

# Rachael Thompson Panik - Curriculum Vitae

## PERSONAL INFORMATION

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Rachael Thompson Panik, AICP  
PhD Student  
Georgia Institute of Technology  
Advisor: Kari E. Watkins, PE, PhD  
Department of Civil and Environmental Engineering  
790 Atlantic Drive  
Atlanta, GA 30332

Tel.: +1 (256) 997-6913  
Email: [rtpanik@gatech.edu](mailto:rtpanik@gatech.edu)  
GMail: [rtpanik@gmail.com](mailto:rtpanik@gmail.com)  
Homepage: <http://rtpanik.com/>  
Google Scholar: <https://scholar.google.com/citations?user=JJgdD7QAAAAJ&hl=en>  
ORCID: <https://orcid.org/0000-0001-7669-5409>  
Linkedin: <https://www.linkedin.com/in/rachael-thompson-panik-aicp-6054a885/>

## EDUCATION

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- 08/2020–present    **PhD, Transportation Systems Engineering**  
Georgia Institute of Technology, Atlanta, GA, USA  
**Thesis:** [Alternative Methods for Volume and Risk Estimation for Non-Motorized Travel](#)  
**Advisor:** Kari E. Watkins, PE, PhD  
**Co-Advisor:** Michael Rodgers, PhD
- 08/2016–05/2018    **Master of City and Regional Planning**  
Clemson University, Clemson, SC, USA  
Magna Cum Laude  
Edward McCallum Scholar  
**Thesis:** ["Safety in Numbers" and Bicycle Safety: A Detailed Analysis of the Denver Metropolitan Area](#)  
**Advisor:** Eric Morris, PhD
- 08/2012–06/2016    **B.S.C., Civil Engineering**  
University of Alabama at Birmingham, Birmingham, AL, USA  
Magna Cum Laude  
Civil Engineering Honors  
Japanese Language Minor

## PROFESSIONAL EXPERIENCE

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- 08/2021–08/2022 **Physical Activity Policy, Research, and Evaluation Network, Center for Disease Control**  
Position: Transportation Work Group Fellow  
Supervisor: Karin Valentine Goins, KarinValentine.Goins@umassmed.edu
- 01/2017–04/2020 **Toole Design Group**  
Position: Transportation Planner and Engineer  
Supervisor: Jared Draper, jdraper@tooledesign.com
- 08/2016–12/2016 **Clemson University**  
Position: Graduate Research Assistant  
Supervisor: Eric Morris, PhD, emorri7@clemson.edu

## TEACHING EXPERIENCE

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- 08/2022–Current **Georgia Institute of Technology**  
Position: Instructor  
Course: CEE 4610, Multimodal Transportation Engineering  
Co-Instructor: Michael Rodgers, PhD
- 01/2021–05/2021 **Georgia Institute of Technology**  
Position: Teaching Assistant  
Course: CEE 4660, Sustainable Transportation Abroad  
Instructor: Kari E. Watkins, PhD
- 08/2020–12/2020 **Georgia Institute of Technology**  
Position: Teaching Assistant  
Course: CEE 4610, Multimodal Transportation Engineering  
Instructor: Kari E. Watkins, PhD
- 08/2011–12/2011 **University of Alabama at Birmingham**  
Position: Teaching Assistant  
Course: CE 220, Mechanics of Solids  
Instructor: Christopher Waldron, PE, PhD

## PUBLICATIONS

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### Journal Publications

1. EDERER, D. J., WATKINS, K. E., BOTCHWEY, N., AND **Panik**, R. T. The safe systems pyramid: A new framework for traffic safety. *In review: Journal of Transport and Health TBD* (2022), 1–20
2. DEAN, M. D., AMAYA, K. A., HALL, J., GUPTA, K. M., **Panik**, R. T., GUSTAT, J., AND CRADOCK, A. L. Safe streets for some: A review of local active transportation responses

- across the u.s. during the covid-19 pandemic. *In review: Journal of Transport and Health TBD* (2022), 1–19
3. **Panik**, R. T., EDERER, D. J., AND WATKINS, K. E. Metrics of mobility: Assessing the impact of COVID-19 on travel behavior. *Accepted, Pre-Print: Transportation Research Record: Special Issue on COVID-19 2* (2022), 1–20
  4. JIN, W., MURALI, S., CHO, Y., ZHI, H., LI, T., **Panik**, R. T., RIMU, A., DEB, S., WATKINS, K. E., YIAN, X., AND LI, M. CycleGuard: a smartphone-based assistive tool for cyclist safety using acoustic ranging. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 5* (2021), 1–30
  5. **Panik**, R. T., MORRIS, E. A., AND VOULGARIS, C. T. Does walking and bicycling more mean exercising less? evidence from the us and the netherlands. *Journal of Transport & Health 15* (2019), 1–17
  6. JIN, W., MURALI, S., CHO, Y., ZHI, H., LI, T., **Panik**, R. T., RIMU, A., DEB, S., WATKINS, K. E., YIAN, X., AND LI, M. CycleGuard: a smartphone-based assistive tool for cyclist safety using acoustic ranging. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 5* (2021), 1–30

