

Smruti Sourava Mohapatra

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D.O.B.: 17th December 1987.

Citizenship: Indian

Research Interest:

- Traffic flow modeling
- Capacity estimation
- Level of Service analysis
- Clustering techniques
- Statistical analysis

Educational Qualification:

- Ph.D. (Civil Engineering, 20012-2016)
 - Indian Institute of Technology Bhubaneswar, Odisha, India
 - Title of Thesis: Study of U-Turn Movement at Median Openings
 - Area of research: Traffic Flow Modeling
- Master of Technology (Transpiration Engineering, 2010-2015)
 - National Institute of Technology Rourkela, Odisha, India
 - Title of Thesis: Level of Service Criteria of Urban Streets in Indian Context Using Advanced Classification Tools
 - Area of research: Clustering and Level of service analysis
- Bachelor of Technology (Civil Engineering, 2006-2010)
 - KIIT University, Bhubaneswar, Odisha, India

Experience:

- **Assistant Professor**, Department of Civil Engineering, Indian Institute of Technology (ISM) Dhanbad since 5th August, 2015.
- **Assistant Professor**, Department of Civil Engineering, VSS University of Technology, Burla from July, 2014 to June 2015.
- **Research Scholar**, School of Infrastructure, IIT Bhubaneswar since July, 2012.

Course Taught:

Under Graduate	Post Graduate
At VSSUT	
1. Transportation Engineering-1	1. Pavement Materials
2. Highway Engineering Lab	2. Analysis Design of Pavement
3. Engineering Drawing	
4. Transportation Engineering-2	
5. Geotechnical and Transportation Design	
<hr/> At IIT (ISM)	
1. Transportation Engineering-1	NIL
2. Transportation Engineering Lab	
3. Building Material Construction and Estimation	
4. Material Testing Lab	
5. Estimation and Costing (Honors Course)	
6. Geotechnical Engineering (Minor Course)	
7. Basic Transportation Engineering (Minor Course)	
8. Highway Material Testing Lab (Minor Course)	

Professional Activities:

1. **Reviewer** of the journal ‘Transportation Letters: the International Journal of Transportation Research’
2. **Member** of Technical Program Committee of ‘The United Conference on Architecture, Design, Earth Sciences and Geography (ADESG-2017).
3. **Member** of the Technical committee of The World Symposium on Civil Engineering (WSCE-2017).
4. **Co-coordinator** of National Workshop on Road Safety Audit (RSA-2015), 6th - 7th February, 2015 held at VSSUT, Burla.

5. **Organizing committee member** of Short term course on Sustainable Infrastructure, on 8th to 10th of January, 2016 organized by Department of Civil Engineering of Indian School of Mines Dhanbad.
6. **Organizing committee member** of National workshop on Recent Advances in Civil Engineering (RACE-2014), on 25th and 26th of October 2014 organized by Department of Civil Engineering of VSSUT, Burla.

Professional Membership

- Associate Member of American Society of Civil Engineers (ASCE)
- Life member of Indian Road Congress (IRC)
- Life member of Institute of Urban Transport India
- Life member of International Association of Engineers (IAENG)

Accomplishments:

- Co-Coordinator of two day national workshop on **Road Safety Audit (RSA-2015)** on 6th and 7th February, 2015 at VSSUT, Burla, Odisha.
- **Sixteen months** teaching and research experience as Assistant Professor in Department of Civil Engineering at **Indian Institute of Technology (ISM) Dhanbad** and **Eleven months** teaching and research experience as Assistant Professor in Department of Civil Engineering at **VSSUT, Burla**.
- **ITS grant** of SERB, DST to attend the 19th International Conference of Hong Kong Society for Transportation Studies, 13th-15th December, 2014, held at Hong Kong.
- **Two years** research experience as research scholar at IIT Bhubaneswar.
- **Departmental Co-ordination** for NBA visit to Department of Civil Engineering, VSSUT, Burla.
- **Got silver** medal from NIT Rourkela for securing highest CGPA in Transportation Engineering Specialization.
- Scored **highest** GPA in all the 4 semesters during Master of Technology study.
- Qualified National Level test GATE (General Aptitude Test for Engineers) required for doing higher studies after Bachelor Degree

Skills:

- Expertise in application of various clustering algorithms
- **Operating System:** Windows, MS-DOS
- **Software:** MATLAB, MS-Office, Statistica , R-Package
- Strong communication skills- oral, written and presentation
- Excellent team skills

Publications:

Journals (9 accepted, 4 under review)

