Hi everyone, my name is Charlie Nitschelm and I am running for Chair of the board of directors. During my first year at the University of New Hampshire, I didn’t really connect with any of the engineering groups the college had to offer. I became part of some groups, but the work never excited me. However, during my winter break after my first semester, I witnessed a SpaceX booster landing on a drone ship from an orbital launch live. This was mid-January of 2017 or so.

I heard of SEDS shorty after my second semester began, and I instantly knew that this organization would help lay a framework for starting a local chapter at UNH.

By the start of my sophomore year, the club grew to 14 committed members spanning 5 different majors and years. When we were finally ready to get to work, we decided that we wanted to pursue the art of high power rocketry.

But, there was one little thing: not one of us had built a rocket before, excluding the little model rockets we did in elementary school. We decided right then that no matter how hard it is, we will compete in the SEDS USRC.

After countless flights, including burning a hole through our first launch pad, a G engine coming out of the engine tube, 2 tree landings, countless rocket lawn darts and one very unfortunate lake landing, I think I can finally say to the team here and back home, that we now know how to build a rocket. Starting this team has been the hardest, most rewarding thing I have done. I owe everything to SEDS.

I feel I have a unique experience to add to the board of directors. I have gone through, I think, every single struggle a new SEDS group could experience. If I am elected Chair, I could provide a different outlook on the struggles of new chapters to help their growth.

Although I have never held a position within the board of directors, I believe I have the ability to grow this nation-wide organization to touch more young minds to become inspired by space exploration.

I mean what is possibly a more exciting thought then going out at the start of your day among the stars. I can’t think of one…

For Submission:

When I entered my university as a mechanical engineering major, there were no aerospace organizations pushing the bounds of space technology. I started the University of New Hampshire's SEDS during the Fall of 2017 and the club has now grown to a membership of 30 students spanning 6 different majors. When we had our first meeting, it was unanimous that we would focus our engineering minds on expanding the art of high power rocketry. We entered the USRC for the 2018 competition determined to compete against other like-minded organizations. Not one member in the club had ever built a rocket before, so the first year was an incredible learning curve, with the majority of our lessons from pure failures. After one year as an organization, we finished our competition launch climbing a multi-stage carbon fiber rocket to 2,200 meters. Not only has UNH SEDS been the highlight of my college career, I feel I have created a community of individuals connected by the pursuit of space exploration. Although the club has gone through many (many) failures to get to where we are now, we continue to push onward to design and test a hybrid engine for the Team America Rocketry Competition in May of 2019. By experiencing the struggles of a new SEDS organization first hand, I feel I am in a position to apply my knowledge to help the SEDS community grow further, accelerating the race back to space and beyond. Ad astra, SEDS!

Throughout my college career so far, I have worked towards joining the space industry, and in particular, working on rockets. I started the University of New Hampshire’s SEDS chapter during the Fall of 2017, my sophomore year as a mechanical engineering major, and has now grown to the largest, most interdisciplinary engineering organization at the college. The 2017-2018 school year was dedicated to learning basic rocket building techniques: simulating, launching and optimizing rockets using off-the-shelf solid engines. Once we understood the basic systems required to make a rocket, we moved toward designing our own hybrid engine, which we rightfully named Runaway, for the Spaceport America Cup in June 2020 (right after I graduate from UNH). 16 of our members (around ½ the organization) also travelled to San Diego to attend SpaceVision 2018 hosted by SEDS UCSD which was an experience that we will all cherish for a long time. During that conference, I ran for President of SEDS USA with the experience of what it takes to start and run a SEDS engineering and outreach chapter. The opportunity of becoming a Member at Large for SEDS USA will allow me to work with the Board of Directors, the entire SEDS community and outside sponsors to make SEDS USA stronger and the individual chapters better equipped and capable of making a greater impact at their university.

Although many projects I will start and lead will spawn from understanding the current state of SEDS USA and its chapters, I have three ideas that I think would make a big difference in the little guys (Individual chapters). The first idea/project and the one I am most excited about is to schedule a strongly encouraged meeting with a member or two of each SEDS chapter with myself or another Board of Director to have a close, one on one conversation on how the chapter is doing, and what else SEDS USA can do for them. The second idea/project which is focused on the business side of the SEDS chapters is to disperse the business knowledge (proven tactics and documents for sponsorship, etc.) of veteran SEDS organizations as polished templates that will immediately give all the SEDS chapters a leg up in financing initiatives and any other pertinent business tactics. The third idea/project which is focused on the engineering side of SEDS Chapters is based on the assumption that most of the engineering projects SEDS chapters are engaged in are roughly the same (rockets, engines, weather balloons, CubeSat’s, etc.). That being said, with proper organization, an online engineering community could be created that immediately connects rookie and veteran students together, enabling cross learning for the entire SEDS engineering community on any project a chapter might be tackling.

Lastly, I will be spending my summer working at Rocket Lab as a manufacturing engineering intern in Huntington Beach, California as a Matthew Isakowitz Fellow. This experience in the commercial space industry and being a member of a growing community of future space leaders will better equip me to enact greater change as Member at Large of SEDS USA.