

## **Abdoul-Ahad Choupani**

Assistant Professor

Transportation Planning and Traffic Engineering

Shahrood University of Technology, Shahrood, Iran.

## **Contact Information**

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## **Academic Qualification**

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|-------------------|--|
| 09/2011 - 08/2015 | Ph.D.<br>Department of Civil and Environmental Engineering<br>Tarbiat Modares University, Tehran, Iran<br>Thesis: "Proposing a Methodology for Integer Conversion in Iterative Proportional fitting for Urban Travel Demand Forecasting" |
| 09/2004 – 03/2007 | M.Sc.<br>Department of Civil Engineering<br>Iran University of Science and Technology, Tehran, Iran<br>Thesis: "Operational Evaluation of Un-Conventional Urban U-Turns"   |
| 09/1999 – 05/2004 | B.Sc.<br>Department of Civil Engineering<br>Iran University of Science and Technology, Tehran, Iran  |

## **Scholarships and Awards**

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|---------|---|
| 09/2009 | PhD Scholarship, University of Kentucky, US |
| 09/2009 | PhD Scholarship, University of McGill, CA   |

## **Research Interests**

1. Traffic Engineering
2. Operational Effects of Geometric Design
3. Urban Traffic Control and Design
4. Traffic Simulation
5. Road Safety
6. Public Transportation

7. Urban Travel Demand Modeling and Forecasting
8. Urban Transportation Strategic Planning
9. Uncertainty in Travel Demand
10. Transportation and Health

## **Journal Publications**

1. Najmi, A., Choupani, A.A., Aghaian, I., (2019) "Characterizing Driver Behavior in Dilemma Zones at Signalized Roundabouts", *Transportation Research Part F: Traffic Psychology and Behaviour*, Vol. 63, pp. 204-215.
2. Choupani, A.A, (in press) "Assessment of Operational Performance, Fuel Consumption, and Pollution of Signalized Intersections and Median U-Turns at Six-lane Arterials", *Journal of Civil and Environmental Engineering of University of Tabriz*.
3. Khademi, N., Choupani, A.A., (2018) "Investigating the Road Safety Management Capacity in Iran: Toward a Lead Agency Reform", *IATSS Research*, Vol. 3, No 105, pp. 105-120.
4. Choupani, A.A., Mamdoohi, A.R., (2016) "A Methodology for Population Synthesis Using Mathematical Programming for Travel Demand Forecasting", *Transportation Engineering Quarterly*, Vol. 7, No 3, pp. 434-419.
5. Choupani, A.A., Mamdoohi, A.R., (2016) "Population Synthesis Using Iterative Proportional Fitting (IPF): A Review and Future Research", *Transportation Research Procedia*, No 17, pp. 223-233.
6. Choupani, A.A., Mamdoohi, A.R., (2015) "Population Synthesis in Activity-Based Models: Tabular Rounding in Iterative Proportional Fitting", *Transportation Research Record*, No 2493, pp. 1-10, 2015.
7. Shahi, J., Choupani, A.A., (2009) "Modeling the Operational Effects of Unconventional U-Turns at a Highway Intersection", *Transportmetrica*, Vol. 5, No 3, pp. 173-191.
8. Choupani, A.A., (2010) "Estimating Public Transport Costs: Caste Study of Oroomieh and Arak", *Rahvar (in Persian)*, No 12, pp. 106-122.
9. Choupani, A.A., (2010) "Estimating Costs of Private Transportation Impacts for Oroomieh and Arak", *Rahvar (in Persian)*, No 10, pp. 22-40.