## Conferences

1. **Panik**, R. T., NAZEMI, H., SALEH, J. H., FITZPATRICK, B., AND MOKHTARIAN, P. L. Probing elements of safety culture in engineering students: Exploratory analysis and preliminary results. In *Proceedings from the European Safety and Reliability Conference* (Dublin, Ireland, 2022), pp. 100 – 108
2. KARN, K., JOGANICH, T., TYRRELL, R. A., **Panik**, R. T., LEE, J. D., AND SCHWEBEL, D. C. Safety considerations for cyclists and pedestrians. In *Proceedings from the Human Factors and Ergonomics Society Conference* (Atlanta, Georgia, 2022)
3. **Panik**, R. T., EDERER, D. J., AND WATKINS, K. E. Metrics of mobility: Assessing the impact of COVID-19 on travel behavior. In *Transportation Research Board Annual Meeting* (Washington, DC, 2022)
4. **Panik**, R. T., MORRIS, E. A., AND VOULGARIS, C. T. Does walking and bicycling more mean exercising less? evidence from the us and the netherlands. In *Transportation Research Board Annual Meeting* (Washington, DC, 2019)

## Technical Reports

1. SISIOPIKU, V. P., **Panik**, R. T., AND RAMADAN, O. E. UAB commuter survey. Tech. rep., University of Alabama at Birmingham, Birmingham, AL, 2016

## PROJECTS IN PROGRESS

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1. **Panik**, R. T., NAZEMI, H., SALEH, J. H., FITZPATRICK, B., AND MOKHTARIAN, P. L. Safety perceptions among engineering students. *Working Manuscript Complete* (2022)

2. **Panik, R. T., AND WATKINS, K. E.** Pedestrian volume estimation methods: A systematic literature review. *Working Manuscript* (2022)

## VOLUNTEERING & SERVICE

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### Organizing Committee

1. **NPC'22:** American Planning Association National Planning Conference. Role: NPC Planning Committee Member

### Student Volunteer

1. **TRB'22:** Paper Reviewer for ACH20 Bicycle Committee as a Committee Friend
2. **TRB'21:** Paper Reviewer for ACH20 Bicycle Committee as a Committee Friend

### Service

1. **CEE PhAM Program, Co-Organizer, 2021-present:** Serves as a mentor and co-leader for the departmental PhD Applicant Mentorship program (CEE PhAM), which provides guidance through workshops and one-on-one meetings with undergraduate students who are interested in advanced degrees.
2. **UTIL Journal Club Organizer, 2021-2022:** Initiated the first academic journal club centered on multimodal transportation within the Urban Transportation Information Lab (UTIL) at Georgia Tech.
3. **American Planning Association, 2017-present:** Served in a variety of leadership positions within the APA, including a member of the Board of Directors (2017-2019), the Student Representatives Council Chair and Past Chair (2017-2022), and Education Committee Member (2021-2022).

## HONORS, AWARDS & SCHOLARSHIPS

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1. **Center For Transportation Equity, Decisions, and Dollars Student of the Year (2021):** Selected for recognition award and scholarship for the CTEDD program based on human factors and safety research.
2. **Georgia Department of Transportation Research Grant Awardee (2021):** Co-authored a successful grant application to study bicycle and pedestrian activity, exposure, and safety. Awarded \$250,000 over a 36-month study period.
3. **Dwight D. Eisenhower Transportation Fellowship (2020, 2021):** Twice awarded a nationally-competitive scholarship given to students in transportation-related disciplines to attract the nations brightest minds to the field of transportation.
4. **Georgia Institute of Technology Presidents Fellowship (2020):** Fellowships offered annually to a select number of PhD students who bring exemplary scholarship and innovation to the academic departments.

5. **Fulbright Scholar Award Recipient (2018)**: Awarded scholarship to study autonomous vehicle interactions with vulnerable road user at Leeds Universitys Institute for Transport Studies.
6. **Edward L. Falk Citation for Merit (2017)**: Award given to one first-year student in Clemson Universitys City & Regional Planning program based on professional promise and service to the program.
7. **Ed McCallum Scholarship (2016)**: Endowment presented to the highest ranked incoming graduate student in Clemson Universitys City & Regional Planning Program.
8. **State Department Critical Languages Scholar (2015)**: Selected as a top 10 percentile applicant for a nationally competitive foreign language award. Studied Japanese in Hikone, Japan, in an immersive environment during the summer of 2015.

#### SCHOOLS AND WORKSHOPS ATTENDED

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1. **University of Shiga Prefecture (2015)**: Immersive Japanese language learning in Hikone, Japan, during the summer of 2015.

#### LANGUAGES

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English (native)

Japanese (basic)

#### REFERENCE

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##### **Prof. Kari E. Watkins, PE, PhD** ( PhD advisor)

Position: Assistant Professor at University of California - Davis

Department: Civil and Environmental Engineering

Phone: (206) 250-4415

Email: [kewatkins@ucdavis.edu](mailto:kewatkins@ucdavis.edu)

##### **Prof. Michael Rodgers, PhD** (PhD co-advisor)

Position: Regents Researcher at Georgia Institute of Technology

Department: Civil and Environmental Engineering

Phone: (404) 385-0569

Email: [michael.rodgers@ce.gatech.edu](mailto:michael.rodgers@ce.gatech.edu)

*Addresses available on request.*

*[CV compiled on August 19, 2022]*

Atlanta, Georgia, USA, August 19, 2022