






Nathaniel Price

335 S. 46th St. Lincon, NE 68510

 natbprice  DayduhScientist  +1 904 315 2486  natbprice@gmail.com  natbprice

Education

2014 - 2016	Ph.D. Mechanical Engineering Saint-Étienne, Rhône-Alps, France	École des Mines de Saint-Étienne
2012 - 2016	Ph.D. Mechanical Engineering Gainesville, Florida, US	University of Florida
2012 - 2014	Graduate Certificate in Scientific Computing Gainesville, Florida, US	University of Florida
2012 - 2014	M.S. Mechanical Engineering Gainesville, Florida, US	University of Florida
2010 - 2012	B.S. Mechanical Engineering Gainesville, Florida, US	University of Florida

Experience

2016 - present	Post-doctoral Research Associate Lincoln, Nebraska, US	University of Nebraska-Lincoln
<ul style="list-style-type: none">• Developed innovative approach to analyzing repeat-purchase data through the application of statistical models from population dynamics• Mentor graduate students and train students in statistical analysis techniques• Developed exploratory data analysis web application in R for SQL sportsperson customer database		
2012 - 2016	Graduate Research Assistant Gainesville, Florida, US	University of Florida
<ul style="list-style-type: none">• 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		
2014 - 2016	Ph.D. Student Researcher Palaiseau, Île-de-France, France	ONERA
<ul style="list-style-type: none">• Developed a novel method for optimal design of sounding rocket under uncertainty• Co-authored book chapter on space vehicle design under uncertainty		
2011 - 2012	Undergraduate Research Assistant Gainesville, Florida, US	University of Florida
<ul style="list-style-type: none">• 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		
2010 - 2011	Launch Engineer Intern Cape Canaveral, Florida, US	SpaceX
<ul style="list-style-type: none">• Performed maintenance of launch vehicle ground systems• Assisted in rollout and launch of Falcon 9 and Dragon spacecraft		
2005 - 2010	Engineer Intern St. Augustine, Florida, US	E&S Consulting, Inc.
<ul style="list-style-type: none">• Assisted with failure analysis investigations (inspections, materials testing, reports, research)		
2009 - 2010	Undergraduate Research Assistant Gainesville, Florida, US	University of Florida
<ul style="list-style-type: none">• Developed Matlab code for compliance correction of compression / tensile strength test data		

Awards

2013	Knox T. Millsaps Outstanding Undergraduate Paper Award
2012	Biomedical Engineering Society (BMES) Design and Research Award
2012	University of Florida Graduate School Fellowship Award
2009	American Institute of Aeronautics & Astronautics (AIAA) Foundation Junior Scholarship

Publications

Journal Articles and Book Chapters

1. Balesdent, M, L Brevault, NB Price, S Defoort, R Le Riche, NH Kim, RT Haftka, and N Bérend (2016). "Advanced Space Vehicle Design Taking into Account Multidisciplinary Couplings and Mixed Epistemic/Aleatory Uncertainties". In: *Space Engineering: Modeling and Optimization with Case Studies*. Ed. by G Fasano and JD Pintér. Cham: Springer International Publishing, pp.1–48. https://doi.org/10.1007/978-3-319-41508-6_1.
2. Price, NB, NH Kim, RT Haftka, M Balesdent, S Defoort, and R Le Riche (Sept. 2016). Deciding Degree of Conservativeness in Initial Design Considering Risk of Future Redesign. *Journal of Mechanical Design* **138**(11), 111409–111409–13.
3. Chaudhuri, A, G Waycaster, N Price, T Matsumura, and RT Haftka (Jan. 2015). NASA Uncertainty Quantification Challenge: An Optimization-Based Methodology and Validation. *Journal of Aerospace Information Systems* **12**(1), 10–34.

Conference Papers with Oral Presentations

1. Price, NB, M Balesdent, S Defoort, R Le Riche, NH Kim, and RT Haftka (Jan. 2016). Simulating Future Test and Redesign Considering Epistemic Model Uncertainty. In: *18th AIAA Non-Deterministic Approaches Conference*. AIAA SciTech Forum. American Institute of Aeronautics and Astronautics. <https://doi.org/10.2514/6.2016-0950>.
2. Chaudhuri, A, G Waycaster, T Matsumura, NB Price, and RT Haftka (Jan. 2014). Framework for Quantification and Risk Analysis for Layered Uncertainty using Optimization: NASA UQ Challenge. In: *16th AIAA Non-Deterministic Approaches Conference*. AIAA SciTech Forum. American Institute of Aeronautics and Astronautics. <https://doi.org/10.2514/6.2014-1498>.
3. Price, NB, T Matsumura, RT Haftka, and NH Kim (Jan. 2014). Deciding How Conservative A Designer Should Be: Simulating Future Tests and Redesign. In: *16th AIAA Non-Deterministic Approaches Conference*. AIAA SciTech Forum. American Institute of Aeronautics and Astronautics. <https://doi.org/10.2514/6.2014-1010>.
4. Berry, AJ, ES George, and NB Price (Dec. 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.

Oral Presentations Only

1. Hinrichs, M, N Price, C Chizinski, and M Vritiska (Jan. 2018). *Nebraska Waterfowl Hunters: Where do they go?* Milwaukee, Wisconsin.
2. Price, N, C Chizinski, J Fontaine, and K Pope (Jan. 2018). *Retention of Youth Deer Hunters in Nebraska*. Milwaukee, Wisconsin.
3. Price, N, C Chizinski, M Hinrichs, K Pope, and J Fontaine (Sept. 2018). *Transitions among sportsperson permit holders and the influence of cross-buying behavior*. Goslar, Germany.
4. Grams, A, N Price, C Chizinski, J Fontaine, and K Pope (Feb. 2017). *Exploring Linkages between Hunting and Fishing Permit Sales*. Lincoln, Nebraska.
5. Grams, A, N Price, C Chizinski, J Fontaine, and K Pope (Sept. 2017). *Permit Associations of Nebraska Sportspersons*. Estes Park, Colorado.

Conference Posters

1. Price, NB, NH Kim, B Wilcox, and B Hatcher (Aug. 2012). Design Study on Stability & Safety of Median Sternotomy Fixation. In: vol. 79. Gainesville, Florida: American Society of Biomechanics, pp.67. <http://www.asbweb.org/conferences/2012/abstracts/95.pdf>.
2. Price, NB, NH Kim, B Wilcox, and B Hatcher (Oct. 2012). The Effects of Cortical Thickness, Bone Strength, & Screw Length on Rigid Sternal Fixation Stability. In: Atlanta, Georgia: Biomedical Engineering Society.

Software (Github: natbprice)

1. Price, N, C Chizinski, and J Burnett (Mar. 2019). *radsets - An R Package for creating Radial Sets diagrams*. (lifecycle: experimental). <https://natbprice.github.io/radsets/>.
2. Price, N and J Burnett (Mar. 2019). *tvdiff - An R Package for performing total variation regularized differentiation*. (lifecycle: experimental). <https://github.com/natbprice/tvdiff>.