

# Ruimin KE

Contact Information	More Hall 101 Smart Transportation Applications and Research Lab University of Washington Seattle, WA, 98195, USA	Phone: (+1) 206-519-9298 Email: ker27@uw.edu <a href="#">Homepage</a> <a href="#">GoogleScholar</a> <a href="#">ResearchGate</a>
Research Interest	<ul style="list-style-type: none"><li>• <u>Advanced urban sensing technologies</u>: I focus on developing advanced urban sensing algorithms, edge computing sensing systems, and sensors, especially their applications to urban transportation and infrastructure systems.</li><li>• <u>Urban computing and data science</u>: I am experienced and interested in urban big data platform development and urban data mining, for the objectives of urban mobility pattern learning, data visualization, and traffic congestion mitigation.</li><li>• <u>Autonomous driving</u>: I focus on machine vision and sensor fusion applications to autonomous driving and developing evaluation frameworks for autonomous driving products.</li><li>• <u>Smart and connected infrastructure</u>: I am interested in exploring AI-based methods and cyber-physical systems to make existing urban infrastructures smart and connected.</li></ul>	
Teaching Interest	<ul style="list-style-type: none"><li>• Traffic Simulation and Systems Operations</li><li>• Urban Data Management and Analytics</li><li>• Sensing Technologies for Smart Cities</li><li>• Intro to Connected and Automated Vehicles</li></ul>	
Education	University of Washington, Seattle, USA <i>Ph.D. in Civil Engineering (Intelligent Transportation Systems)</i> <ul style="list-style-type: none"><li>• Dissertation: Advanced video sensing for real-time traffic surveillance with edge artificial intelligence and urban traffic modeling</li><li>• Advisor: Prof. Yinhai Wang</li></ul> <i>M.S. in Civil Engineering (Intelligent Transportation Systems)</i> <ul style="list-style-type: none"><li>• Thesis: A novel framework for real-time traffic flow parameters estimation from aerial videos</li><li>• Advisor: Prof. Yinhai Wang</li></ul> University of Illinois at Urbana-Champaign, Champaign, USA <i>M.S. in Computer Science</i> <ul style="list-style-type: none"><li>• Concurrently taken online</li></ul> Tsinghua University, Beijing, China <i>B.S. in Automation (Electrical and Computer Engineering)</i> <ul style="list-style-type: none"><li>• Undergraduate Thesis: Development of an automatic alarm system for vehicle anti-theft</li><li>• Advisor: Prof. Danya Yao</li></ul>	July 2016 – June 2020 (expected) Sept 2014 – June 2016 Aug 2019 – Dec 2020 (expected) Sept 2010 – July 2014
Honors and Awards	<ul style="list-style-type: none"><li>• Finalist, Outstanding Chinese Student Abroad (final round ongoing)</li><li>• Outstanding Award, DiDi Transportation Forecasting Competition</li><li>• Outstanding Graduate Student Award, ITE Washington Section</li><li>• Editor's Choice Paper, Journal of Transportation Engineering, Part A: Systems</li><li>• Grand Prize, The International Seafood Industry Transportation Challenge</li><li>• Outstanding Award, Di-Tech Transportation Algorithm Competition</li><li>• Outstanding Reviewer of Transportation Research Part C, Elsevier</li><li>• Graduate Student Travel Award</li><li>• First Place Winner, ITE Bill Kloos Traffic Bowl Competition</li></ul>	2019 2019 2018 2018 2018 2018 2017 2016 2015

- Second Place Winner, PacTrans Student Poster Competition 2014
- Outstanding Student Scholarship, Tsinghua University 2011, 2013
- Third Prize, Undergraduate Physics Contest of Beijing 2011
- Second Prize, China National High School Math Olympia 2009
- Men's Doubles Runner-up, Washington State Badminton Closed 2018
- Men's Singles Runner-up, Washington State Badminton Open 2016
- Men's Singles Champion, Husky Badminton Open 2015
- Men's Team Runner-up, China National Badminton Tournament for University Students 2014
- Men's Singles Champion, Beijing Badminton Tournament for University Students 2011-2013