## **Conference Papers**

1. Choupani, A.A., Jahanshahi, J., Aghaian, I., (2019) "Sensitivity Analysis of Urban Trip Generation Models: A Case Study of Mashhad", 11<sup>th</sup> National Congress on Civil Engineering, Shiraz, Iran.
2. Kharrazian, E., Aghaian, I., Choupani, A.A., Mohammadi, A., (2019) "Determination of Passenger Car Equivalent at Signalized Intersections Based on Control Delay Using

- Synchro: Case Study of Mashhad", 6<sup>th</sup> National Conference on Applied Research in Civil Engineering, Architecture and Urban Management, Tehran, Iran.
3. Khodanazari, H., Choupani, A.A., Aghaian, I., (2019) "Investigating the Students Active Travels to Schools and its Effect on Weight Status", 6<sup>th</sup> National Conference on Applied Research in Civil Engineering, Architecture and Urban Management, Tehran, Iran.
  4. Khodanazari, H., Choupani, A.A., Aghaian, I., (2019) "The Effect of School Type on Students' Non-motorized Trips and Body Mass Index", 6<sup>th</sup> National Conference on Applied Research in Civil Engineering, Architecture and Urban Management, Tehran, Iran.
  5. Choupani, A.A., (2018) "Operational Evaluation of Uncontrolled Median Openings and Signal Controlled Intersections", 11<sup>th</sup> International Congress on Civil Engineering, Tehran, Iran.
  6. Choupani, A.A., (2017) "Clearer Representation of Sioux-Falls Network for Travel Assignment and Network Design Problems Using PTV VISUM ", 1<sup>st</sup> National Conference on Recent Advancements in Engineering and Planning, Ghazvin, Iran.
  7. Khosrowshahi, A.G., Aghaian, I., Choupani, A.A., (2017) "Predicting the Injury Accident Points of Intra-Urban Areas Using Geographical Information System and Data Mining Techniques", 5<sup>th</sup> National Conference on Applied Research in Civil Engineering, Architecture, and Urban Management, Tehran, Iran.
  8. Najmi Atarabadi, A., Aghaian, I., Choupani, A.A., (2017) "Studying Dilemma Zone at Signalized Roundabouts: Case Study of Mashhad", 1<sup>st</sup> National Conference on Recent Advancements in Engineering and Planning, Ghazvin, Iran.
  9. Choupani, A.A., Mamdoohi, A.R., (2016) "Tabular Rounding in Iterative Proportional Fitting for Population Synthesis in Activity-Based Models", 94<sup>th</sup> Annual Meeting of Transportation Research Board (TRB), Washington, D.C.
  10. Shoar, K., Choupani, A.A., Kazemnejad, L., (2011) "Walking and Cycling Special Pathways and Zones: Case of Mashhad", 1<sup>st</sup> International Conference on Cycling, Tehran, Iran.
  11. Choupani, A.A., Shahi, J., (2008) "Calibration and Validation of SimTraffic for Signalized Intersections", 4<sup>th</sup> National Congress on Civil Engineering, Tehran, Iran.

### **Working Papers**

1. Choupani, A.A., "Restricting Yellow Light Running in a Developing Country: Assessing Drivers' Compliance and Aggressiveness".
2. Khodanazari, H., Choupani, A.A., Aghaian, I., "Obesity, Overweight, and Differences in Walking Trips of Iranian Students: Is Walking to School Sufficient for Health Benefits?

## **Book**

Naderan, A., Choupani, A.A. “Urban Transportation Management” Iran Municipalities Organization, 2010.

## **Academic Experience**

1. Advances in Civil Engineering (Reviewer)
2. Journal of Traffic and Transportation Engineering (Reviewer)
3. Journal of Cognitive Psychology (Reviewer)
4. Transportation Engineering Quarterly (Reviewer)
5. International Conference of Transportation and Traffic Engineering (Reviewer since 2014)
6. Iran National Science Foundation (Reviewer)

## **COURSES TAUGHT**

### **Graduate Courses**

1. Advanced Traffic Engineering
2. Travel Demand Modeling
3. Transportation Planning
4. Public Transportation
5. Traffic Safety
6. Highways and Intersections Capacity (Highway Capacity Manual)
7. Numerical Simulation

