

Dr. Annalisa Scacchioli's Biographical Sketch (annalisa@gatech.edu, 510-292-0817)

Institutional Affiliation

Daniel Guggenheim School of Aerospace Engineering, Georgia Institute of Technology.

Field of Specialization and Research Interests

Application of feedback, control and diagnosis and multidisciplinary mathematical modeling of complex-engineered systems, with focus on **automotive and transportation systems** (transportation electrification, including energy storage systems, advanced vehicle propulsion systems, vehicle active safety systems).

Educational Background

| | | |
|---------------|---------------------------------------|-------------------------------------------------|
| Postdoctorate | Aerospace Engineering | Georgia Institute of Technology, 2008- |
| Postdoctorate | Civil and Environmental Engineering | University of California at Berkeley, 2007-2008 |
| Postdoctorate | Mechanical Engineering | The Ohio State University, 2005-2006 |
| PhD | Electrical Eng. and Computer Sciences | University of L'Aquila, Italy, 2005 |
| MEng | Electrical Engineering | University of L'Aquila, Italy, 2000 |

Professional Background

| | |
|-----------|-------------------------------------------------------------------------------------------|
| 2009- | Research Collaborator, Massachusetts Institute of Technology, Cambridge, USA |
| 2008- | Research Collaborator, US Army CRRL, Hanover, New Hampshire, USA |
| 2008,2010 | Visiting Researcher, Ford Research and Innovation Center, Dearborn, Michigan, USA |
| 2008- | Research Collaborator, Ford Research and Innovation Center, Dearborn, Michigan, USA |
| 2008- | Postdoctoral Researcher, Aerospace Engineering, Georgia Institute of Technology, USA |
| 2007-2008 | Postdoctoral Researcher, Earthquake Eng. R. C., University of California at Berkeley, USA |
| 2005-2006 | Research Collaborator, General Motors Corporation, Warren, Michigan, USA |
| 2005-2006 | Postdoctoral Researcher, Center for Automotive Research, The Ohio State University, USA |
| 2002 | Visiting Control Research Engineer, Daimler-Chrysler, Stuttgart, Germany |
| 2000-2004 | Control Research Engineer, Magneti-Marelli Powertrain, Bologna, Italy |
| 2000 | Visiting Undergraduate Student Researcher, PARADES, Rome, Italy |

Awards and Grants (selected)

US NSF-GOALI Award (with P. Tsiotras and J. Lu) in collaboration with Ford Motor Company for "Next generation active safety control systems for crash-avoidance of passenger vehicles using expert driver knowledge," co-PI at the Georgia Institute of Technology, Atlanta, USA, 2008-present.

GM (General Motors) Grant (with G. Rizzoni and M. A. Salman) for "Faults diagnosis of electrical vehicles," co-PI at The Ohio State University Center for Automotive Research, USA, 2005-2006.

ASTRI Award for "Doctoral thesis for research in automotive industry," Milan, Italy, 2004.

ATA (Technical Association for Automobiles) Grant for "*Laurea* thesis on automotive control systems," Turin, Italy, 2000.

Publications (selected of 22)

1. **A. Scacchioli**, G. Rizzoni, M. A. Salman, W. Li, S. Onori, X. Zhang, "Experimental implementation of an on-board-oriented model-based diagnosis for an electric power generation and storage automotive system," in *ASME Journal of Dynamic Systems, Measurement, and Control* (in revision, 2010).
2. **A. Scacchioli**, P. Tsiotras, and J. Lu, "Nonlinear-feedback traction force control with load transfer," in *Proceedings of the 2nd ASME Dynamic Systems and Control Division Conference*, (Hollywood, California), October 12-14, 2009.
3. **A. Scacchioli**, A. M. Bayen, and B. Stojadinović, "Propagation of uncertainty in dynamics of structures using reachability analysis - PART I: single-degree-of-freedom systems," in *Journal of Earthquake Engineering and Structural Dynamics* (to be submitted, available upon request).
4. **A. Scacchioli**, *Hybrid Regulation of Electromagnetic Valves in Automotive Systems*. EECS Ph.D. Dissertation, University of L'Aquila, *Biblioteca Nazionale di Roma* and *Biblioteca Nazionale di Firenze*, Italy, March 2005.