#### Preprints

1. **Ke R**, Cui Z, Chen Y, Lutin J, Wang Y\* (2019) Real-time vehicle near-miss event logging system with advanced video sensing and edge computing. *IEEE Transactions on Intelligent Transportation Systems* (submitted)
2. **Ke R**, Zhuang Y, Pu Z, Wang Y\* (2019) A smart, efficient, and reliable parking surveillance system with edge artificial intelligence on IoT devices. *IEEE Transactions on Intelligent Transportation Systems* (under major revision)
3. **Ke R**, Feng S, Cui Z, Wang Y\* (2019) An advanced framework for microscopic and lane-level macroscopic traffic parameters estimation from UAV video. *IET Intelligent Transport Systems* (under the 2nd round review)
4. **Ke R**, Li W, Cui Z, Wang Y\* (2019) Two-stream multi-channel convolutional neural network (TM-CNN) for multi-lane traffic speed prediction considering volume impact. *Transportation Research Record* (under the 2nd round review)
5. Cui Z, **Ke R**, Wang Y\* (2019) Stacked bidirectional and unidirectional LSTM recurrent neural network for forecasting network-wide traffic speed with missing values. *Transportation Research Part C: Emerging Technologies* (under the 2nd round review)
6. Cui Z, **Ke R**, Pu Z, Ma X, Wang Y\* (2019) Learning traffic as a graph: a gated graph wavelet recurrent neural network for network-scale traffic prediction. *Transportation Research Part C: Emerging Technologies* (under the 2nd round review)
7. Zhu M, Wang Y\*, Hu J, Wang X, **Ke R** (2019) Safe, efficient, and comfortable velocity control based on reinforcement learning for autonomous driving. *Transportation Research Part C: Emerging Technologies* (under the 2nd round review)
8. Pu Z, Li Z, **Ke R**, Hua X, Wang Y\* (2019) Evaluating the non-linear correlation between vertical curve features and crash frequency on highways using random forests. *Journal of Transportation Engineering, Part A: Systems* (under the 3rd round review)
9. Chen X, Li Z\*, Yang Y, **Ke R** (2018) Microscopic traffic parameter extraction from aerial video with multi-dimensional camera movements. *Transportation Research Part C: Emerging Technologies* (under the 2nd round review)
10. Guo Y, Liu C\*, Chang F, Li S, **Ke R**, Wang Y (2019) High-performance Cyclist Detection Based on Locally Decorrelated Region Proposal and Pyramid Multi-branch YOLO Network. *IEEE Intelligent Transportation Systems Magazine* (under the 2nd round review)

#### Refereed Journal Publications

1. **Ke R**, Li Z, Tang J, Pan Z, Wang Y\* (2019) Real-time traffic flow parameter estimation from UAV video based on ensemble classifier and optical flow. *IEEE Transactions on Intelligent Transportation Systems* 20(1):54-64. (doi: [10.1109/TITS.2018.2797697](https://doi.org/10.1109/TITS.2018.2797697))
2. **Ke R**, Zeng Z, Pu Z, Wang Y\* (2018) New framework for automatic identification and quantification of freeway bottlenecks based on wavelet analysis. *Journal of Transportation Engineering, Part A: Systems* 144(9): 04018044. (doi: [doi.org/10.1061/JTEPBS.0000168](https://doi.org/10.1061/JTEPBS.0000168))
3. **Ke R**, Li Z, Kim S, Ash J, Cui Z, Wang Y\* (2017) Real-time bidirectional traffic flow parameter estimation from aerial videos. *IEEE Transactions on Intelligent Transportation Systems* 18(4):890-901. (doi: [10.1109/TITS.2016.2595526](https://doi.org/10.1109/TITS.2016.2595526))
4. Zhang W\*, Su Y, **Ke R**\*, Chen X (2018) Evaluating the influential priority of the factors on insurance loss of public transit. *Plos ONE* 13(1): e0190103 (doi: [doi.org/10.1371/journal.pone.0190103](https://doi.org/10.1371/journal.pone.0190103))
5. Zhuang Y, **Ke R**, Wang Y\* (2018) Innovative method for traffic data imputation based on convolutional neural network. *IET Intelligent Transport Systems* (doi: [10.1049/iet-its.2018.5114](https://doi.org/10.1049/iet-its.2018.5114))

