CMEM Publications

Oswald, D., Scora, G., Williams, N., Hao, P. and Barth, M. (2019) "Evaluating the Environmental Impacts of Connected and Automated Vehicles: Potential Shortcomings of a Binned-Based Emissions Model" *Intelligent Transportation Systems Conference*, under review.

Xia, H., Boriboonsomsin, K., and Barth, M. (2013). "Dynamic ECO-driving for signalized arterial corridors and its indirect network-wide energy/emissions benefits." *Journal of Intelligent Transportation Systems*, 17(1), 31-41.

Boriboonsomsin, K., Barth, M., Zhu, W., and Vu. A. (2012). "ECO-routing navigation system based on multi-source historical and real-time traffic information." *IEEE Transactions on Intelligent Transportation Systems*, 13(4), 1694-1704.

Wu, G., Boriboonsomsin, K., Zhang, W.-B., Li, M., and Barth, M. (2010). "Energy and emission benefit comparison between stationary and in-vehicle advanced driving alert systems." *Transportation Research Record*, 2189, 98-106.

Barth, M. and Boriboonsomsin, K. (2009). "Energy and emissions impacts of a freeway-based dynamic eco-driving system." *Transportation Research Part D*, 14(6), 400-410.

Li, M., Boriboonsomsin, K., Wu, G., Zhang, W.-B., and Barth, M. (2009). "Traffic energy and emission reductions at signalized intersections: a study of the benefits of advanced driver information." *International Journal of Intelligent Transportation Systems Research*, 7(1), 49-58.

Barth, M. and Boriboonsomsin, K. (2008). "Real-world carbon dioxide impacts of traffic congestion." *Transportation Research Record*, 2058, 163-171.

Boriboonsomsin, K. and Barth, M. (2008). "Impacts of freeway high-occupancy vehicle lane configurations on vehicle emissions." Transportation Research Part D, March 2008, 13(2): pp. 112-125.

Boriboonsomsin, K. and Barth, M. (2007). "Evaluating air quality benefits of freeway high occupancy vehicle (HOV) lanes in Southern California. "Transportation Research Record: Journal of the Transportation Research Board, No. 2011, TRB, National Research Council, Washington, D.C., pp. 137-147.

Barth, M., N. Davis, G. Scora, J. Collins, and J. Norbeck (2006). "Measuring and modeling emissions from extremely low emitting vehicles." Transportation Research Record: Journal of the Transportation Research Board, No. 1987, TRB, National Research Council, Washington, D.C., pp. 21-31.

Younglove, T., G. Scora, and M. Barth (2005). "Designing on-road vehicle test programs for the development of effective vehicle emission models. "Transportation Research Record: Journal of the Transportation Research Board, No. 1941, TRB, National Research Council, Washington, D.C., pp. 51-59. Barth, M., G. Scora, and T. Younglove (2004). "Modal emissions model for heavy-duty diesel vehicles." Transportation Research Record: Journal of the Transportation Research Board, No. 1880, TRB, National Research Council, Washington, D.C., pp. 10-20.

Malcolm, C., T. Younglove, M. Barth, and N. Davis (2003). "Mobile-source emissions: analysis of spatial variability in vehicle activity patterns and vehicle fleet distributions." Transportation Research Record: Journal of the Transportation Research Board, No. 1842, TRB, National Research Council, Washington, D.C., pp. 91-98.

Barth, M., C. Malcolm, T. Younglove, and N. Hill (2001). "Recent validation effort for a comprehensive modal emissions model." Transportation Research Record: Journal of the Transportation Research Board, No. 1750, TRB, National Research Council, Washington, D.C., pp. 13-23.

Barth, M., Malcolm, C., and Scora, G. (2001). "Integrating Comprehensive Modal Emissions Model into ATIMS transportation modeling frameworks." California PATH Research Report UCB-ITS-PRR-2001-19, California Partners for Advanced Transit and Highways, August, 48 pp.

An, F., M. Barth, G. Scora, and M. Ross (1999) "Modal-based intermediate soak time emissions modeling." Transportation Research Record: Journal of the Transportation Research Board, No. 1664, TRB, National Research Council, Washington, D.C., pp. 58-67.

Barth, M., F. An, T. Younglove, G. Scora, C. Levine, M. Ross, and T. Wenzel (1999). "The development of a comprehensive modal emissions model. Final report to the National Cooperative Highway Research Program", November, 255 p

Barth, M., G. Scora, and T. Younglove (1999). "Estimating emissions and fuel consumption for different levels of freeway congestion." Transportation Research Record: Journal of the Transportation Research Board, No. 1664, TRB, National Research Council, Washington, D.C., pp. 47-57.

An, F., M. Barth, G. Scora, and M. Ross (1998) "Modeling enleanment emissions for light-duty vehicles." Transportation Research Record: Journal of the Transportation Research Board, No. 1641, TRB, National Research Council, Washington, D.C., pp. 48-57.

An, F., M. Barth, J. Norbeck, and M. Ross (1997) "Development of comprehensive modal emissions model: operating under hot-stabilized conditions." Transportation Research Record: Journal of the Transportation Research Board, No. 1587, TRB, National Research Council, Washington, D.C., pp. 52-62.

Barth, M., T. Younglove, T. Wenzel, G. Scora, F. An, M. Ross, and J. Norbeck (1997) "Analysis of modal emissions from diverse in-use vehicle fleet." Transportation Research Record: Journal of the Transportation Research Board, No. 1587, TRB, National Research Council, Washington, D.C., pp. 73-84.

Barth, M., F. An, J. Norbeck, and M. Ross (1996). "Modal emissions modeling: a physical approach." Transportation Research Record: Journal of the Transportation Research Board, No. 1520, TRB, National Research Council, Washington, D.C., pp. 81-88.