

PINGFAN HU

胡平凡

PhD Candidate · Systems Engineering
George Washington University

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PHD CANDIDATE · GWU · 2026

RESEARCH FOCUS

Data science & quantitative modeling in sustainable transportation & human behavior; develops open-source survey software surveydown.

EDUCATION

PhD · Systems Eng. (2026)

George Washington Univ., DC
Advisor: John Paul Helveston

M.Eng. · Mechanical Eng. (2018)

University of Sydney, Australia
Engineers Australia accredited

B.S. · Industrial Eng. (2015)

Pennsylvania State University
Minor in Six Sigma

HONORS

- ★GW SEAS Feature (2025)
- ★GW Student OSS Award 2nd (2024)

MEMBERSHIPS

- IEEE
- TRB

RESEARCH

surveydown

Open-source R package combining Quarto UI, Shiny web framework, and PostgreSQL for programmable reproducible surveys.

sdstudio

Companion GUI for surveydown — survey design and database management, published as a Shiny app.

EV Smart Charging Adoption

Survey and discrete-choice modeling of EV owner preferences for managed charging and V2G programs.

Grid Peak-Shaving

Simulate nationwide EV charging load on grid supply curves, quantifying smart charging peak-reduction potential.

INDUSTRY

Software Engineer

Harsco Rail · US / China (2021–22)
Led software delivery for Undercutter and Grinder rail projects; full programming and PM lifecycle.

Project Engineer

GE Appliances · Qingdao (2019–20)
Edison Engineering Development Program; PLM management and engineering design for appliance lines.

Process Engineering Intern

Kurtz Ersa GmbH · Germany (2017)
Executed DoE for new soldering technologies; appeared in Ersa Asia marketing video.

PUBLICATIONS

- Hu et al. (2025). "surveydown: An open-source, markdown-based platform for programmable and reproducible surveys." *PLOS ONE*, 20(8).
- Hu et al. (2025). "Measuring electric vehicle owners' willingness to participate in smart charging programs." *Environmental Research Letters*.

2 conf. papers 2 working papers 4 software pkgs

6 talks

TEACHING

- TA (Fall 2025) EMSE 4572/6572 · Exploratory Data Analysis
- TA (Spring 2025) EMSE 4571 · Programming for Analytics
- Workshop Instructor · Quant UX Con 2025 (online)
- Workshop Instructor · Workshops for Ukraine 2025 (online)

Programming R Python C++ Swift SQL JavaScript Shell

Data Science Statistical Modeling Discrete Choice Conjoint Analysis Monte Carlo Sim. Data Visualization
Survey Design

Tools Quarto R Shiny PostgreSQL Git Netlify Tableau Power BI