

## Deepti Muley, PhD

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Profile link: <https://scholar.google.com/citations?user=JIt30WwAAAAJ&hl=en&oi=ao>

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### Career Objective

To be involved in an academic environment which will provide opportunities for teaching and research in transportation engineering field to pave way for safe and sustainable transport solutions.

### Academic Qualifications

- **Doctor of Philosophy** (2011) in Civil Engineering with specialisation in Transportation Engineering at Queensland University of Technology, Brisbane, Australia.  
Thesis: Evaluating the Transport Impacts of Transit Oriented Developments (TODs)
- **Master of Technology** (2006) in Transportation Engineering from Indian Institute of Technology, Roorkee, India. CGPA 9.18 on a 10 point scale.
- **Bachelors in Civil Engineering** (2003) from Walchand Institute of Technology, Solapur, India. Overall percentage 63.90.

### Research Interests

- Shared transport
- Traffic safety
- Travel behaviour of studies
- Transport modelling (Macroscopic and microscopic)
- Sustainable transport planning and evaluation

### Teaching Experience

- Feb 2014 – April 2015: Lecturer at Caledonian College of Engineering, Muscat, Oman
- July 2012 – Feb 2014: Assistant Professor at Galgotias University, Greater Noida, India.
- Jan 2011 – Feb 2012: Assistant Professor at JUIT, Wagnaghat, Solan, India

Undergraduate courses taught in Qatar:

- Highway Engineering (Theory and Lab)
- Traffic Engineering (Theory and Lab)
- Engineering Economics (Theory)

Undergraduate courses taught in Oman:

- Construction Engineering (Theory and Lab)
- Construction Materials (Theory and Lab)
- Transportation Engineering (Theory and Lab)
- Engineering Drawing (Lab)

Undergraduate courses taught in India:

- Highway Engineering (Theory and Lab)
- Surveying (Theory and Lab)
- Construction Technology and Management (Theory)
- Engineering Materials (Theory and Lab)
- Engineering Graphics (Lab)
- Workshop Practice (Lab)

Masters courses taught in India:

- Modelling, Simulation and Computer Applications (Theory)
- Energy Efficient Buildings (Theory)
- Energy Auditing, Conservation & Management (Theory)

Undergraduate courses (as tutor) in Australia:

- Traffic Flow Theory and Analysis (Tutorial)
- Transportation Engineering (Tutorial)

### **Other course related responsibilities**

- Develop course outline and design the course syllabus for undergraduate and postgraduate courses
- Procure the equipment and material to establish the laboratories in the department
- Develop course file and co-ordinate with other faculties involved in delivering the same course
- Supervise students for their undergraduate projects and senior design projects
- Co-supervise students for their master's thesis
- Be a member of master's and doctoral thesis evaluation committee
- Design comprehensive exam for doctoral student
- Prepare proposal for starting a new course/program

### **Research Experience**

- Aug 2019 – Present: Research Associate at Qatar Transportation and Traffic Safety Center, Qatar University.
- June 2016 – August 2018: Post-Doctoral Researcher at Qatar Transportation and Traffic Safety Center, Qatar University, Qatar
- Apr 2015 – March 2016: Post-Doctoral Researcher at Qatar University, Qatar
- Feb 2010 – May 2010: Research Associate at University of Queensland (UQ), Brisbane, Australia
- May 2009 – Dec 2009: Research Associate at Queensland University of Technology (QUT), Brisbane, Australia

### **Research projects**

- NPRP No.: 8-365-2-150: Investigating pedestrian crossing behavior to improve pedestrian accident rates and severities in the State of Qatar – Worked as a PostDoc.
- NPRP No.: 4-1170-2-456: Development of video-based automated road safety analysis – Worked as a PostDoc.

### **Research grants**

- Mohamed Kharbeche (Lead Principal Investigator), Mohamed Haouari (PI), Imen Becheur (PI), **Deepti Muley (PI)**, Semira Mohammed (PI). (2021-2023) “Optimization Approaches for School Bus Transport Management in the State of Qatar”, Qatar University, Internal Collaborative Grant, total budget QAR 200,000.

