RYAN FELLINI, PhD

	List	of Publications
JOURNAL ARTICLES	01. 02.	 Fellini, R. and Kropp, Y. Post-Buckling Behavior of Thin Corrugated Panels, with Application to Gossamer Space Structures. AIAA Journal of Spacecraft and Rockets, 2010. (in preparation for submission) Fellini, R. and Kropp, Y. James Webb Space Telescope Sunshield: Challenges in Analysis of Gossamer Structures. Northrop Grumman Technology Review Journal, Vol. 16, No. 1, pp. 17-44, Spring/Summer, 2008. Awarded Best Paper
	03.	 Fellini, R., Kokkolaras, M., and Papalambros, P. Quantitative Platform Selection in Optimal Design of Product Families, with Application to Automotive Engine Design. Journal of Engineering Design, Vol. 17, No. 5, pp. 429-446, October, 2006. http://ode.engin.umich.edu/publications/PapalambrosPapers/2006/183.pdf
	04.	Fellini, R. , Kokkolaras, M., Papalambros, P., and Perez-Duarte, A. <i>Platform Selection under Performance Bounds in Optimal Design of Product Families</i> . ASME Transactions, Journal of Mechanical Design, Vol. 127, No. 4, pp. 524-535, July, 2005. (see also the 2002 conference version)
	05.	Fellini, R., Kokkolaras, M., Michelena, N., PapalambiosPapers/2002/1473.pdf Fellini, R., Kokkolaras, M., Michelena, N., Papalambros, P., Perez-Duarte, A., Saitou, K., and Fenyes, P. <i>A Sensitivity-Based Commonality Strategy for Family Products of Mild Variation, with Application to Automotive Body Structures</i> . ISSMO Journal of Structural and Multidisciplinary Optimization, Vol. 27, No. 1-2, pp. 89-96, May, 2004. (see also the 2002 conference version)
	06.	Kokkolaras, M., Fellini, R. , Kim, H.M., Michelena, N., and Papalambros, P. <i>Extension of the Target Cascading Formulation to the Design of Product Families</i> . ISSMO Journal of Structural and Multidisciplinary Optimization, Vol. 24, No. 4, pp. 293-301, October, 2002. (see also the 2001 conference version)
	07.	Assanis, D., Delagrammatikas G., Fellini R. , Filipi Z., Liedtke J., Michelena, N., Papalambros, P., Reyes, D., Rosenbaum D., Sales A., and Sasena M. <i>An Optimization</i> <i>Approach to Hybrid Electric Propulsion System Design.</i> Journal of Mechanics of Structures and Machines, Vol. 27, No. 4, pp. 393-421, 1999. http://ode.engin.umich.edu/publications/PapalambrosPapers/1999/118.pdf
	08.	Hulbert, G.M., Michelena, N., Ma, Z-D., Tseng, F-C., Fellini, R. , Scheffer, C., Choi, K.K., Tang, J., Ogarevic, V., and Hardee, E. <i>A Case Study for Network-Distributed Collaborative Design and Simulation: Extended Life Optimization for M1 Abrams Tank Road Arm.</i> Journal of Mechanics of Structures and Machines, Vol. 27, No. 4, pp. 423-451, 1999.
	09.	Michelena, N., Scheffer, C., Fellini , R. , and Papalambros, P. <i>A Corba-Based Object-Oriented Framework for Distributed System Design</i> . Journal of Mechanics of Structures and Machines, Vol. 27, No. 4, pp. 365-392, 1999. http://ode.engin.umich.edu/publications/PapalambrosPapers/1999/110.pdf
CONFERENCE PROCEEDINGS	01.	Fellini, R. and Kropp, Y. <i>Post-Buckling Behavior of Thin Corrugated Panels, with Application to Gossamer Space Structures.</i> In the Proceedings of the 51st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, paper AIAA-2010-2508, Orlando, Florida, USA, April 12-15, 2010.
	02.	Fellini, R., Kokkolaras, M., and Papalambros, P. Efficient Product Portfolio Reduction. In the Proceedings of the 5th ISSMO World Congress on Structural and Multidisciplinary Optimization, Lido di Jesolo-Venice, Italy, May 19-23, 2003. http://ode.engin.umich.edu/publications/PapalambrosPapers/2003/163.pdf

03. **Fellini, R.**, Kokkolaras, M., and Papalambros, P. *A Rigorous Framework for Making Commonality and Modularity Decisions in Optimal Design of Product Families.* In the Proceedings of the International Conference on Engineering Design, Stockholm, Sweden, August 19-21, 2003.

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04. Fellini, R., Kokkolaras, M., Michelena, N., Papalambros, P., Saitou, K., Perez-Duarte, A., and Fenyes, P. A Sensitivity-Based Commonality Strategy for Family Products of Mild Variation, with Application to Automotive Body Structures. In the Proceedings of the 9th AIAA/ISSMO Symposium on Multidisciplinary Analysis and Optimization, paper AIAA-2002-5610, Atlanta, Georgia, USA, September 4-6, 2002. (see also the 2004 Journal version)

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05. **Fellini, R.**, Kokkolaras, M., Papalambros, P., and Perez-Duarte, A. *Platform Selection under Performance Loss Constraints in Optimal Design of Product Families.* In the Proceedings of the 2002 ASME Design Automation Conference, paper DAC-34099, Montréal, Québec, Canada, September 29-October 2, 2002. (see also the 2005 Journal version)

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 Georgiopoulos, P., Fellini, R., Sasena, M., and Papalambros, P. Optimal Design Decisions in Product Portfolio Valuation. In the Proceedings of the 2002 ASME Design Automation Conference, paper DAC-34097, Montréal, Québec, Canada, September 29-October 2, 2002.

