

Motorcycle Test Bed for Dynamic Wheel Load Measurement in the Laboratory

Relevance to the Automotive Industry:	The field of research within this project aims at enhancing motorcycle safety.	
Research Location:	TUD Fahrzeugtechnik (FZD)	VT
Homepage (Engl.):	http://www.tu-darmstadt.de/fzd/index_en.html	
Faculty Mentor:	Prof. Dr. rer. nat. Hermann Winner	
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Project Description:	<p>The Chair of Automotive Engineering (FZD) at the Technische Universität Darmstadt conducts research on future vehicle stability control systems for unbraked cornering. In this project, motorcycle accidents have been simulated using special motorcycle and simulation software. During a motorcycle fall event, the wheel loads decreased unequally, thus generating a yaw momentum that turns the motorcycle into the bend.</p> <p>The task in this REU project is to construct, implement and test a test bed to measure the dynamic wheel loads of a motorcycle in the laboratory.</p>	
Jun 9 - Aug 1, 2008; (8 weeks, 40h/week)		
Necessary Skills/ Knowledge:	•	
Desirable Skills/ Knowledge:	<ul style="list-style-type: none"> • Mechanics • MATLAB • CAD Software (e.g. Pro/ENGINEER, NX) • Motorcycle driver's license 	
Additional Online Resource(s):		

NSF REU Students must have completed at least two semesters of engineering studies prior to the proposed summer research, and they must have at least one semester remaining before they can earn their BS in Engineering.