

LUIS M. GARCIA GUZMAN

Office for the Study of Automotive Transportation
The University of Michigan Transportation Research Institute
2901 Baxter Road, Ann Arbor, MI 48109-2150
Telephone: (734) 764-5262; e-mail: lgguzman@umich.edu

RESEARCH FOCUS:

My primary research interests include multivariate statistical-decision making, tolerance analysis, manufacturing methods, and automotive body validation.

EDUCATION:

Ph.D. (Industrial and Operations Engineering), Rackham School of Graduate Studies, The University of Michigan, Ann Arbor, Michigan. August 2001. Ph.D. Dissertation: "Dimensional Management in Metal Assembly Process Validation: A Multivariate Approach."

Master of Science in Engineering (Industrial and Operations Engineering), Rackham School of Graduate Studies, The University of Michigan, Ann Arbor, Michigan. December 1997.

Bachelor of Science in Engineering (Industrial and Systems Engineering), Monterrey Institute of Technology (ITESM), Atizapan, Mexico. 1991.

EMPLOYMENT HISTORY:

The University of Michigan, Ann Arbor, MI:

Assistant Research Scientist, OSAT/UMTRI, August 2004 to present.

Adjunct - Assistant Professor, Industrial and Operations Engineering, August 2003 to present.

Research Investigator, OSAT/UMTRI, August 2002 to August 2004.

Research Fellow, OSAT/UMTRI, August 2001 to August 2002.

Research Associate, OSAT/UMTRI, September 1998 to August 2001.

Daimler Chrysler Corporation, Belvidere Stamping Plant, Belvidere, IL:

Quality Engineer. May 1998 to August 1998.

AMP Industries, Harrison TWP, MI:

Quality Engineer. August 1994 to August 1996.

Duroplast, Naucalpan, Mexico:

Product Development Engineer. February 1991 to August 1994.

TEACHING:

Probability and Statistics for Engineers: Industrial and Operations Engineering, Fall 2003, Winter 2004

**Quality Engineering (Six Sigma) Courses, Center for Professional Development,
College of Engineering (Winter 2003, Fall 2003)**

**Lab Instructor, Industrial and Operations Engineering 265, Probability and
Statistics for Engineers (Fall 2001)**

**Teaching Assistant, Accelerated Six Sigma, Center for Professional Development
Short Course (Winter and Spring 2001)**

HONORS:

Joaquín Carrión Solana Award – 1991 Mexican Association of Mechanical and
Electrical Engineers

Top of Class Award – 1991 Monterrey Institute of Technology, Mexico.

PUBLICATIONS:

Refereed Journals:

Guzman, L.G., and Hammett, P.C., 2002, Understanding multivariate component-
sheet metal assembly relationships using dimensional slow build studies.
Accepted for publication in *International Journal of Production Research*.

Refereed Conferences and Symposiums:

Garcia Guzman, L., and Hammett, P.C., 2003, “A Tolerance Adjustment Process
for Dimensional Validation of Stamping Parts and Welded Assemblies,”
Proceedings of the International Body Engineering Conference, Chiba, Japan,
pp. 249-253

Garcia Guzman, L., and Hammett, P. C., 2002, “Analysis and Design of Slow
Build Studies During Sheet-metal Assembly Validations,” Proceedings of the
International Body Engineering Conference, Paris, France. Paper no. 2001-01-
3052

Other Conference Presentations:

Garcia Guzman, L., and Herrin, G., 1998, “Evaluating Process Capability for
Geometric Dimensioning and Tolerancing,” *Informs Conference*, Montreal,
Canada.

Industry Technical Reports:

Hammett, P.C., Frescoln, K. & Garcia Guzman, L., 2003, “Changing Automotive
Body Measurement System Paradigms With 3D Non-Contact Measurement
Systems,” *UMTRI Technical Report 2003-43*.

Hammett, P.C. & Garcia Guzman, L., 2003, “Strategies for Stamped Part
Measurement System Analysis Studies,” Internal GM Report.

Hammett, P.C., Geddes, S. & Garcia Guzman, L., 2002, "Functional Evaluation Process Comparison: GM FE Process with Fuji Screwbody Process," Internal GM Report.

Industry Technical Presentations:

Formability Study - Waveform Analysis, Warren Stamping Plant, Daimler Chrysler, 2003
Press Waveform Analysis in Stamping Process Control, Daimler Chrysler, 2003
Dimensional Capability Analysis for New Gap/Flush Initiatives, General Motors, 2003
Dimensional Requirements Evaluation Process (DREP) Analysis, General Motors, 2003
Measurement Systems Analysis and Global Tolerances, General Motors, 2002
Dimensional Comparison High Strength Steel Underbodies, General Motors, 2002
Implications of Global Tolerances on Gage R&R, General Motors, 2001
Tolerance Adjustment Process Recommendation, General Motors, 2001
Sheet Metal Stamping FE 1 Submittal Criteria Revisions for Global Tolerances, General Motors, 2001
GMT 360 MFD Dimensional Conformance and FE Performance Summary, General Motors, 2001
Tolerance Adjustment Strategies for Sheet Metal Parts, General Motors, 2000
Slow Build Door Study, Auto/Steel Partnership, 2000

CURRENT RESEARCH PROJECTS:

Daimler-Chrysler, 2002 to present.

Lead investigator for project on Stamping Panel and Press Consistency from Die Construction Source to Home line die tryout.

CogniTens, 2002 to present.

Co-investigator for project utilizing 3D non-contact measurement technology with point cloud data during stamping die tryout and tune-in."

ITT Corporation, 2002 to present.

Manage University of Michigan on-line Six Sigma courses and certification projects.

Fuji Dietec Corporation, 2001 to present.

Co-investigator for this stamping and assembly research project to develop strategies to more efficiently execute manufacturing validation phase of automotive body development.

General Motors Corporation, 1999 to present.

Co-investigator for a stamping and assembly research project for General Motors. This project has been renewed annually since 1995.

Auto/Steel Partnership, 1998 to 2000.

Lead investigator for a dimensional slow build study project for Daimler Chrysler during the launch of a new vehicle in their Mexican operations.

LANGUAGES:

Spanish
Portuguese

AFFILIATIONS:

Society of Automotive Engineers