6. Feng S, **Ke R**, Wang X, Zhang Y, Li L\* (2017) Traffic flow data compression considering burst components. *IET Intelligent Transport Systems* 11(9):572-580 (doi: [10.1049/iet-its.2016.0328](https://doi.org/10.1049/iet-its.2016.0328))
7. Zhou Z\*, Cai Y, **Ke R**, Yang J (2017) A collision avoidance model for two-pedestrian groups: Considering random avoidance patterns. *Physica A: Statistical Mechanics and its Applications* 475:142-154. (doi: [doi.org/10.1016/j.physa.2016.12.041](https://doi.org/10.1016/j.physa.2016.12.041))
8. Zeng Z, Zhu W, **Ke R**, Ash J, Wang Y\*, Xu J, Xu Xi (2017) A generalized nonlinear model-based mixed multinomial logit approach for crash data analysis. *Accident Analysis & Prevention* 99:51-65. (doi: [doi.org/10.1016/j.aap.2016.11.008](https://doi.org/10.1016/j.aap.2016.11.008))
9. Tang J, Liu F, Zhang W, **Ke R**, Zou Y\* (2018) Lane-changes prediction based on adaptive fuzzy neural network. *Expert Systems with Applications* 91:452-463. (doi: [doi.org/10.1016/j.eswa.2017.09.025](https://doi.org/10.1016/j.eswa.2017.09.025))
10. Chen X, Shi C, Wang S, Wu H, Xu T, **Ke R** (2017) Research Review on Marine Search and Rescue. *Journal of Shipping and Ocean Engineering* 7:112-120. (doi: [doi.org/10.17265/2159-5879/2017.03.004](https://doi.org/10.17265/2159-5879/2017.03.004))
11. Cui Z, Henrickson K, **Ke R**, Wang Y\* (2019) Traffic graph convolutional recurrent neural network: a deep learning framework for network-scale traffic learning and forecasting. *IEEE Transactions on Intelligent Transportation Systems* (in press)

Refereed  
Conference  
Proceedings

1. **Ke R**, Zhuang Y, Pu Z, Wang Y (2020) A smart, efficient, and reliable parking surveillance system with edge artificial intelligence on IoT devices. *2020 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
2. Chen X, Yang Y, Yu Z, Wu H, **Ke R** (2020) Detecting ships from coastal surveillance videos with a Canny-Gaussian morphology framework. *2020 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
3. Soule H, Huck S, Krum A, Wang Y, **Ke R**, Valadez D, Sellers D, Lutin J (2020) How we are testing an automated collision avoidance and emergency braking system for buses and what we have learned so far. *2020 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
4. **Ke R**, Li W, Cui Z, Wang Y (2018) Multi-lane traffic pattern learning and forecasting using convolutional neural network. *COTA International Symposium on Emerging Trends in Transportation (ISETT)* (Honolulu, Hawaii, USA).
5. **Ke R**, Lutin J, Spears J, Wang Y (2017) A cost-effective framework for automated vehicle-pedestrian near-miss detection through onboard monocular vision. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* (Honolulu, Hawaii, USA). (doi: [10.1109/CVPRW.2017.124](https://doi.org/10.1109/CVPRW.2017.124))
6. **Ke R**, Pan Z, Pu Z, Wang Y (2017) Roadway surveillance video camera calibration using standard shipping container. *IEEE International Smart Cities Conference (ISC2)* (Wuxi, China). (doi: [10.1109/ISC2.2017.8090811](https://doi.org/10.1109/ISC2.2017.8090811))
7. **Ke R**, Kim S, Li Z, Wang Y (2015) Motion-vector clustering for traffic speed detection from UAV video. *IEEE International Smart Cities Conference (ISC2)* (Guadalajara, Mexico). (doi: [10.1109/ISC2.2015.7366230](https://doi.org/10.1109/ISC2.2015.7366230))
8. Cui Z, **Ke R**, Wang Y (2017) Deep stacked bidirectional and unidirectional LSTM recurrent neural network for network-wide traffic speed prediction. *6th KDD International Workshop on Urban Computing* (Halifax, Canada).
9. Cui Z, Long Y, **Ke R**, Wang Y (2015) Characterizing evolution of extreme public transit behavior using smart card data. *IEEE International Smart Cities Conference (ISC2)* (Guadalajara, Mexico). (doi: [10.1109/ISC2.2015.7366217](https://doi.org/10.1109/ISC2.2015.7366217))
10. Wang Y, Li L, Yu J, Li Z, Wang S, **Ke R** (2015) Identifying the urban transportation corridor based on mobile phone data. *IEEE International Smart Cities Conference (ISC2)* (Guadalajara, Mexico). (doi: [10.1109/ISC2.2015.7366203](https://doi.org/10.1109/ISC2.2015.7366203))
11. Zhuang Y, **Ke R**, Wang Y (2019) A New Method for Traffic Flow Data Collection Using Onboard Monocular Camera. *2019 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
12. **Ke R**, Feng S, Cui Z, Wang Y (2019) An advanced framework for traffic parameters estimation from UAV video. *2019 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
13. Cui Z, Henrickson K, **Ke R**, Wang Y (2019) High-Order Graph Convolutional Recurrent Neural Network: A Deep Learning Framework for Network-Scale Traffic Learning and Forecasting. *2019 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).