- **Deepti Muley (Lead Principal Investigator)** Charitha Dias (PI). (2021-2022) “Assessment of driver behavior using smartphone-based application data”. QNRF, UREP27-029-5-003, total budget USD 21,000.
- **Deepti Muley (Lead Principal Investigator)** Mohamed Kharbeche (PI). (2020-2021) “Impacts of New Pedestrian Laws (Fines) on Pedestrian Safety in the State of Qatar”. QNRF, UREP25-034-5-008, total budget USD 20,000.

## Journal Papers

- Tahmasseby, S., **Muley, D.**, Wink, B. W. 2021. Performance Evaluation of Vehicle Restraint Systems in the Context of Design and Installation. *Civil Engineering Journal*, Vol. 7, No. 3, DOI 10.28991/cej-2021-03091665.
- **Muley, D.**, Ghanim, M.S., Mohammad, A., Kharbeche, M. 2021. Quantifying the Impact of Covid-19 Preventive Measures on Traffic in The State of Qatar. *Transport Policy*, 103, pp. 45–59. <https://doi.org/10.1016/j.tranpol.2021.01.018>.
- Abdullah, M., Dias, C., **Muley, D.**, Shahin, M. 2020. Exploring the Impacts of COVID-19 on Travel Behavior and Mode Preferences. *Transportation Research Interdisciplinary Perspectives*, 8, 100255. <https://doi.org/10.1016/j.trip.2020.100255>
- **Muley, D.**, Shahin, M., Dias, C., Abdullah, M. 2020. Role of transport during outbreak of infectious diseases: evidences from the past, *Sustainability Special issue on Vulnerability and Resilience of Transport Systems: How to Manage Unexpected Events*, 12(18), 7367. <https://doi.org/10.3390/su12187367>
- Abuhijleh, A., Dias, C., Alhajyaseen, W., **Muley, D.** 2020. Effect of u-turns and heavy vehicles on saturation flow rates of left turn lanes at signalized intersections, *Sustainability Special Issue Road Traffic Engineering and Sustainable Transportation*, 12(11), 4485. <https://www.mdpi.com/2071-1050/12/11/4485>.
- Shaaban, K., **Muley, D.**, & Mohammed, A. 2019. Modeling pedestrian gap acceptance behavior at a six-lane urban road, *Journal of Transportation Safety & Security*, <https://doi.org/10.1080/19439962.2019.1691100>.
- **Muley, D.**, Kharbeche, M., Downey, L., Saleh, W., and Al-Salem, M. 2019. Road Users’ Behavior at Marked Crosswalks on Channelized Right-Turn Lanes at Intersections in the State of Qatar. *Sustainability*, Vol 11, 5699 doi:10.3390/su11205699.
- **Muley, D.**, Kharbeche, M., Alhajyaseen, W., and Al-Salem, M. 2019. Empirical study on pedestrian signal design and compliance in the State of Qatar. *International Journal of Civil Engineering*, <https://doi.org/10.1007/s40999-019-00451-0>
- Downey, L. T., Saleh, W., **Muley, D.**, and Kharbeche, M. 2019. Pedestrian crashes at priority-controlled junctions, roundabouts, and signalized junctions: The UK case study. *Traffic Injury Prevention*, Vol. 20, No. 3, pp. 308 – 313. DOI: 10.1080/15389588.2019.1574972
- Downey, L., Saleh, W., **Muley, D.**, and Kharbeche, M. 2018. The relationships between social deprivation, pedestrian and driver actions and exposure in road casualty accidents at mid-block crossings. *Smart Highways*, Vol. 6, No. 1, pp. 46 – 52.
- Shaaban, K., **Muley D.**, and Khalil R. F. 2018. An assessment tool to evaluate complete streets in developing countries: The case of Qatar, *Int. J. of Sustainable Society*, Vol. 10, No. 3, pp. 225–242. DOI: 10.1504/IJSSOC.2018.096271
- Shaaban, K., **Muley D.**, and Mohammed A. S. 2018. Analysis of illegal pedestrian crossing behavior on a major divided arterial road, *Transportation Research Part F*, Vol. 54, pp. 124–137. <https://doi.org/10.1016/j.trf.2018.01.012>
- Shaaban, K., **Muley, D.**, and Elnashar, D. 2017. Evaluating the effect of seasonal variations on walking behaviour in a hot weather country using logistic regression, *International Journal of Urban Sciences*, <https://doi.org/10.1080/12265934.2017.1403363>