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07. **Fellini, R.**, Kim, H.M., Kokkolaras, M., Michelena, N., and Papalambros, P. *Target Cascading for Design of Product Families*. In the Addendum of the Proceedings of the 4th ISSMO World Congress on Structural and Multidisciplinary Optimization, Dalian, China, June 4-8, 2001 (see also the 2002 Journal version).

http://ode.engin.umich.edu/publications/PapalambrosPapers/2001/137.pdf

- 08. Fellini, R., Papalambros, P., and Weber, T. Application of a Product Platform Design Process to Automotive Powertrains. In the Proceedings of the 8th AIAA/NASA/USAF/ISSMO Symposium on Multidisciplinary Analysis and Optimization, paper AIAA-2000-4849, Long Beach, California, USA, September 6-8, 2000. http://ode.engin.umich.edu/publications/PapalambrosPapers/2000/132.pdf
- 09. **Fellini, R.**, Michelena, N., Papalambros, P., and Sasena, M. *Optimal Design of Automotive Hybrid Powertrain Systems*. In the Proceedings of the EcoDesign '99: 1st International Symposium on Environmentally Conscious Design and Inverse Manufacturing, Tokyo, Japan, February 1-3, 1999.

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- 01. **Fellini, R.** Space Behavior of a Membrane with Attached IMM Cells. Presentation at the Air Force Research Lab's IMM Integration Workshop, Manhattan Beach, California, USA, April 19, 2010.
 - 02. **Fellini, R.** An Introduction to Analytical Methods for Product Family Design. Seminar at the Center for Precision Engineering, Lawrence Livermore National Laboratory, Livermore, California, USA, July 15, 2004.
 - 03. **Fellini, R.** *Efficient Product Portfolio Reduction.* Presentation at the 9th Annual ARC Conference on Critical Technologies for Modeling and Simulation of Ground Vehicles, DaimlerChrysler, Auburn Hills, Michigan, USA, University of Michigan, Ann Arbor, Michigan, USA, May 12-13, 2003.
 - 04. **Fellini, R.** and Perez-Duarte, A. *Commonality Decisions in Product Platform Design: Theory.* Presentation at the 8th Annual ARC Conference on Critical Technologies for Modeling and Simulation of Ground Vehicles, General Motors Tech Center, Warren, Michigan, USA, University of Michigan, Ann Arbor, Michigan, USA, May 14-15, 2002.
 - 05. **Fellini, R.** and Perez-Duarte, A. *Commonality Decisions in Product Platform Design: Applications.* Presentation at the 8th Annual ARC Conference on Critical Technologies for Modeling and Simulation of Ground Vehicles, General Motors Tech Center, Warren, Michigan, USA, University of Michigan, Ann Arbor, Michigan, USA, May 14-15, 2002.

TALKS

	06. 07.	Fellini, R. <i>Product Platform Design.</i> Presentation at the 7th Annual ARC Conference on Critical Technologies for Modeling and Simulation of Ground Vehicles, Ford Motor Company, Dearborn, Michigan, USA, University of Michigan, Ann Arbor, Michigan, USA, May 15-16, 2001. Sasena, M., Delagrammatikas G., and Fellini, R. <i>System Engineering Methods Applied to Hybrid Electric Vehicle Propulsion.</i> Presentation at the 4th Annual ARC Conference on Critical Technologies for Modeling and Simulation of Ground Vehicles, University of Michigan, Ann Arbor, Michigan, USA, May 19-20, 1998.
BOOK CHAPTERS	01.	Fellini, R., Kokkolaras, M., and Papalambros, P. Commonality Decisions in Product Family Design. Chapter 9 of <i>Product Platform and Product Family Design: Methods and</i> <i>Applications</i> , ISBN: 978-0-387-25721-1, edited by Simpson, T.W., Siddique, Z., and Jiao, J., Springer, New York, (Eds.) 1st ed. 2005. Corr. 2nd printing, 2006. http://www.springer.com/engineering/production+eng/book/978-0-387-25721-1
	02.	Kokkolaras, M., Fellini, R. , Kim, H.M., and Papalambros, P. Analytical Target Cascading in Product Family Design. Chapter 11 of <i>Product Platform and Product Family Design:</i> <i>Methods and Applications</i> , ISBN: 978-0-387-25721-1, edited by Simpson, T.W., Siddique, Z., and Jiao, J., Springer, New York, (Eds.) 1st ed. 2005. Corr. 2nd printing, 2006. http://www.springer.com/engineering/production+eng/book/978-0-387-25721-1
THESES	01.	Fellini, R. A Model-Based Methodology for Product Family Design. PhD Dissertation, Department of Mechanical Engineering, University of Michigan, Ann Arbor, Michigan, USA, 2003. http://www.ryanfellini.com/files/fellini_phd_abstract.pdf
	02.	Fellini, R. Derivative-Free and Global Search Optimization Algorithms in an Object-Oriented Design Framework. MS Thesis, Department of Mechanical Engineering, University of Michigan, Ann Arbor, Michigan, USA, 1998. http://www.ryanfellini.com/files/fellini_ms_abstract.pdf