Hima Elsa Shaji

CONTACT INFORMATION

Research Scholars' Lab
Transportation Engineering Division
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EDUCATION

Dual MS and PhD: Indian Institute of Technology Madras (IITM)
Chennai, India
2014 - present

CGPA - 9.11

Relevant Coursework

- Traffic Engineering & Management
- Traffic Flow Theory
- Intelligent Transportation Systems
- Analytical Techniques in Transportation Engineering
- Applied Time Series Analysis

Bachelor of Technology: Govt. Rajiv Gandhi Institute of Technology
Mahatma Gandhi University, Kerala, India
2009 - 2013

Major

- Civil Engineering

Aggregate Marks

- 83%

Class XII - All India Senior School Certificate Examination, CBSE
Good Shepherd Public School and Junior College
2009.

Marks - 93.4

Class X - All India Secondary School Examination, CBSE
Good Shepherd Public School and Junior College
2007.

Marks - 96.2

RESEARCH EXPERIENCE

Use of clustering algorithms for the prediction of bus arrival times.
Jan., 2016 - present

Pattern analysis of taxi Global Positioning Systems (GPS) data.
July 2014 - Dec. 2015

The above works were carried out under the supervision of my research advisors Dr. Lelitha Devi Vanajakshi and Dr. Arun K. Tangirala.

Teaching Experience

Traffic Engineering & Management (CE5830) Teaching Assistant, CE, IITM
July - Nov., 2015, July - Nov., 2016.
- Assisted in designing and grading of assignments and exams.

Transportation Engineering - II (CE3020) Teaching Assistant, CE, IITM
Jan. - May., 2017
- Facilitated designing and grading of assignments and exam.

Intelligent Transportation Systems ITS (CE5900) Teaching Assistant, CE IITM
Jul. - Nov., 2017
- Helped in designing and grading of assignments and exam.
- Took classes on the applications of data analysis in ITS.

Traffic Flow Theory TFT (CE6840) Teaching Assistant, CE IITM
Jan. - Present, 2018
- Helped in designing and grading of assignments and exam.

Internship

Summer Fellowship Program: Department of Civil Engineering, IIT Madras.
May. - Jul., 2012
- Use of bluetooth sensors and Global Positioning Systems (GPS) under Indian traffic conditions.

Publications

Hima, E. S., Tangirala, A. K., & Vanajakshi, L. D. (2018). Evaluation of Clustering Algorithms for the Prediction of Trends in Bus Travel Time. Transportation Research Record, Journal of Transportation Research Board.

Dhivyabharathi, B., Hima, E. S., & Vanajakshi, L. D. (2016). Stream travel time prediction using particle filtering approach. Transportation Letters, 1-8.

Workshops/ Conference proceedings

Hima, E. S., Tangirala, A. K., & Vanajakshi, L. D. (2021). Effects of Data Characteristics on Bus Travel Time Prediction: A Systematic Study. 100th Annual Meeting of Transportation Research Board, Washington. D. C., USA.

Hima, E. S., Vanajakshi, L. D., & Tangirala, A. K. (2021, January). Effects of Clustering Feature Vectors on Bus Travel Time Prediction: A Case Study. In 2021 International Conference on COMmunication Systems NETworkS (COMSNETS) (pp. 741-746). IEEE.

Hima, E. S., Tangirala, A. K., & Vanajakshi, L. D.(2020). Prediction Of Trends In Bus Travel Time Using Spatial Patterns. Transportation Research Procedia, 48, 998-1007.

Hima, E. S., Tangirala, A. K., & Vanajakshi, L. D. (2018). Evaluation of Clustering Algorithms for the Prediction of Trends in Bus Travel Time. 97th Annual Meeting of Transportation Research Board, Washington. D. C., USA.

Hima, E. S., Deepika, S., Akhilesh, K., & Vanajakshi, L. D. (2015). Pattern analysis of taxi GPS data. The 20th International Conference of Hong Kong Society for Transportation Studies, Hong Kong.

Dhivyabharathi, B., Hima, E. S., & Vanajakshi, L. D. (2015). Stream travel time prediction using particle filtering approach. Recent Advances in Traffic Engineering (RATE), India.

Talks

Hima, E. S., Tangirala, A. K., & Vanajakshi, L. D.(2018). Prediction Of Trends In Bus Travel Time Using Spatial Patterns. World Transport Conference (WTC), Beijing, China.

Grants

Recipient of the inaugural Women Leading IITM (WLI) Grants, 2021.

Computer Skills

Proficient in R and MATLAB®.

References

Dr. Lelitha Devi Vanajakshi
Professor, Dept. of Civil Engineering
Indian Institute Of Technology Madras, Chennai
E-mail: lelitha@iitm.ac.in

Dr. Arun K. Tangirala
Professor, Dept. of Chemical Engineering
Indian Institute Of Technology Madras, Chennai
E-mail: arunkt@iitm.ac.in