14. Chen X, Li Z, Yang Y, Wu H, **Ke R**, Zhou W (2019) A novel framework for automatic vehicle trajectory extraction and denoising from aerial videos. *2019 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
15. Li Z, Chen X, Ling L, Wu H, Zhou W, **Ke R** (2019) Microscopic traffic parameter extraction from aerial videos with multi-dimensional camera movements. *2019 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
16. Zhuang Y, **Ke R**, Wang Y (2018) An innovative method for traffic data imputation based on convolutional neural network. *2018 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
17. Luo Y, Liang Y, **Ke R**, Luo X (2018) Traffic flow parameter estimation from satellite video data based on optical flow. *2018 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
18. **Ke R**, Zeng Z, Pu Z, Wang Y (2018) A new framework for automatic identification and quantification of freeway bottlenecks based on wavelet analysis. *2018 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
19. Lutin J, Spears J, Wang Y, **Ke R**, Clancy S (2018) Testing automated collision avoidance warning systems in transit bus revenue operations: active safety collision warning pilot in Washington state. *2018 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
20. Ke R, Spears J, Lutin J, Wang Y (2017) Automated vehicle-pedestrian near-miss detection through onboard monocular vision. *2017 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
21. **Ke R**, Kim S, Li Z, Ash J, Wang Y (2016) Efficient bidirectional traffic flow parameter estimation from aerial videos. *2016 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
22. **Ke R**, Kim S, Li Z, Wang Y (2016) Efficient vehicle detection in aerial videos using combined cascaded classifiers and neural network detector. *2016 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).
23. **Ke R**, Zhang Y, Wang Y (2015) Roadway surveillance camera calibration using standard moving objects. *2015 Transportation Research Board (TRB) Annual Meeting* (Washington DC, USA).

Technical  
Project  
Reports

1. Wang Y, Zhuang Y, **Ke R**, Liu C (2018) A multi-sensor solution for sound transit parking space detection. *Sound Transit Parking Project Research Report*.
2. (Co-PI) Wang Y, **Ke R**, Zhang W, Zeng Z (2018) Developing a cost-effective bus-to-pedestrian near-miss detection method using onboard video camera data. *Pacific Northwest Transportation Consortium (PacTrans) Small Project Final Report*.
3. Spears J, Lutin J, Wang Y, **Ke R**, Clancy S (2017) Active safety-collision warning pilot in Washington state. *TRB Transit-IDEA Program Project Final Report* (report number: Transit IDEA Project 82).
4. Wang Y, **Ke R**, Zhang W, Cui Z, Henrickson K (2016) Digital roadway interactive visualization and evaluation network applications to WSDOT operational data usage. *Washington State Department of Transportation (WSDOT) Research Report* (report number: WA-RD 854.1).

Academic  
Talks

1. October 2019, "Two-stream multi-channel convolutional neural network (TM-CNN) for multi-lane traffic speed prediction considering traffic volume impact," *INFORMS 2019*, Seattle, USA
2. May 2019, "Video-based data collection for intelligent transportation systems," *Institute of Transportation Engineers (ITE) Student Night*, Seattle, USA.
3. October 2018, "Multi-lane traffic pattern learning and forecasting using convolutional neural network," *COTA International Symposium on Emerging Trends in Transportation (ISETT)*, Honolulu, USA.
4. July 2018, "Longitudinal control strategy of platoon with mixed automated and manually driven vehicles for reducing traffic oscillations," *International Conference on Transportation and Development (ICTD)*, Pittsburgh, USA.
5. July 2018, "A multi-sensor solution for large-scale parking space detection," *International Conference on Transportation and Development (ICTD)*, Pittsburgh, USA.

