

Jacob Dein, PE

curriculum vitae

Department of Geography
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EDUCATION

- since 2018 PhD Student, Geography
University of Tennessee, Knoxville
- 2012 B.S. Civil and Environmental Engineering with Honors
A.B. German (dual degree, summa cum laude)
Lafayette College

EMPLOYMENT

- since 2020 Solutions Engineer—Thrivence / Barge Design Solutions, Knoxville, Tennessee
- 2017-2020 Engineer—Barge Design Solutions, Knoxville, Tennessee
- 2015–2016 Fulbright Grantee—University of Innsbruck, Austria
Researcher at the Institute for Ecology
- 2012–2014 Engineer—Langan, New York, New York

PUBLICATIONS

- 2022 Rivarola, M. D., Dein, J., Simberloff, D., Herrero, H. V. Assessing Protected Area Zoning Effectiveness With Remote Sensing Data: The Case of Nahuel Huapi National Park, Argentina. *Frontiers in Remote Sensing*, 3 (2022).
<https://doi.org/10.3389/frsen.2022.901463>
- 2020 Dein, J., Rüdissler, J. Landscape influence on biophony in an urban environment in the European Alps. *Landscape Ecology* 35, 1875–1889 (2020).
<https://doi.org/10.1007/s10980-020-01049-x>

GRANTS AND AWARDS

- 2019 American Geographical Society Council Fellowship, \$1,500
- 2019 Best Poster, AAG Urban Geography Specialty Group, \$100
- 2018 Anne Mayhew and Graduate Student Senate Travel Awards,
University of Tennessee, \$1,200
- 2015 Fulbright U.S. Student Combined Grant to Austria, \$18,000

- 2015 NSF Travel Grant to Global Sustainable Soundscapes Network Workshop, \$1,000
- 2012 Carroll Phillips Basset Prize in Civil Engineering, Lafayette College, \$2,000
- 2012 Rexroth Prize in German, Lafayette College, \$500
- 2011 Viscomi Civil Engineering Student Prize, Lafayette College, \$500

CONFERENCE PRESENTATIONS

- 2019 Dein, J. The utility of the wavelet transform for multiscale landscape analysis. A paper presented at the SEDAAG 2019 Annual Meeting, November 24-25, Wilmington, North Carolina.
- 2019 Dein, J. Redefining the urban soundscape through better maps. A poster presented at the AAG 2019 Annual Meeting, April 3-7, Washington, D.C.
- 2018 Dein, J. Soundscapes of Urbanizing Landscapes. A paper presented at the Spaces and Flows Conference in Urban and ExtraUrban Studies, October 25-26, Heidelberg, Germany.
- 2016 Dein, J. Soundscapes of the Alpine Landscapes. A poster presented at the Fulbright Seminar in American Studies, May 12-14, Strobl, Austria.
- 2015 Dein, J. Soundscapes of the Alpine Landscapes. A paper presented at the Global Sustainable Soundscapes Network Workshop, July 13-17, Wood River, Nebraska and Brookings, South Dakota.
- 2012 Dein, J. GIS-based Web Analysis Tool for Landowners in the Marcellus Shale Region. A paper presented at the American Water Resource Association Specialty Conference: GIS and Water Resources, March 26-28, New Orleans, Louisiana.

TEACHING

- 2016 Fulbright English Teaching Assistant, School Board for Tyrol, Innsbruck, Austria
Taught and created lesson plans for 13 classes per week at two secondary schools.

RESEARCH

- 2015–2016 Noise data collection and modeling, University of Innsbruck, Austria
Designed and conducted a study to predict the acoustic environment across the landscape with two collaborators at the Institute of Ecology (Fulbright grant).
- 2011–2012 GIS analysis, Lafayette College, Pennsylvania
Developed a web application for landowners in the Delaware River Basin to predict potential impacts from natural gas development.
- 2011–2012 Stream monitoring, Martins-Jacoby Watershed Association, Pennsylvania
Monitored a high-quality stream near the Delaware Water Gap to assess the impact of nearby municipal water supply wells.
- 2010–2011 GIS development, Nazareth Municipal Authority (NBMA), Pennsylvania

Lead part of a three-year project with NBMA to develop a GIS of the town's utilities.

COMMUNITY INVOLVEMENT

2008–2012 Volunteer National Ski Patroller, Tanglwood Mountain, Tafton, Pennsylvania

2008–2012 Ski and Snowboard Racing Team, Lafayette College, Pennsylvania
(President, 2012)

2008–2012 Rowing Team, Lafayette College, Pennsylvania

2011–2012 Peer Tutor in Engineering, Lafayette College, Pennsylvania

2011 Member of the Delaware River Basin Discussion Group, Easton, Pennsylvania

PROFESSIONAL MEMBERSHIPS

since 2018 American Association of Geographers (AAG)

2018 American Geographical Society (AGS)

2018 Southeastern Division of the Association of American Geographers (SEDAAG)

2012 Sigma Xi Research Society

2011 American Society of Civil Engineers (ASCE)

2011 American Water Resources Association (AWRA)

2011 Delta Phi Alpha National German Honorary Society

2011 Tau Beta Pi Engineering Honor Society

2011 Phi Beta Kappa Honor Society

PROFESSIONAL LICENSES

2020 Licensed Professional Engineer (PE) in Tennessee
License number: 122884

COMPUTER SKILLS

programming	Python, R, C, MATLAB, SQL, git
web development	HTML, CSS, SASS, JavaScript
web frameworks	Django, jQuery, Compass, Gulp
GIS	ArcGIS, PostGIS, fiona, rasterio, geopandas
engineering	AutoCAD Civil 3D, WinTR-55, HEC-HMS
databases	PostgreSQL, MySQL
data analysis	SciPy, pandas, scikit-learn, PyMC3
data visualization	matplotlib, seaborn, bokeh
design	Photoshop

LANGUAGES

English native language
German fluent in speaking, writing, and reading