### **Undergraduate Courses**

1. Traffic Engineering
2. Geometric Design (and project)
3. Engineering Economics
4. Computer Programming
5. Numerical Computations
6. Engineering statistics and probabilities

## **Graduate Students Supervised**

1. Reza Jahanshahi (2019), "Sensitivity Analysis of Urban Travel Demand Models: Case Study of Mashhad City ", Msc Thesis, Shahrood University of Technology, Iman Aghayan.
2. Emadoddin kharrazian (2019), "Estimating the passenger car equivalent (PCEs) in urban networks for undersaturated, saturated and over saturated flows", Msc Thesis, Shahrood University of Technology.
3. Hemmat Khodanazari (2019), "Study of the student travels patterns and it's effect on Body Mass Index", Msc Thesis, Shahrood University of Technology.
4. Amin Ganjali Khosrowshahi (2019), "Presenting a spatial clustering method for crash data", Msc Thesis, Shahrood University of Technology.
5. Ahmad Najmi Oterabad (2018), "Studying of dilemma zone at signalized roundabout", Msc Thesis, Shahrood University of Technology.

## **Career Records**

06/2004 – 03/2005 Atiesaz Shargh, Tehran, Iran  
06/2007 – 03/2012 Trah-e-Haftom, Tehran, Iran  
04/2012 – 09/2015 Avand-e-Tarh-o-Andishe, Tehran, Iran  
09/2015 – 09/2016 Atiesaz Shargh, Tehran, Iran  
09/2015 – 09/2016 Golestan University, Gorgan, Iran  
09/2016 – till now Shahrood University of Technology, Shahrood, Iran  
06/2007 – till now Building and Construction Supervisor

## **Accomplished Projects**

2017 Grade Separating Networks of Velayat Park, Tehran, Iran  
2017 Feasibility Studies of Grade Separating Towhid Square Tehran, Iran  
2017 Feasibility Studies of Grade Separating Aradkooh Landfill, Tehran, Iran  
2015 Transportation Master Plan of Boroojerd, Iran  
2014 Updating Transportation and Traffic Master Plan (TMP) of Mashhad, Iran  
2013 Transportation Master Plan of Ardabil, Iran  
2013 Transportation Master Plan of Zanjan, Iran  
2012 Ground access to Imam Khomeini International Airport, Iran

- 2012 Mashhad Citizens' Flexible Hours of Activities
- 2011 Upgrading Level Crosswalks of Pedestrian in Region 4 of Tehran, Iran
- 2011 Upgrading the Guidance Signs of Highways in Region 4 of Tehran, Iran
- 2010 Traffic Improvement Studies of Gonbad-e-Qavoos, Iran
- 2010 Traffic Improvement Studies of Najafabad, Iran
- 2009 Transportation Master Plan of Arak, Iran
- 2009 Transportation Master Plan of Oroomieh, Iran
- 2008 Traffic Improvement Studies of Kermanshah CBD, Iran
- 2007 Light Rail Transit of Kermanshah, Iran
- 2005 Black Spot Treatment and Safety Improvement of network of Region 9 Tehran, Iran
- 2005 Traffic Improvement Studies of Regions 13 and 14 of Tehran, Iran
- 2005 Manual for Unsignalized Intersections and Median U-Turns of Tehran, Iran

### **Language**

English, Persian, Arabic,

### **Membership**

Tehran Construction Engineering Organization

### **Computer Skills**

1. VISUM, Synchro, SimTraffic, HCS, HICAP, AIMSUN (Traffic and Transportation)
2. MATLAB, VB, (Computer Programming)
3. SPSS, XLSTAT, Excel, Easyfit, Stata, (Statistical Tools)
4. NLogit, GAUSS, (Discrete Choice Modeling)
5. ETABS, SAP, SAFE (Construction and Building)
6. Arena (Discrete Event Simulation)