6. January 2018, "Testing transit bus automated collision avoidance warning systems in revenue operations -- active safety collision warning pilot in Washington state," *ITE Washington December Event*, Seattle, USA.
7. August 2017, "Testing transit bus automated collision avoidance warning systems in revenue operations -- active safety collision warning pilot in Washington state," *ITE Washington Annual Conference*, Bellevue, USA.
8. July 2017, "A cost-effective framework for automated vehicle-pedestrian near-miss detection through onboard monocular vision," *IEEE Conference on Computer Vision and Pattern Recognition*, Honolulu, USA.
9. September 2016, "Washington state public transit collision avoidance pilot," *40th Annual Public Transportation Conference*, Wenatchee, USA.
10. August 2016, "Real-time bidirectional traffic flow parameter estimation from aerial videos," *PacTrans-Tojing PhD Student Research Symposium in Transportation Science and Technologies*, Seattle, USA.
11. October 2015, "Motion-vector clustering for traffic speed detection from UAV video," *IEEE International Smart Cities Conference (ISC2)*, Guadalajara, Mexico.
12. October 2015, "Identifying the urban transportation corridor based on mobile phone data," *IEEE International Smart Cities Conference (ISC2)*, Guadalajara, Mexico.
13. October 2015, "Applying semi-supervised learning method for cellphone-based travel mode classification," *IEEE International Smart Cities Conference (ISC2)*, Guadalajara, Mexico.
14. January 2015, "Roadway surveillance camera calibration using standard moving objects," *2015 Transportation Research Board (TRB) Annual Meeting*, Washington DC, USA.

#### Teaching

1. **Pre-Doctoral Instructor**, University of Washington Fall 2019  
*CET 590: Traffic Simulation and Systems Operations*
2. **Teaching Assistant**, University of Washington Fall 2018  
*CET 590: Traffic Simulation and Systems Operations*
3. **Guest Lecturer**, University of Washington Fall 2018  
*EE(P) 502: Analytical Methods for Electrical Engineering*  
Lecture Topic: Computer vision applications in transportation engineering
4. **Guest Lecturer**, University of Washington Winter 2019  
*CET 412: Transportation Data Management and Analytics*  
Lecture Topic: Advances in sensor technology for robust traffic data collection
5. **Guest Lecturer**, University of Washington Spring 2016 – 2019  
*Engineering Discovery Days*  
Lecture Topic: Drone-based traffic detection and management

#### Mentorship

- Mayuree Binjolkar, graduate student Mar 2018 – June 2018  
*Research topic: Onboard traffic video segmentation with image depth estimation*
- Yanlong Chen, undergraduate student Mar 2019 – June 2019  
*Research topic: An advanced traffic near-miss detection method using onboard monocular camera* (undergraduate thesis at Tsinghua University, final score: 94/100)
- Kassie Jia, undergraduate student July 2018 – Sept 2018  
*Research topic: Vehicle trajectory data mapping in Open Street Map*
- Nanye Du, undergraduate student July 2018 – Sept 2018  
*Research topic: Traffic detection in embedded systems*
- Frank Yang, undergraduate student July 2016 – Sept 2016  
*Research topic: Transit telematics data management and analysis*
- Yifan Zhuang, undergraduate student July 2015 – Sept 2015  
*Research topic: Using optical flow methods for traffic detection and tracking in roadway surveillance videos*

