CENTER FOR CONNECTED AND AUTOMATED TRANSPORTATION

Project Title	A Naturalistic Bicycling Study in the Ann Arbor Area	
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Most relevant CCAT research thrusts (choose all applicable)	__X__Enabling Technology __X__ Planning and Policy __X__Human Factors __X__ Infrastructure Design and Management _____ Control and Operations _____Models and Implementation	
Funding Request		
Matching Funds and Source (if any)	Toyota $369,104	
Total Project Cost	$369,104	
Contract Number	69A3551747105	
Project start/end dates	2017-2018	
Project Abstract	In the past few years much progress have been made in the self-driving technologies and related issues (e.g., legislation and regulation) by a variety of entities from automotive and tech industries, academic institutions, and government and organizations. However, there are still great challenges to be solved. One of the critical challenges is that the self-driving cars need to share the existing infrastructure with other non-motorized road users such as bicyclists and pedestrians. Given the complexity of the real-world road environment and the presumably high variability of the behaviors of the non-motorized road users, how the self-driving cars should be designed, tested, and tuned to share the road with bicyclists and pedestrians in a safe and efficient manner is a complicated and yet crucial question. One way to potentially help answer this question is to collect naturalistic data of people riding bicycles in their everyday trips on real-world roadways, and use the collected quantitative data to create guidelines, supports, and test scenarios to develop the artificial intelligence algorithms for self-driving cars in their ability to effectively interact with bicyclists in real-world environment. The final report for this project will not be publicly available.	
High-level implementation plan		
Project Metrics	Data collected, Events triggered, Analysis results	

Web Links:	ccat.umtri.umich.edu