NICHOLAS LANDRY

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EDUCATION

University of Colorado, Boulder *2022 Expected*
Ph.D. in Applied Mathematics
Overall GPA: **3.8**

University of New Hampshire, Durham *May 2014*
B.S. in Mechanical Engineering
University Honors Program
Overall GPA: **4.0**

EXPERIENCE

Turbocam International November 2014 - July 2017
Product Engineer *Barrington, NH*

- **Note: Intern from November 2014-March 2015
- Led interdepartmental, large-scale projects and ensured their success through effective communication
- Developed software applications for machine status tracking (MTConnect compliant)
- Implementing process and quality automation through developed software applications
- Evaluated milling tools based on their impact on spindle vibration
- Conducted specialized analysis of tool wear and high-cycle fatigue
- Helped improve manufacturing processes and created 5-axis mill programs
- Integrated advanced dimensional probing into the 5-axis milling process

The University of New Hampshire May 2013 - December 2015
Research Assistant *Durham, NH*

- Mentored by Prof. Marko Knezevic
- Awarded UNH Summer Undergraduate Research Fellowship (SURF) grant to conduct research
- Developed a metal microstructure data compaction method to make metal-forming simulations more computationally efficient; applied this framework to metals with cubic and hexagonal symmetries
- Extended work on data compaction and developed and optimized a high dimensional convex hull to minimize necessary microstructure data
- Developed FFT methods to generate material property closures for metals with hexagonal symmetry; relevant for efficient microstructure-sensitive finite element simulations

PUBLICATIONS

Nicholas W. Landry, Marko Knezevic, *Delineation of First-Order Elastic Property Closures for Hexagonal Metals Using Fast Fourier Transforms*, Materials, Volume 8, No. 9, September 2015, Pages 6326-6345

Marko Knezevic, Nicholas W. Landry, *Procedures for reducing large datasets of crystal orientations using generalized spherical harmonics*, Mechanics of Materials, Volume 88, September 2015, Pages 73-86,

ISSN 0167-6636

Marko Knezevic, Daniel J. Savage, Nicholas W. Landry, *Towards Computationally Tractable Simulations of Metal Forming Processes With Evolving Microstructures*, Proc. ASME. 45813; Volume 2: Processing, June 09, 2014, Paper No. MSEC2014-3984, pp. V002T02A070, doi:10.1115/MSEC2014-3984

TEACHING EXPERIENCE

University of Colorado, Boulder August 2017 - Present
Graduate Teaching Assistant *Boulder, CO*

- Taught Calculus 1 (APPM 1350) to 75 students total in 3 recitation sections a week (August 2017 – December 2017)
- Taught Calculus 2 (APPM 1360) to 85 students total in 2 recitation sections and 1 workgroup a week (January 2018 – May 2018)
- Taught Calculus 3 (APPM 2350) to 26 students total in 2 recitation sections a week (August 2018 – December 2018)
- Taught Differential Equations (APPM 2360) to 50 students total in 2 recitation sections a week (January 2019 – May 2019)
- Presented concepts, developed course material and quizzes
- Improved teaching skills by reviewing recorded video of recitation with lead TA

UNH Math Center August 2011 - May 2014
Tutor *Durham, NH*

- Teach students mathematical concepts and methods and provide assistance with homework

UNH Mechanical Engineering Department August 2012 - May 2014
Tutor *Durham, NH*

- Explained concepts to students in areas of engineering statics, dynamics, system controls, thermodynamics, and fluid mechanics

AWARDS

Chief Student Marshal for UNH Commencement 2014 based on GPA and contributions to the college *2014*
Mechanical Engineering Faculty Choice Award for Poster at UNH Undergraduate Research Conference *2014*
Vice President of Pi Mu Epsilon for excellence in mathematics and an outstanding academic record *2012*
Member of Tau Beta Pi indicating high academic standing *2012*
Nominee for the Goldwater Scholarship; 1 of 4 students representing UNH *2012*
UNH Presidential Scholarship for consistent achievement *2010-2011*
Kenneth J. Higson Scholarship showing academic promise and performance *2011*
Eagle Scout built a community gathering area for the Eagle project *2008*

CERTIFICATIONS

Certificate in College Teaching November 2018
Graduate Teacher Program *Boulder, CO*

- Attended 20 hours of teaching-related workshops

· Observed by a faculty member to vouch for my teaching
· Participated in 2 consultations using video footage from my class
· Attended 20 hours of discipline-specific teaching workshops.
· Wrote a teaching portfolio, outlining my teaching experience, skills, and philosophy

SERVICE

CU Boulder Applied Math Department August 2018 - May 2019
Lead TA *Boulder, CO*

· Led a weekly seminar for 15 first year students
· Facilitated video consultations to student TAs to help develop effective teaching skills
· Informed students about important topics, like obtaining residency, finding a research advisor, summer opportunities, and succeeding as a grad student

CU Boulder Applied Math Department August 2018 - August 2019
Graduate Student Representative *Boulder, CO*

· Gathered student input through polls and meetings
· Met with the Applied Mathematics graduate committee to voice student concerns
· Collaborated with students and faculty to help create policies agreeable to both parties

"I Have a Dream Foundation" of Boulder County Summer 2018
Tutoring Volunteer *Boulder, CO*

· Tutored underprivileged students in the local school district in math and science

TECHNICAL STRENGTHS

Programming Languages	C, C++, C#, VBA, Python, Fortran, MATLAB, and Simulink
Programs	Visual Studio, LaTeX, Mastercam, Solidworks, Maple
Protocols	MTConnect