and further development of the instruments for coordinating settlement and transport development against the backdrop of necessary CO2 reduction and demographic development for the Stuttgart Region (NAMOREG)