

# Evgeny Noi

PhD Candidate

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## Education

- 2018-now Ph.D. in Geographic Information Science, University of California, Santa Barbara, USA
- 2023 M.A in Statistics, Data Science, University of California, Santa Barbara, USA
- 2015 M.A. in Leadership for Sustainability, University of Malmo, Malmo, Sweden
- 2013 M.S. in Urban Planning, University of Iowa, Iowa City, USA
- 2010 B.S. in Political Science, Irkutsk State University, Irkutsk, Russia

## Refereed Journal Articles and Publications

- 2025 **Noi E.**, Leyk S., Balk D., Montgomery M., Jones B. & Agu E. (in preparation). Forecasting the Urban future: Comparative Spatially-Explicit Predictive Modeling. Unpublished manuscript. [Noi et al., 2025a]
- 2025 Montgomery M., Agu E., Balk D., Carioli A., Leyk S. & **Noi E.** (in preparation). Gridded Population Age-structures and Dependency Ratios: New methods and applications. Unpublished Manuscript. [Noi et al., 2025b]
- 2024 **Noi E.**, Dodge S. & Murray T. A. (in preparation). Spatio-Temporal Data Integration Framework for Studying and Inferring Human Movement. Unpublished manuscript. [Noi et al., 2024a]
- 2024 **Noi, E.**, Dodge, S., & Murray, T. A. (submitted). Exploring the effects of wildfire events on aggregate movement patterns in southern and central California. *Applied Geography*. [Noi et al., 2024b]
- 2023 **Noi E.**, Rudolph A. & Dodge S. VASA: an exploratory visualization tool for mapping spatio-temporal structure of mobility – a COVID-19 case study, *Cartography and Geographic Information Science*. <https://doi.org/10.1080/15230406.2022.2156388> [Noi et al., 2023a]
- 2022 **Noi, E.**, & Murray, A. T. Interpolation biases in assessing spatial heterogeneity of outdoor air quality in Moscow, Russia. *Land Use Policy*, 112, 105783. <https://doi.org/10.1016/j.landusepol.2021.105783> [Noi & Murray, 2022]
- 2022 **Noi E.**, Rudolph A. & Dodge S. Assessing COVID-induced changes in spatiotemporal structure of mobility in the United States in 2020: a multi-source analytical framework, *International Journal of Geographical Information Science*, 36:3, 585-616. <https://doi.org/10.1080/13658816.2021.2005796> [Noi et al., 2022a]
- 2021 Dodge S. & **Noi E.** Mapping trajectories and flows: facilitating a human-centered approach to movement data analytics, *Cartography and Geographic Information Science*, 48:4, 353-375. <https://doi.org/10.1080/15230406.2021.1913763> [Dodge & Noi, 2021]

- 2020 Murray, A. T., Xu, J., Baik, J., Burtner, S., Cho, S., **Noi, E.**, Pludow, A. & Zhou, E. Overview of contributions in geographical analysis: Waldo Tobler. *Geographical Analysis*, 52(4), 480-493. <https://doi.org/10.1111/gean.12257> [Murray et al., 2020]

### Peer-reviewed Conference Proceedings

- 2023 Noi, E. & Dodge, S. A Data Fusion Framework for Exploring Mobility around Disruptive Events. *12<sup>th</sup> International Conference on Geographic Information Science (GIScience 2023) in Short Paper Proceedings*, Schloss Dagstuhl-Leibniz-Zentrum für Informatik. <https://drops.dagstuhl.de/opus/volltexte/2023/18952/pdf/LIPICs-GIScience-2023-57.pdf> [Noi et al., 2023b]
- 2022 Noi, E., Rudolph, A., & Dodge, S. Mapping spatial and temporal variability in mobility patterns in California during 2020-2022. In *AutoCarto 2022 Proceedings*, Redlands, CA. [https://cartogis.org/docs/autocarto/2022/docs/abstracts/Session5\\_Noi\\_0720.pdf](https://cartogis.org/docs/autocarto/2022/docs/abstracts/Session5_Noi_0720.pdf) [Noi et al., 2022b]
- 2021 Noi, E., Rudolph, A., Dodge, S. A novel method for mapping spatiotemporal structure of mobility patterns during the COVID-19 pandemic. In *GIScience Conference 2021 Short Paper Proceedings*, UC Santa Barbara: Center for Spatial Studies. <https://doi.org/10.25436/E2WC7B>. [Noi et al., 2021]

### Conference Presentations & Invited Talks

- 2024 Geo-Aware Urban Population Growth Modeling. *AGU 2024 Annual Meeting*, December 13, 2024.
- 2023 Visual Analytics for Spatial Association: Exploring Spatio-Temporal Patterns of Human Mobility, University of Chicago Spatial Data Science Center, May 16, 2023.
- 2022 Mapping spatial and temporal variability in mobility patterns in California during 2020-2022, *AutoCarto 2022*, November 3, 2022.
- 2021 A novel method for mapping spatiotemporal structure of mobility patterns during the COVID-19 pandemic. *GIScience 2021*, September 29, 2021.
- 2021 Mapping trajectories and flows: Facilitating a human-centered approach to movement data analytics. *AAG Annual Meeting*, April 8, 2021.
- 2020 Spatial sampling configuration for air quality network monitoring. *North American Regional Science Council Annual Meeting*. November 12, 2020.
- 2019 Urban Sensing Optimization and Sampling. The Case of Moscow Air Quality Monitoring Network. *AAG Annual Meeting*, April 6, 2019
- 2017 Using anonymized Call Detailed Records (CDR) to assess mobility and residential patterns of people with disabilities in Moscow, Russia. *First Congress of Producers and Distributors of Rehabilitation Equipment in Russia*. December 12, 2017.