- Shaaban, K., **Muley, D.**, and Elnashar, D. 2017. Temporal variation in walking behavior: An empirical study, *Case Studies on Transport Policy*, Vol. 5, No. 4, pp. 671-680. available at <http://dx.doi.org/doi:10.1016/j.cstp.2017.07.001>
- **Muley D.**, Al-Mandhari H. S. 2014. Performance Evaluation of Al Jame' Roundabout Using SIDRA. *World Academy of Science, Engineering and Technology, International Journal of Civil, Structural, Construction and Architectural Engineering* Vol. 8, No. 12, pp. 1226 – 1231.
- **Muley D.**, Bunker J. and Ferreira L. 2009. Investigation into travel modes of TOD users: Impacts of personal and transit characteristics. *International Journal of ITS Research. Special Issue: Sustainable Transportation Systems*. Vol. 7, No. 1, pp 3 – 13.

### Conference Papers/Presentations

- **Muley, D.**, Kharbeche, M., Ghonim, O., Madkoor, A., and Mohamed, Y. 2021. Does Pedestrian Penalty Affect Pedestrian Behavior? A Case of the State of Qatar. Accepted for presentation at The 12th International Conference on Ambient Systems, Networks and Technologies (ANT 2021), March 23-26, 2021, Warsaw, Poland. <https://doi.org/10.1016/j.procs.2021.03.032>
- **Muley, D.**, Tahmasseby, S., Wink, B. W., and Tarlochan, F. 2020. Application of Vehicle Restraint Systems (VRSs) in the State of Qatar: A Case Study from Northern Roads. *International Conference on Civil Infrastructure and Construction (CIC 2020)*, February 2-5, 2020, Doha, Qatar.
- **Muley, D.**, Ghanim, M., and Kharbeche, M. 2018. Prediction of traffic conflicts at signalized intersections using SSAM. Accepted for presentation at The 9th International Conference on Ambient Systems, Networks and Technologies (ANT 2018), May 8-11, 2018, Porto, Portugal. *Procedia Computer Science*, Vol. 130, pp. 255 – 262. <https://doi.org/10.1016/j.procs.2018.04.037>
- **Muley, D.**, Alhajyaseen, W., Kharbeche, M., and Al-Salem, M. 2018. Pedestrians' speed analysis at signalised crosswalks. Accepted for presentation at The 9th International Conference on Ambient Systems, Networks and Technologies (ANT 2018), May 8-11, 2018, Porto, Portugal. *Procedia Computer Science*, Vol. 130, pp. 567 – 574. <https://doi.org/10.1016/j.procs.2018.04.102>
- Alhajyaseen, W., Ratrou, N., and **Muley, D.**, 2018. Relationship between Chauffeurs' Demographics, and Knowledge of Traffic Signs in the Kingdom of Saudi Arabia. Accepted for presentation at The 9th International Conference on Ambient Systems, Networks and Technologies (ANT 2018), May 8-11, 2018, Porto, Portugal. *Procedia Computer Science*, Vol. 130, pp. 34 – 41. <https://doi.org/10.1016/j.procs.2018.04.009>
- **Muley, D.**, Alhajyaseen, W., and Kharbeche, M. 2017. An overview of pedestrian signal setting and implementation in the State of Qatar. *The 8th International Conference on Ambient Systems, Networks and Technologies (ANT 2017)*, May 16-19, 2017, Madeira, Portugal. *Procedia Computer Science* 109C (2017) 545–552. <https://doi.org/10.1016/j.procs.2017.05.337>
- **Muley, D.**, Kharbeche, M., Alhajyaseen, W., and Al-Salem, M. 2017. Pedestrians' Crossing Behavior at Marked Crosswalks on Channelized Right-Turn Lanes at Intersections. *The 8th International Conference on Ambient Systems, Networks and Technologies (ANT 2017)*, May 16-19, 2017, Madeira, Portugal. *Procedia Computer Science* 109C (2017) 233–240. <https://doi.org/10.1016/j.procs.2017.05.339>
- Shaaban, K. and **Muley D.** 2016. Investigation of weather impacts on pedestrian volumes. Accepted for 6th European Transport Research Conference, Moving Forward: Innovative Solutions for Tomorrow's Mobility, National Stadium, Warsaw, Poland, 18-21 April 2016. *Transportation Research Procedia*, Vol. 14, pp. 115 – 122, <https://doi.org/10.1016/j.trpro.2016.05.047>.
- Shaaban, K., **Muley D.**, and Mohammed A. S. 2016. Investigation of gap acceptance behavior of pedestrians jaywalking at a wide midblock section. No. 16-2190, *Transportation Research Board 95th Annual Meeting*, January 10-15, 2016, Washington, D.C.

