Nathaniel Price

natbprice DayduhScientist +1 904 315 2486 natbprice@gmail.com | *Updated:* March 30, 2019

Education

Ph.D. Mechanical Engineering (jointly conferred) 2012 - 16
University of Florida, Gainesville, Florida, USA
École Nationale Supérieure des Mines de Saint-Étienne, Saint-Étienne, France

M.S. Mechanical Engineering 2012 - 14
University of Florida, Gainesville, Florida, USA

Graduate Certificate in Scientific Computing 2012 - 14
University of Florida, Gainesville, Forida, USA

B.S. Mechanical Engineering 2008 - 12
University of Florida, Gainesville, Florida, USA

Professional Experience

Post-doctoral Research Associate September 2016 - present
School of Natural Resources
University of Nebraska-Lincoln, Lincoln, Nebraska, USA

- Data scientist for human dimensions research group
- Mentor graduate students and train students in statistical analysis techniques
- Developed exploratory data analysis dashboard in R for SQL sportsperson customer database

Graduate Research Assistant August 2012 - August 2016
Department of Mechanical & Aerospace Engineering
University of Florida, Gainesville, Florida, USA

- Integrated machine learning (e.g., Gaussian process), optimization, and uncertainty propagation to design engineering systems considering future decision making process
- Collaboratively developed optimization-based method for NASA Uncertainty Quantification Challenge

Ph.D. Student Researcher October 2014 - April 2016
ONERA – The French Aerospace Lab, Palaiseau, France

- Developed and applied a novel method for optimal design of sounding rocket under uncertainty
- Co-authored book chapter on space vehicle design under uncertainty

Undergraduate Research Assistant May 2011 - May 2012
Department of Mechanical & Aerospace Engineering
University of Florida, Gainesville, Florida, USA

- Developed Python code for parameterized finite element modeling of rigid sternal fixation
- Analyzed effects of patient variability and plate designs on stability of sternal fixation
- Presented award winning research at top conferences

Engineer Intern January 2005 - August 2012
E&S Consulting Inc., St. Augustine, Florida, USA

- Assisted with failure analysis investigations (inspections, materials testing, reports, research)

Launch Engineer Intern August 2010 - December 2010 *SpaceX, Cape Canaveral, Florida, USA*

- Performed maintenance of launch vehicle ground systems
- Assisted in rollout and launch of Falcon 9 and Dragon spacecraft

Undergraduate Research Assistant May 2011 - May 2012
Department of Materials Science & Engineering
University of Florida, Gainesville, Florida, USA

- Developed Matlab code for compliance correction of compression / tensile strength test data
- Machined magnesium tensile strength test specimens

Publications

Balesdent, Mathieu, Loïc Brevault, Nathaniel B. Price, Sébastien Defoort, Rodolphe Le Riche, Nam-Ho Kim, Raphael T. Haftka, and Nicolas Bérend. 2016a. "Advanced Space Vehicle Design Taking into Account Multidisciplinary Couplings and Mixed Epistemic/Aleatory Uncertainties." In *Space Engineering*, 1–48. Springer Optimization and Its Applications. Springer, Cham. https://doi.org/10.1007/978-3-319-41508-6_1.

Balesdent, Mathieu, Loïc Brevault, Nathaniel Price, Sebastien Defoort, Rodolphe Le Riche, Nam H. Kim, Raphael Haftka, and Nicolas Bérend. 2016b. "Space Vehicle Design Taking into Account Multidisciplinary Couplings and Mixed Epistemic / Aleatory Uncertainties." In *Space Engineering: Modeling and Optimization with Case Studies*. Springer.

Berry, Allan J., Edward S. George, and Nathaniel B. Price. 2007. "Fire Damage Remediation of a Steel Box Aerial Guideway Girder on Miami-Dade Transit's Metrorail System." In. New Orleans, Louisiana: American Institute of Steel Construction.

Chaudhuri, Anirban, Garrett Waycaster, Taiki Matsumura, Nathaniel B. Price, and Raphael T. Haftka. n.d. "Framework for Quantification and Risk Analysis for Layered Uncertainty Using Optimization: NASA UQ Challenge." In *16th AIAA Non-Deterministic Approaches Conference*. American Institute of Aeronautics; Astronautics. Accessed January 16, 2018. https://doi.org/10.2514/6.2014-1498.

Chaudhuri, Anirban, Garrett Waycaster, Nathaniel Price, Taiki Matsumura, and Raphael T. Haftka. 2015. "NASA Uncertainty Quantification Challenge: An Optimization-Based Methodology and Validation." *Journal of Aerospace Information Systems* 12 (1): 10–34. https://doi.org/10.2514/1.I010269.

Price, Nathaniel B., Mathieu Balesdent, Sébastien Defoort, Rodolphe Le Riche, Nam Ho Kim, and Raphael T. Haftka. n.d. "Simulating Future Test and Redesign Considering Epistemic Model Uncertainty." In *18th AIAA Non-Deterministic Approaches Conference*. American Institute of Aeronautics; Astronautics. Accessed January 16, 2018. https://doi.org/10.2514/6.2016-0950.

Price, Nathaniel B., Nam Ho Kim, Bryan Wilcox, and Brian Hatcher. 2012a. "The Effects of Cortical Thickness, Bone Strength, & Screw Length on Rigid Sternal Fixation Stability." In. Atlanta, Georgia: Biomedical Engineering Society.

Price, Nathaniel B., Nam H. Kim, Bryan Wilcox, and Brian Hatcher. 2012b. "Design Study on Stability & Safety of Median Sternotomy Fixation." In, 79:67. Gainesville, Florida: American Society of Biomechanics.

Price, Nathaniel B., Taiki Matsumura, Raphael T. Haftka, and Nam Ho Kim. 2014. "Deciding How Conservative A Designer Should Be: Simulating Future Tests and Redesign." In *16th AIAA Non-Deterministic Approaches Conference*. National Harbor, Maryland: American Institute of Aeronautics; Astronautics.