

## Bingyu ZHAO

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### Profile

Post-doc at the University of California, Berkeley. Research key words: traffic modeling, pavement degradation, wildfire evacuation, earthquake recovery.

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### Education

#### **Department of Civil and Environmental Engineering, University of California, Berkeley; USA – 2017-2019**

##### *Visiting PhD Student*

- PhD thesis, titled "City-scale eco-routing and pavement eco-maintenance scheduling for CO<sub>2</sub> mitigation".
- Supervisors: Kenichi Soga (UC Berkeley, formerly University of Cambridge), Elisabete Silva (University of Cambridge), Ruchi Choudhary (University of Cambridge).

#### **The Alan Turing Institute; UK – 2016-2017**

##### *Enrichment student*

- PhD research: a city-scale spatial pavement degradation model for San Francisco
- Kaggle competition on Youtube video classification. Responsible for deploying the code on the Microsoft Azure cloud computing platform.
- Data Study Week (DSW) at the Alan Turing Institute. Participated in the first DSW (2016.12), titled "Data-driven benchmarking for the agricultural industry in developed and developing countries", and the second DSW (2017.5), titled "Urban analytics - Machine learning for location prediction".

#### **Department of Engineering, University of Cambridge; UK – 2014-2019**

##### *PhD student*

- PhD research: studying pavement degradation characteristics and maintenance scheduling for urban roads.
- Supervisors: Professor Kenichi Soga (now at UC Berkeley), Dr Elisabete Silva.

#### **College of Civil Engineering, Tongji University; China – 2010-2014**

##### *Bachelor of Engineering (2014)*

- Student Innovation Training Program (SITP): Geothermal snow-melting system for airport pavements (2012.1-2013.12).
- Final year project: Simulation of ground temperature variation due to thermal pipeline drop leakage (2014.2-2014.6).

#### **Department of Civil and Environmental Engineering, National University of Singapore; Singapore – 2012.8-2012.12**

##### *Exchange student, Temasek Foundation (TF) LEARN Scholar*

- Laboratory work at the Center for Transportation Research (2012.10-2012.12).

**Publications**

Zhao, B., Kumar, K., Casey, G., & Soga, K. (2019). Agent-Based Model (ABM) for City-Scale Traffic Simulation: A Case Study on San Francisco. In *International Conference on Smart Infrastructure and Construction 2019 (ICSIC) Driving data-informed decision-making* (pp. 203-212). ICE Publishing.

Zhao, B., Silva, E., & Soga, K. (2018). Pavement degradation: a city-scale model for San Francisco, USA. *Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction*, 171 (3), 93-109. <https://doi.org/10.1680/jsmic.18.00001>

Soga, K., Casey, G., Kumar, K., & Zhao, B. (2017). High Performance Computing for City-Scale Modelling and Simulations. *Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction*, 170 (4), 80-85. <https://doi.org/10.1680/jsmic.17.00026>