1. Dash, S., Mohapatra, S.S., and Dey, P.P. “Estimation of critical gap of U-turns at uncontrolled median openings”, *Transportation Letters*. **(Accepted)**
2. Sil, G., Mohapatra, S. S., Dey, P.P., and Chandra, S. (2016). Merging process of U-turns at uncontrolled median openings under mixed traffic conditions. *Transport*, 1-10. **(Published online)**
3. Mohapatra, S.S., Dey, P.P., and Chandra, S. (2016). “Conflicting volume of U-turns at uncontrolled median openings.” *Institution of Civil Engineers-Transport, Thomas Telford Ltd*, Vol. 169, No. 4, pp. 195-204.
4. Mohapatra, S. S., Dey, P. P., and Chandra, S. (2016). “Modeling the critical position of U-turning vehicles at uncontrolled median openings.” *KSCE Journal of Civil Engineering*, Vol. 20, No. 1, pp. 411-420.
5. Mohapatra, S. S., and Dey, P. P. (2015). “Lateral placement of U-turns at median openings on six-lane divided urban roads.” *Transportation Letters*, Vol. 7, No. 5, pp. 252-263.
6. Mohapatra, S. S., Sil, G., and Dey, P. P. (2015). “Quantification of LOS at median openings through cluster analysis.” *Indian Highways*, Indian Roads Congress, New Delhi, Vol. 43, No.3, pp. 25-31.
7. Bhuyan, P. K., and Mohapatra, S. S. (2014) “Affinity propagation clustering in defining level of service criteria of urban streets.” *Transport*, Vol. 29, No. 4, pp. 401-411.
8. Mohapatra, S. S., Bhuyan, P. K., and Rao, K. V. (2012) “Genetic algorithm fuzzy clustering using GPS data for defining level of service criteria of urban streets.” *European Transport\ TrasportiEuropei*, Issue 52, Paper no. 7.
9. Mohapatra, S. S., and Bhuyan, P. K. (2012) “Self Organizing Map of Artificial Neural Network for Defining Level of Service Criteria of Urban Streets.” *International Journal for Traffic and Transport Engineering*, Vol. 2, Issue 3, pp. 236-252.
10. Mohapatra, S.S., and Dey, P.P. “Estimation of U-turn Capacity at Median Openings.” *Journal of Transportation Engineering, ASCE*. (Under review)
11. Mohapatra, S.S., and Dey, P.P. “Defining Level of Service criteria of U-turns.” *Institution of Civil Engineers-Transport, Thomas Telford Ltd* (Under review)

12. Sil, G., Mohapatra, S.S., and Dey, P.P., Chandra, S. "Service time and merging behavior of U-turning vehicle at uncontrolled median openings." **Transport** (Under review)
13. Bhuyan, P. K. and Mohapatra, S.S. "A comparative study of clustering techniques in defining level of service criteria of urban streets in Indian context". *International Journal of Civil Engineering*. (Under review)

Conferences

1. Sil, G., Mohapatra, S.S., and Dey, P.P., Chandra, S. "Assessment of service delay and merging time at uncontrolled median openings." *Proceedings of the 96th Annual Meeting of Transportation Research Board, Washington, DC, January 8-12, 2017 (CD-ROM)*.
2. Mohapatra, S.S. and Dey, P.P. "Capacity of U-turn movement at median openings." **In Proceedings of the 95th Annual Meeting of Transportation Research Board, Washington, DC, January 10-14, 2016. (CD-ROM)**.
3. Mohapatra, S.S., and Dey, P.P. "Modeling the placement of conflicting traffic at uncontrolled median openings." **3rd Conference of Transport Research Group, 17th -20th December, 2015, Kolkata, India. (Paper presented)**
4. Mohapatra, S.S., Sil, G., and Dey, P.P. "Affinity propagation clustering for quantification of level of service at uncontrolled median opening." **The 19th International Conference of Hong Kong Society for Transportation Studies, 13th-15th December, 2014, The Hong Kong Polytechnic University, Hong Kong, Paper id- HKSTS19-308. (Paper presented)**
5. Mohapatra, S.S., Dey, P.P. "Modeling the critical position of u-turning vehicles at uncontrolled median openings on 6-lane divided urban roads". **TPMDC, IIT Bombay. (Paper presented)**
6. Mohapatra, S.S., Sil, G., and Dey, P.P. "Defining level of service at uncontrolled median openings through K-medoid clustering." **International Conference on Industrial Engineering Science and Applications (IESA 2014), April 2-4, 2014, NIT Durgapur, Durgapur, India. (Paper presented)**
7. Sil, G., Mohapatra, S.S., and Dey, P.P. "Effect of conflicting vehicles on service delay under mixed traffic conditions." **International Conference on Industrial Engineering Science and Applications (IESA 2014), April 2-4, 2014 NIT Durgapur, Durgapur, India. (Paper presented)**

8. Sil, G., Mohapatra, S.S., and Dey, P.P. "Service delay at uncontrolled median openings." *International Conference on Advances in Civil Engineering and Chemistry of Innovative Materials (ACECIM'14)*, 13th – 14th March, 2014, SRM University, Chennai, India.
9. Mohapatra, S.S., Dey, P.P. "Lateral placement of U-turns at uncontrolled median openings on four-lane divided roads." *International Conference on Advances in Civil Engineering and Chemistry of Innovative Materials (ACECIM'14)*, 13th – 14th March, 2014, SRM University, Chennai, India.
10. Mohapatra, S.S., Sil, G., and Dey, P.P. "Defining level of service at uncontrolled median openings: a clustering approach." *Transportation Young Researchers Symposium (TYRES 2014)*, 27th – 29th March, 2014, NIT Warangal, Warangal, India. (Paper Presented)

Workshop/Seminar/Training Programme Attended:

1. Ethics and Integrity in Organisations (E&IO-2013), 16th April, 2013, IIT Bhubaneswar.
2. 2nd Workshop on Indian Water Management in 21st Century, 7th February, 2013 held at IIT Bhubaneswar.
3. Workshop on Application of New Materials and Technologies in Rural Roads, 13th-15th September, 2013 held at IIT Bhubaneswar.
4. Workshop on Application of Non Conventional Materials and Technologies in Rural Roads 14th-15th February, 2014 held at IIT Bhubaneswar.

References:

Dr. Partha Pratim Dey

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