

# Richard Hill

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- x Designed and helped conduct acceptance and development testing. Interfaced with various subcontractors and customers.

### Brief Summary of Research Activities

UNIVERSITY OF MICHIGAN Ann Arbor MI –Graduate Student Researcher July 2004– July 2008

- x Determined requirements and developed algorithms for the modular and hierarchical control of discreteevent systems that reduce complexity and improve reconfigurability. Applied results to various physical examples:

R.C. Hill and K.A. Plantenberg. "A Conceptual Approach to Undergraduate Dynamics Instruction in a World of Progress," Proceedings of the North Central Section Meeting of the American Society for Engineering Education, Ada, OH, March, 2012.

M. Sartini, A. Paoli, R.C. Hill, and S. Lafortune. "A Methodology for Modular Model Building in Discrete Automation," Proceedings of the IEEE Conference on Emerging Technologies in Factory Automation, Bilbao, Spain, Sept 2010.

R.C. Hill and P. Pena. "International Collaboration in an Undergraduate Controls Systems Course," Proceedings of the 2010 American Society for Engineering Education Annual Conference & Exposition, Louisville, KY, June 2010.

R.C. Hill, J. Lockwood, and Y. Li. "Diagnostics Design Process for Developmental Societies of Automotive Engineers (SAE) World Congress, April 2010

R.C. Hill. "Effective Use of Simulation in the Introductory Controls Curriculum," Proceedings of the American Society for Engineering Education Annual Conference & Exposition, Louisville, KY, June 2010.



funded 2011-2012.

“Fault-Tolerant Discrete Control Logic in Automotive Applications”, Subcontract, PI Stephane Lafortune (University of Michigan), Automotive TRW Endowed Research Award: \$ ~~350,000~~ <sup>350,000</sup> at UDM) funded 2011-2012.

“Updating MATLAB Controls Tutorial

Andrew Niedert, Modeling, Control, and Design of a Teleoperated Omnidirectional Ground Mobile  
of Mechanical Engineering, Fall 2011- (advised with Dr. Nassif Rayess).

## Reviewer of Technical Papers

- x Journals
  - IEEE Transactions on Automatic Control
  - IEEE Transactions on Automation Science and Engineering
  - International Journal of Control
  - Journal of Discrete Event Dynamic Systems
- x Conferences
  - 2013 American Control Conference (ACC'13)
  - 2012 American Society of Engineering Education (ASEE) North-Central Section Conf
  - 2010 Society of Automotive Engineers (SAE) World Congress & Exhibition
  - 2009 IEEE Conference on Decision and Control (CDC'09)
  - 2009 IEEE Conference on Automation Science and Engineering (CASE'09)
  - 2009 International Workshop on Principles of Diagnosis (DX'09)
  - 2009 American Society of Engineering Education (ASEE) North-Central Section Conf
  - 2009 Society of Automotive Engineers (SAE) World Congress & Exhibition
  - 2008 International Workshop on Discrete Event Systems (WODES'08)
  - 2007 Dependable Control of Discrete Event Systems (DCDS'07)
  - 2007 American Control Conference (ACC'07)
  - 2006 American Control Conference (ACC'06)

## Affiliations

- x ASEE
- x ASME
- x SAE