Sam D. Simons-Wellin
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EDUCATION

University of Colorado, Boulder – College of Engineering and Applied Science **May 2020**
Bachelor of Science in Mechanical Engineering
Cumulative GPA: 3.77

- ***Independent Study:*** Numerical Methods in Computational Fluid Dynamics
- ***Graduate Coursework:*** Fluid Dynamics

EXPERIENCE

Summer Program for Undergraduate Research Summer 2019
Department of Mechanical Engineering, University of Colorado, Boulder

- Studied numerical and physical implications of Proper Orthogonal Decomposition (POD)
- Calculated efficiency of and developed fast algorithms to perform POD on AMR computational grids
- Designed a synthetic data generator to mimic data structures seen in CFD simulations using AMR

Computational Methods Teaching Assistant Fall 2018 and Spring 2019
College of Engineering and Applied Science, University of Colorado, Boulder

- Graded homework, projects, and exams
- Proctored exams and held regular office hours to work with students on coding, scripting, and solutions of computationally intensive numerical and engineering problems

Engineering Projects Teaching Assistant Fall 2018
College of Engineering and Applied Science, University of Colorado, Boulder

- Guest lectured on engineering material selection and design for manufacturability
- Lead group of first-year students in design-to-build process of diverse engineering projects
- Graded projects and papers, held office hours to assist students with design and fabrication problems

Fixture and Die Fabricator 2013 - 2015
Performance Structures Inc., Oakland, CA

- Machined and fabricated high-precision custom engineered stainless steel structures
- Measured and scanned parts using CMM and Faro arm for precision to .0005 inches
- Maintained and operated PLC controlled 1200 ton hydraulic press and ABB robotic systems

PUBLICATIONS AND CONFERENCE PROCEEEDINGS

- Simons-Wellin, S.D., Meehan, M.A, Hamlington, P.E., (2019, July). *An Efficient Proper Orthogonal Decomposition Algorithm for Adaptively Refined Meshes.* Presented at Rocky Mountain Fluid Mechanics Research Symposium, Boulder, CO.

AWARDS

- Engineering Scholarship Fund Merit Scholarship (2019 – 2020)
- Mackison Prize for Writing in Engineering
- Engineering Scholarship Fund Merit Scholarship (2018 – 2019)
- College of Engineering Summer Session Incentive Award
- Peralta Colleges Foundation Ars Magna Math Scholarship