### Policy Reports

- 2014 The University of Iowa Public Policy Center. Analysis of Impediments to Fair Housing Choice.

2013 Noi E., Chen L., Sanchagrin J., Uhl A., Voigt B., West K. & Yanke J. Dubuque County Sustainability Indicators. *Iowa Initiative for Sustainable Communities*.

## Courses Taught

- GEOG 172 (UCSB): Intermediate Geographic Data Analysis (2022)
- GEOG 176A (UCSB): Introduction to Geographic Information Systems and Science (2021)
- GEOG 12 (UCSB): Maps and Spatial Reasoning (2019, 2020)

## Teaching Experience

2018-23 Teaching Assistant, Department of Geography, UCSB

- GEOG W12: Maps and Spatial Reasoning
- GEOG 176A: Geographic Information Systems and Science
- GEOG 176C: GIS Design and Applications
- GEOG 3A: Ocean Atmosphere
- GEOG 190: Location Theory and Modelling

2023 Research Mentor, UCSB Data Science Capstone

2019-22 Research Mentor, UCSB Faculty Research Assistant Program (FRAP)

2022 Research Mentor, UCSB Summer Research Mentorship Program

2021 Research Mentor, California Alliance for Minority Participation

2011-13 Teaching Assistant, School of Urban and Regional Planning, University of Iowa

- GEOG:3920:0001/2: Planning Livable Cities

## Research Experience

2024 Research Associate, Population Center, Institute of Behavioral Science, CU Boulder

- Designed and compared spatio-temporal modeling framework for analyzing patterns of population development in Kenya, Vietnam, Peru, South Korea, Spain.
- Customized domain adaptation techniques to generate population gridded data products for the conterminous United States.

2023 Research Assistant, Santa Fe Institute, NM, USA

- Created and maintained automated data-gathering and data-processing pipelines for NSF-funded project on the Effect of Social Networks in Inequality.
- Engineering a reporting pipeline to compile site-specific geospatial attributes for remote sites.
- Designed R-package 'endow' that accelerated data-driven tasks by 50%.

2022 Research Assistant, Regional Wildfire Mitigation Program, UCSB

- Developed an open-source agent-based simulation to investigate the impacts of wildfire-evacuation in the city of Santa Barbara.

- 2019-23      Research Assistant, Department of Geography, UCSB
- Created multi-source database for COVID-induced mobility in the US for 2019-2020. Part of the “VCR COVID-19 Seed Grant for the Collaborative Project: A data-driven approach to modeling the effects of non-pharmaceutical interventions in disease progression dynamics at varying geographic granularities”.
  - Developed an open-source Python package VASA to explore spatio-temporal structure of mobility in United States during the COVID-19 pandemic
  - Automated data analysis and data fusion pipelines for data mining spatio-temporal patterns in human movement during wildfire season in California

## **Professional and Consulting Experience**

- 2017-18      Team Lead, Big Data Division, City of Moscow
- Employed machine learning algorithms to forecast fires and prioritize fire inspections
  - Utilized SARIMA-based models to forecast city-wide flu outbreaks in schools
  - Developed forecasting tools for K-12 student performance and professional trajectory
  - Enabled large scale intra-city migration analysis
- 2015-17      Data Engineer, Big Data Division, City of Moscow
- Developed and employed ETL procedures to automate the processing of data from disjoint city data systems
  - Supplied data-analytics and visualizations for weekly mayoral briefings
- 2013-14      GIS Analyst, GeoGracom Ltd.
- Visualized transportation data and annotated GIS analyses in preparation of transportation master plans for Volgograd and Sverdlovsk oblast
- Consultant, Russian Academy of Transportation
- Adjusted a region-wide model to account for environmental and economic impacts of transportation modernization

## **Honors and Awards**

- 2023            Excellence in Research Award, Department of Geography, UCSB
- 2021            UCSB Open Access Publishing Fund
- 2014-15        Swedish Institute Visby Scholarship
- 2011-13        Fulbright Scholarship
- 2006-09        Oxford Russian Fund Scholarship

## **Service**

- 2019-20        Sports Committee, Department of Geography, UCSB
- 2018-19        Outreach Committee, Department of Geography UCSB

2014-15 Swedish Institute Network for Future Global Leaders, Malmo Chapter Board Chairman

2011-13 Graduate Student Senate Representative, University of Iowa

### **Professional Society Membership**

2018-now American Association of Geographers

2018-23 North American Regional Science Council

2020-21 Institute of Mathematical Statistics

2011-13 American Planning Association