- **Muley D.**, Bunker J. and Ferreira L. 2012. Assessing efficiency of a transit oriented development (TOD) by comparative analysis. Proceedings of the 35th Australasian Transport Research Forum, 26 – 28 September, Perth.
- \***Muley D.**, Bunker J. and Ferreira L. 2009. Assessing the impact of transit and personal characteristics on mode choice of TOD users. 12th TRB National Transportation Planning Applications Conference. May 17 – 21, Houston, Texas.
- **Muley D.**, Bunker J. and Ferreira L. 2009. Transit Oriented Developments: Results from a travel survey. Proceedings of the Second Infrastructure Theme Postgraduate Conference, Queensland University of Technology.
- **Muley D.**, Bunker J. and Ferreira L. 2008. Conducting visitor travel survey for a TOD: Case study from South East Queensland. Proceedings of the 31st Australasian Transport Research Forum, 2 – 3 October, Gold Coast.
- **Muley D.**, Bunker J. and Ferreira L. 2007 Evaluating Transit Quality of Service for Transit Oriented Development (TOD), 30th Australasian Transport Research Forum, 25 – 27 September, Melbourne.

### **Book Chapters**

- Shahin, M., Abdullah, M., **Muley D.**, and Dias, C. 2021. Case studies on COVID-19 and environment. COVID-19 in the Environment, © Elsevier 2021. (Accepted), Ch 13
- Shaaban, K. and **Muley D.** 2015. Exploring the suitability of a survey instrument to measure the walkability of streets in Doha. Advances in Civil, Architectural, Structural and Constructional Engineering – Kim, Jung & Seo (Eds) © 2016 Taylor & Francis Group, London, ISBN 978-1-138-02849-4. Pp 158.
- **Muley D.**, Bunker, J. and Ferreira, L. 2009. User characteristics of transit oriented developments: the case of Kelvin Grove Urban Village In: Yigitcanlar T., Sustainable Urban and Infrastructure Development: Management, Engineering and Design.

### **Other Academic Activities:**

- Reviewer for various journals in Transportation Engineering field (Journal of Transportation Safety and security, International Journal of Civil Engineering, Case Studies of Transport Policy, Journal of Public Affairs, Transportation Research Interdisciplinary Perspectives, Urban Planning and Transport Research, International Journal of Sustainable Transportation, Journal of Traffic and Transportation Engineering (English Edition), International Journal of Injury Control and Safety Promotion)
- August 2012 – December 2012, Guest faculty at Gautam Buddha University, Greater Noida, India.
- Review of Incident Response Services and travel time reliability
- Arranged educational tours for students to familiarise them with practices followed on site
- Organise workshops/seminars in transportation engineering field
- Member of academic hiring committee

### **Industrial Experience**

- June 2010 – December 2010: Senior Transport Modeller, CAPITA, Mumbai, India
- April 2007 – May 2009: Transport Planner, PTV Asia Pacific, Brisbane, Australia

### **List of Consultancy Projects**

- Qatar University Road Transport Status Quo Report. Capital Project Affairs, Qatar University.

