

Charlie Nitschelm

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Objective:	To show my experience for the opportunity to serve as Chair of SEDS USA 2019-2020	
Education:	University of New Hampshire – College of Engineering and Physical Sciences GPA: 3.79/4.0 Honors Program B.S, Mechanical Engineering Minor in Physics	Aug. 2016 – May 2020, anticipated
Tech Skills:	Solidworks MATLAB VSM GD&T DMLS Printing 5 Axis Machining Pressure Testing Tig and Laser Welding	
Experience:	Rocket Lab USA <i>Propulsion Manufacturing Engineering Intern</i> <ul style="list-style-type: none">Created the factory's first in-depth value stream map to identify process bottlenecksDesigned and created a company-wide production tracking worksheet to plot production line rates and predict the corresponding effect that engineering projects would deliver, thus highlighting the biggest impactorsDesigned, drafted, and manufactured 9 different tools and fixtures that to reduce set-up and 5-axis CNC machining time by a total of 30 machining hours and 34 set-up hours per engine flight setOperated the DMLS 3D printers with setting-up, print up-keeping and taking down during surge times in productionDesigned, cut, and welded the frame for a turbo-pump flow test rig	May 2019 – August 2019
	TURBOCAM International <i>Manufacturing Engineering Intern</i> <ul style="list-style-type: none">Created and optimized 5-axis mill tool paths using batch with feeds, speeds, approaches and retractsUsed a Zoller Smile to precisely obtain tool measurement readings after an operationConducted an analysis on tool degradation with different tool coatings for Inconel 718 to determine if the extended tool life would outweigh the costs of tool coating implementation to the factory floor	September 2018 – May 2019
	National Institute of Standards and Technology (NIST) <i>Researcher: Mechanical Performance</i> <ul style="list-style-type: none">Conducted a study on Inconel 625 in both tension and compression and stress triaxiality on axisymmetric 1018 steelPerformed low strain rate tests on an MTS and compiled all the data using Python to output useful informationDesigned and performed all experiments on a pulse-heated Split Hopkinson (Kolsky) Bar for high strain rates	May 2018 – August 2018
Relevant Orgs:	UNH Students for the Exploration and Development of Space <i>President, Lead Engineer</i> <ul style="list-style-type: none">Oversaw the engineering development of Runaway, New Hampshire's first hybrid rocket engine, from initial development to hot-fire testing.Leading the propulsion team on the qualification and optimization of Runaway with a series of hot-fire tests in preparation for the integration onto a 7" composite rocket to compete in Spaceport America Cup in June 2020.Overseeing the design and build of our hybrid rocket that will carry a research payload to 10,000 feet by managing engineering leads and all recruitment/business/finance initiatives.Founded the team/family and has now grown to the largest, most interdisciplinary engineering organization at UNH.	Mar. 2017 – present
	Students for the Exploration and Development of Space USA <i>Board, Member at Large</i> <ul style="list-style-type: none">Lead the development of a SEDS Wiki, the largest student-run space organization in the world, allowing the transfer of knowledge not just between one college organization, but chapter to chapter.Will be released to the public in November 2019 during our annual SpaceVision SEDS conference hosted by ASU.	May. 2019 – present
Other Skills:	Engineering Project Management Organizational Leadership Creativity and Problem-Solving Process Improvement	