

Torey Olaf Johnson, EI



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Curriculum Vitae

EDUCATION

- MS Civil Engineering, University of Maine, Orono, Maine (2011)
- BS Civil Engineering with minors in Mathematics and Philosophy, University of Maine, Orono, Maine (2009)

HONORS AND HONOR SOCIETIES

- Graduated summa cum laude with a 3.80 undergraduate GPA
- Licensed Engineer-Intern in the State of Maine
- Member of Chi Epsilon (national Civil Engineering honor society)
- Member of Phi Sigma Tau (international Philosophy honor society)
- Member of Pi Mu Epsilon (national Mathematics honor society)
- Member of Tau Beta Pi (national Engineering honor society)

EXPERIENCE

2011 – Present Transportation Research Engineer, RoadSafe LLC, Canton, Maine: Developed a real-time web-based guardrail assessment analysis tool for use in the field to determine if guardrail repair is warranted. Helped design a retrofit of a unique stacked w-beam barrier system for a high-speed testing facility. Helped design a fascia beam bridge rail mount to allow attachment to bridges with various bridge deck types. Currently performing transportation safety research in the area of roadside hazard safety and barrier performance, administering the AASHTO Task Force 13 website and hardware guide databases, and Finite Element Analysis model building and post-processing.

- 2009 – 2011** Graduate Research Assistant, University of Maine, Orono, Maine: Collected and analyzed traffic usage data at a new roundabout installation in Bangor, Maine. Performed categorical data analysis for the Maine Department of Transportation and the Margaret Chase Smith Policy Center on the effects of MaineDOT's winter roads anti-icing policy on drivers of various age groups. Performed an assessment of the traffic calming measures implemented by the City of Bangor on Howard St. in Bangor, Maine.
- 2007 – 2009** Undergraduate Research Assistant, Maine Space Grant Consortium – NASA Lunar Base Project, University of Maine, Orono, Maine. Helped design and implement a device for bi-axial testing of fabric samples to calculate shear and tensile strengths according to ASTM standards. Cavitated samples of composite materials for mass-loss analysis.

PUBLICATIONS AND PRESENTATIONS

1. Carrigan, C.E., Johnson, T.O., and Ray, M.H., "Tree Planting and Clearing Guidance with Consideration of Minimized Crash Risk," Transportation Research Record: Journal of the Transportation Research Board, No. 2588, Transportation Research Board of the National Academies, Washington, D.C., 2016., pp. 110-115
2. Plaxico, C.A., Ray, M.H., Ray, A.M., and Johnson, T.O., "Quantitative Method for Assessing the Level of Deterioration of Round Wood Guardrail Posts," Transportation Research Record: Journal of the Transportation Research Board, No. 2521, Transportation Research Board of the National Academies, Washington, D.C., 2015., pp. 86-95
3. Carrigan, C.E., Ray, M.H., Johnson, T.O., and Ray, A.M., "Run-off-road Crash Prediction Models for Each Edge of Undivided and Divided Roadways," Transportation Research Board Annual Meeting Compendium of Papers, Transportation Research Board, Washington, D.C., 2015.
4. Carrigan, C.E., Ray, M.H., Johnson, T.O., "Understanding Heavy Vehicle Encroachment Frequency," Transportation Research Record: Journal of the Transportation Research Board, No. 2437, Transportation Research Board of the National Academies, Washington, D.C., 2014, pp. 20-26
5. Johnson, T.O., Gårder, P.E., "An Evaluation of the Effects of Different Driver Groups on Control Delay at a Low-Volume Roundabout Approach in Bangor, Maine," Presented in a poster session at the Transportation Research Board 91st Annual Meeting and published in the Compendium of Papers (12-2390), Washington, D.C., 2012
6. Johnson, T.O., Gårder, P.E., Stern, A., Rubin, J., "Interaction of Road Type, Road Surface Condition, and Driver Age on Winter Crashes in Maine," Presented at the Transportation Research Board 90th Annual Meeting and published in the Compendium of Papers (11-2915), Washington, D.C., 2011
7. Stern, A., Gårder, P.E., Johnson, T.O., Rubin, J., "Effects of Adverse Winter Weather on Drivers in High Risk Age Groups: Statewide Analysis," Published in the 90th Annual TRB Meeting Compendium of Papers, January 2011

8. Jonathan Rubin, Per E. Gårder, Charles E. Morris, Kenneth L. Nichols, John M. Peckenham, Peggy McKee, Adam Stern, and T. Olaf Johnson, *Maine Winter Roads: Salt, Safety, Environment and Cost*, a Report by the Margaret Chase Smith Policy Center, The University of Maine, February 2010
9. Johnson, T.O., "Assessment of Traffic Calming Measures on Howard St. in Bangor, ME." Presented in poster session at the Northeastern District of the Institute of Transportation Engineers Annual Meeting, Portland, ME, May 2010, recognized as one of the top three posters.