Alireza Sassani, PhD	
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EDUCATION

- PhD, Civil Engineering, Iowa State University, 2018
- MS, Civil Engineering, Middle East Technical University, Turkey, 2014
- BS, Civil Engineering, University of Guilan, Iran, 2009

PROFESSIONAL EXPERIENCE

- Research Scientist, Center for Transportation Research and Education, Institute for Transportation, Iowa State University, 2022–present
- Postdoctoral Research Associate, Center for Transportation Research and Education, Institute for Transportation, Iowa State University, 2019–2022

SELECTED RESEARCH PROJECTS

- *Developing Geospatial Tools for Designing Low Volume Federal Lands Roads* (Federal Highway Administration): Research Staff, In-progress
- *Guidebook for Application of Polymer-Modified Asphalt Overlays: From Decision-Making to Implementation* (Iowa Department of Transportation): Co-PI, In-progress
- *Evaluating the Effectiveness of Pavement Preservation Techniques Using Pavement Management Information System (PMIS)* (Iowa Department of Transportation): Research Staff, In-progress
- *Non-Invasive Sensor Deployment in Aurora Member States* (Federal Highway Administration and Iowa Department of Transportation): Research Staff, 2019–2022
- *Applying the Transportation Asset Management Plan (TAMP) System Performance Requirements to Pavement and Bridge Conditions* (Federal Highway Administration): Research Staff, 2021–2022
- *Development of a Comprehensive Access Management Policy and Guidelines* (Iowa Department of Transportation): Research Staff, 2021–2022
- *Evaluation of Road Weather Messages on DMS Based on Roadside Pavement Sensors* (Iowa Department of Transportation): Research Staff, 2020–2021
- *Evaluation Impact of Pavement Friction on Traffic Safety* (Iowa Department of Transportation): Research Staff, 2019–2021
- *Developing Guidance Documents and Training Workshops to Support Enhancement of the State DOTs Transportation Asset Management Plans* (Iowa Department of Transportation): Research Staff, 2020–2021
- *Asset Management, Extreme Weather and Proxy Indicators* (Iowa Department of Transportation and Iowa Highway Research Board): Research Staff, 2020–2021

PATENTS

- Sassani, A., H. Ceylan, H. Abdualla, S. Kim, A. Arabzadeh, K. Gopalakrishnan, and P. C. Taylor. "Electrically Conductive Concrete Mixture Composition and System Design for Resistive Heating of Pavements with Low Volume Fractions of Carbon Microfiber," Iowa State University Research Foundation (ISURF), US 2020/0262753 A1.
- Arabzadeh, A., A. Sassani, H. Ceylan, and S. Kim. "Electrically-conductive asphalt concrete containing carbon fibers," US 2021/0024418 A1.

SELECTED PUBLICATIONS

- Fakhri, M., S. Javadi, A. Sassani, and M. Torabi-Dizaji. 2022. Zinc Slag as a Partial or Total Replacement for Mineral Filler in Warm Mix Asphalt and Its Effects on Self-Healing Capacity and Performance Characteristics. *Materials*, Vol. 15, No. 3, 736 pp.
- Fakhri, M., S. Javadi, R. Sedghi, A. Sassani, A. Arabzadeh, and B. Baveli Bahmai. 2021. Microwave Induction Heating of Polymer-Modified Asphalt Materials for Self-Healing and Deicing. *Sustainability*, Vol. 13, No. 18.
- Sassani, A., O. Smadi, and N. Hawkins. 2021. Developing Pavement Marking Management Systems: A Theoretical Model Framework Based on the Experiences of the US Transportation Agencies. *Infrastructures*, Vol. 6, No. 2, 18 pp.
- Sassani, A., A. Arabzadeh, H. Ceylan, S. Kim, K. Gopalakrishnan, P. C. Taylor, and A. Nahvi. 2019. Polyurethane-Carbon Microfiber Composite Coating for Electrical Heating of Concrete Pavement Surfaces. *Heliyon*, Vol. 5, No. 8.
- Arabzadeh, A., Notani, M., Kazemianzadeh, A., Nahvi, A., Sassani, A., and H. Ceylan. 2019. Electrically Conductive Asphalt Concrete: An Alternative for Automating the Winter Maintenance Operations of Transportation Infrastructure. *Journal of Composites Part B: Engineering*, Vol. 173.
- Arabzadeh, A., A. Sassani, H. Ceylan, S. Kim, K. Gopalakrishnan, and P. C. Taylor. 2019. Comparison between cement paste and asphalt mastic modified by carbonaceous materials: Electrical and thermal properties. *Construction and Building Mate*rials, Vol. 213, pp. 121–130.
- Nahvi, A., M. Sadoughi, A. Arabzadeh, A. Sassani, S. Kim, H. Ceylan, and C. Hu. 2019. Multi-objective Bayesian Optimization of Superhydrophobic Coatings on Asphalt Concrete Surfaces. *Journal of Computational Design and Engineering*, Vol. 6, No. 4, pp. 693–704
- Malakooti, A., H. Abdualla, A. Sassani, H. Ceylan, and S. Kim, S. 2019. Effect of Electrode Geometry and Size on Heating Performance if Electrically Conductive Concrete. *Proc., 2019 Transportation Research Board (TRB) Annual Conference*, Washington, DC.