- Traffic Impact Study for Qatar University Concept Master Plan 2030, Qatar – involved in preparation of methodology report, developed detailed macroscopic transport model – MOTC, Qatar.
- Traffic Impact Study for Katara Cultural Village Doha, Qatar – involved in managing the macroscopic modelling tasks – MOTC, Qatar
- West Midlands Urban Traffic Control (WMUTC) – developing a micro simulation model using VISSIM for whole of West Midlands in UK. – Transport Research Laboratory (TRL), UK
- Lusail Expressway – scenario testing for proposed Lusail Expressway in Qatar Doha.
- Logan Corridor Master Planning – comparing two different models developed by two consulting firms and preset similarities and differences between them. – Queensland
- Smart Mobility Demonstrator – developing a vision for smart transport using ITS technologies and illustrating it with the help of a video. – Queensland Cyber Infrastructure Foundation (QCIF) and QUT.
- Hong Kong International Airport Airside Simulation – developing an automated micro simulation model for movement of aircraft and ground service equipment at the Hong Kong International Airport (HKIA). – Airport Authority of Hong Kong.
- Conversion of Brisbane Strategic Transport Model (BSTM) – converting BSTM from EMME/3 to VISUM for private transport as well as public transport for the base year scenario.
- Converting Saturn Networks to Visum – updating the SATURN network convertor using VB.NET for converting the models developed using SATURN into VISUM format – PTV AG.
- Hornsby Traffic Model Revisions – calibrating VISUM model for Hornsby Shire using the traffic counts and study impacts of three proposed developments on local traffic – Hornsby Shire Council.
- Provision of Consultancy Services for Development of Road Transport and Agent Based Modelling System for Sentosa – developing strategic and micro simulation model for Sentosa Island, Singapore for base year and future years – Sentosa Development Corporation.
- Regional Strategy and Planning Services – developing a strategic model for Sunshine Coast Regional Council. – Sunshine Coast Regional Council.

### **Other consultancy related activities**

- Undertake technical evaluation of proposals submitted by various companies
- Review the reports submitted by consultants
- Prepare proposals for acquiring consultancy projects

### **Computer Skills**

- Packages : AUTOCAD, Microsoft Office, MapInfo, SPSS, R
- Languages : C, Visual Basic, VBA
- Transport Packages : VISSIM, VISSIM COM, VISUM, VISUM COM, SIDRA, SYNCHRO
- Familiar with : EMME, AIMSUN, TransCad

### **Achievements**

- Awarded a manuscript fee of 50,000 yen for contributing to Special issue of Int. Journal of ITS Research
- Awarded QIDS scholarship for pursuing PhD at Queensland University of Technology
- Obtained MHRD scholarship for pursuing M. Tech at IIT Roorkee, India.
- Awarded as an outstanding HDR student of the month for April 2009

- Best paper award and presentation prize at ‘The Second Infrastructure Theme Postgraduate Research Conference’ at Queensland University of Technology, Brisbane.
- Secured 97.85 percentile in GATE 2004 with All India Rank 189.
- Secured “Late Professor Manohar Dinakar Bhate Memorial Trust (Sangali) Prize” for securing highest number of marks in ‘Design of Structures’ in the University.

### **Knowledge Development**

- Attended a training course of Simulator technical training and scenario development, at QTTSC, Qatar University on 31<sup>st</sup> October and 1<sup>st</sup> November 2017.
- Attended workshop on Road Freight Transport and Safety at Inter Continental Doha, Qatar on 8<sup>th</sup> and 9<sup>th</sup> May 2017
- Attended international forum on “Traffic Safety and Sustainable Transport Systems” at Ritz-Carlton, Doha on 13<sup>th</sup> and 14<sup>th</sup> December 2016
- Attended a short Course in Advanced Statistical Analysis using the SPSS at Qatar University in Apr-May 2015
- Attended various seminars during Faculty Development Program at Galgotias University
- Attended short course on Project Management & Heavy Construction Equipments at JUIT, Wagnaghat in August 2011
- Attended Sessional Academic Program (SAP) at QUT in August 2009
- Attended short course on Transit Precincts at UQ Business School in April 2008
- Attended short course on Planning for Public Transport at UQ Business School in June 2007