Professional Services	<ul style="list-style-type: none"> <li>• <b>Young Committee Member</b>, American Society of Civil Engineers (ASCE) Transportation and Development Institute (T&amp;DI) Infrastructure Systems Committee</li> <li>• <b>Committee Member</b>, Transportation Research Board (TRB) Standing Committee on Statewide Data and Information Systems (ABJ20)</li> <li>• <b>Committee Member</b>, World Transportation Convention (WTC) Transportation and Spatial Modeling Committee</li> <li>• <b>Chair of Student Affairs</b>, Chinese Overseas Transportation Association (COTA)</li> <li>• <b>Organizing Committee Co-Chair</b>, COTA TRB Winter Symposium</li> <li>• <b>Session Co-Chair</b>, Connected and Autonomous Vehicles, 20th COTA International Conference of Transportation Professionals (CICTP)</li> <li>• <b>Conference Session Chair</b>, “Multimodal Transportation System for Shared Mobility” Session, COTA International Symposium on Emerging Trends in Transportation (ISETT)</li> <li>• <b>Area Editor</b>, 5th International Conference on Transportation Information and Safety (ICTIS)</li> <li>• <b>Area Editor</b>, 17th COTA International Conference of Transportation Professionals (CICTP)</li> <li>• <b>Technical Committee Member</b>, IEEE First International Smart Cities Conference (ISC2)</li> <li>• <b>Webmaster</b>, Institute of Transportation Engineers (ITE) University of Washington Student Chapter</li> <li>• <b>Student Member</b>, Institute of Electrical and Electronics Engineers (IEEE)</li> <li>• <b>Student Member</b>, American Society of Civil Engineers (ASCE)</li> </ul>	<p>Oct 2018 – present</p> <p>April 2017 – present</p> <p>Aug 2017 – present</p> <p>Jan 2016 – present</p> <p>2020</p> <p>2020</p> <p>2018</p> <p>2019</p> <p>2017</p> <p>2015</p> <p>Oct 2014 – June 2016</p> <p>Oct 2015 – present</p> <p>Aug 2018 – present</p>
Referee for Journals and Conferences	<ul style="list-style-type: none"> <li>• IEEE Transactions on Intelligent Transportation Systems</li> <li>• IEEE Transactions on Vehicular Technology</li> <li>• Transportation Research Part C: Emerging Technologies</li> <li>• Journal of Transportation Engineering</li> <li>• Journal of Intelligent Transportation Systems</li> <li>• Journal of Advanced Transportation</li> <li>• IET Intelligent Transport Systems</li> <li>• International Journal of Distributed Sensor Networks</li> <li>• Transportation Research Record</li> <li>• Physica A</li> <li>• PLoS ONE</li> <li>• EURASIP Journal on Wireless Communications and Networking</li> <li>• Sensors</li> <li>• Electronics Letters</li> <li>• Transportation Research Board Annual Meeting (2018, 2019)</li> <li>• IEEE International Smart Cities Conference (2015, 2016)</li> <li>• IEEE Conference on Intelligent Transportation Systems (2017)</li> <li>• COTA International Conference of Transportation Professionals (2017, 2018, 2019)</li> <li>• COTA International Symposium on Emerging Trend in Transportation (2018, 2019)</li> </ul>	
Media Coverage	<ul style="list-style-type: none"> <li>• Ruimin Ke was awarded the ITE Washington 2018 Outstanding Graduate Student Award. <a href="#">UW News</a></li> <li>• Fresh perspectives on salmon transport. <a href="#">UW News</a></li> <li>• PacTrans hosts technology transfer showcase at WA ITE annual conference. <a href="#">PacTrans News</a></li> <li>• PacTrans student research presents at IEEE CVPR conference. <a href="#">PacTrans News</a></li> <li>• Videos show warning system helps bus drivers in close-call scenarios.</li> </ul>	<p>Nov 30, 2018</p> <p>July 16, 2018</p> <p>Aug 23, 2017</p> <p>Aug 22, 2017</p> <p>May 11, 2016</p>

- STAR Lab collision avoidance research featured on KIRO 7. [UW News](#)

May 1, 2016

References

- Dr. Yin Hai Wang  
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- Dr. Ed McCormack  
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- Dr. Lei Zhang  
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- Dr. Jerome Lutin  
Senior Director, Statewide and Regional Planning, New Jersey Transit (retired)  
Distinguished Research Professor, New Jersey Institute of Technology (retired)  
Fellow, Institute of Transportation Engineers (ITE)  
Website: <https://www.linkedin.com/in/jerome-lutin-315b1822/>  
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- Dr. Ming-Ting Sun  
Professor, Data Science, ECE, University of Washington  
Director, Information Processing Lab  
Fellow, Institute of Electrical and Electronics Engineers (IEEE)  
Editor in Chief, Journal of Visual Communications and Image Representation  
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