




# Surendra Reddy Kancharla, Ph.D.

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🌐 <http://surendrark.github.io/>

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## Employment History






- 2021 – . . . . .  **Postdoctoral Research Assistant** Lyles School of Civil Engineering, Purdue University.
- 2019 – 2020  **Senior Project Officer** Center for Industrial Consultancy and Sponsored Research, Indian Institute of Technology Madras.
- 2014 – 2019  **Teaching and Research Assistant** Department of Civil Engineering, Indian Institute of Technology Madras.

## Education

- 2013 – 2020  **M.Tech. & Ph.D.** in Civil Engineering **Indian Institute of Technology Madras**  
Thesis title: *Vehicle Routing Problems in Sustainable Urban Freight Transport: Model Formulations and Solution Algorithms*
- 2009 – 2013  **B.Tech.** in Civil Engineering **Sri Venkateswara University**  
Thesis title: *Web Based Civil Engineering Calculator.*

## Research Publications

### Journal Articles

- 1 Kancharla, S. R., & Ramadurai, G. (2020a). Electric vehicle routing problem with non-linear charging and load-dependent discharging. *Expert Systems With Applications*, 160, 113714.  
 doi:10.1016/j.eswa.2020.113714
- 2 Kancharla, S. R., & Ramadurai, G. (2020b). Simulated Annealing Algorithm for Multi Depot Two-Echelon Capacitated Vehicle Routing Problem. *European Transport*, (78).  
 doi:10.48295/ET.2020.78.8
- 3 Kancharla, S. R., & Ramadurai, G. (2019a). Multi-depot Two-Echelon Fuel Minimizing Routing Problem with Heterogeneous Fleets: Model and Heuristic. *Networks and Spatial Economics*, 19(3), 969–1005.  
 doi:10.1007/s11067-018-9437-7
- 4 Kancharla, S. R., & Ramadurai, G. (2018a). An Adaptive Large Neighborhood Search Approach for Electric Vehicle Routing with Load-Dependent Energy Consumption. *Transportation in Developing Economies*, 4(2), 10.  doi:10.1007/s40890-018-0063-3
- 5 Kancharla, S. R., & Ramadurai, G. (2018b). Incorporating driving cycle based fuel consumption estimation in green vehicle routing problems. *Sustainable Cities and Society*, 40, 214–221.  
 doi:10.1016/j.scs.2018.04.016

### Conferences

- 1 Kancharla, S. R., & Ramadurai, G. (2019b). Simulated Annealing Algorithm For Multi Depot Two-Echelon Capacitated Vehicle Routing Problem. In *98<sup>th</sup> annual meeting of the transportation research board*, Washington D.C., USA.
- 2 Siddartha, M. M., Mahesh, S., Sripada, S. K., Kancharla, S. R., Devi, G., & Ramadurai, G. (2019). Estimating Emissions from Urban Freight Trips. In *15<sup>th</sup> world conference on transport research - wctr 2019*, Mumbai, India.

- 3 Kancharla, S. R., & Ramadurai, G. (2018c). Load Dependent Electric Vehicle Routing Problem With Time Windows Considering Nonlinear Charging Function. In *6<sup>th</sup> informs transportation science and logistics (tsl) society workshop*, Hong Kong.
- 4 Kancharla, S. R., & Ramadurai, G. (2018d). Multi-depot Electric Vehicle Routing Problem with Time Windows considering Non-linear Charging and Discharging. In *2018 annual meeting of the institute for operations research and the management sciences (informs)*, Phoenix, USA.
- 5 Ramadurai, G., Kancharla, S. R., & Manohar, M. (2018). Electric Future for Buses? Influence of Size, Battery Capacity, and Route Length. In *2018 informs international conference*, Taipei, Taiwan.
- 6 Kancharla, S. R., & Ramadurai, G. (2017a). An Adaptive Large Neighbourhood Search Approach for Electric Vehicle Routing with Load-dependent Energy Consumption. In *4<sup>th</sup> conference of the transportation research group of india*, Mumbai, India.
- 7 Kancharla, S. R., & Ramadurai, G. (2017b). Incorporating Driving Cycle Based Fuel Estimation For Green Vehicle Routing Problem. In *96<sup>th</sup> annual meeting of the transportation research board*, Washington D.C., USA.
- 8 Kancharla, S. R., & Ramadurai, G. (2016). Multi-depot Two Echelon Pollution Minimizing Routing Problem with Heterogeneous Vehicles. In *2016 annual meeting of the institute for operations research and the management sciences (informs)*, Nashville, USA.

## Miscellaneous Experience

### Academic Service

- Reviewer for Computers & Industrial Engineering, Computers & Operations Research, IEEE Transactions on Vehicular Technology, Environmental Science and Pollution Research, Transportation Research Record, Sustainable Cities and Society

### Awards and Achievements

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|-------------|---|
| 2020        | ■ <b>K. Ganesh and Meena Ganesh scholarship for entrepreneurship development</b> , Indian Institute of Technology Madras.                             |
| 2019        | ■ <b>Institute research award</b> , Indian Institute of Technology Madras.  |
| 2015        | ■ <b>Study visit grant to visit The University of Melbourne, Australia</b> , Volvo Research & Educational Foundations (VREF), Sweden.                 |
| 2014 – 2019 | ■ <b>Merit-based monthly scholarship</b> , Ministry of Human Resource Development, Govt. of India.  |
| 2012        | ■ <b>2<sup>nd</sup> prize</b> in paper presentation event as part of TRACE 2k12 (XIII National Level Student Technical Symposium), RGM CET, Nandyala. |
| 2011        | ■ <b>3<sup>rd</sup> prize</b> in paper presentation event as part of Tathva '11 (Techno Management Fest), NIT Calicut.                                |
| 2014 – 2015 | ■ <b>Post graduate department coordinator</b> at Mentoring for individual TRAnsformation (MiTR), Indian Institute of Technology Madras.               |
| 2011 – 2012 | ■ <b>Civil engineering association student secretary</b> , Department of Civil Engineering, K.S.R.M. College of Engineering.                          |

## Skills

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|--------------|---|
| Coding       | ■ Python, R, GAMS, L <sup>A</sup> T <sub>E</sub> X, Java. |
| Web Dev      | ■ HTML, CSS, JavaScript.                                  |
| Optimization | ■ CPLEX, GUROBI.  |