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October 31st, 2019

To whom it may concern

Re: Letter of Recommendation for Alice Wade

My name is Charlie Nitschelm and I currently serve as the President and Lead Engineer at the University of New Hampshire (UNH) Students for the Exploration and Development of Space (SEDS), an interdisciplinary engineering organization in Durham, NH. I am writing this letter to express my recommendation of and full endorsement of the talents of Alice Wade, a candidate for the Brook Owens Fellowship class of 2020.

As the newly elected Treasurer and frame engineering member, Alice slid in seamlessly to the activities of the organization as she took on projects in such wide-ranging areas as finances, website development, frame engineering, project management and hybrid propulsion insight. Alice has made an impact in all of them and brought her own characteristic enthusiasm, passion, humor and informed technical thinking to her work.

In my role, I oversee the direction of the organization, run/plan weekly general meetings, manage engineering schedule and leads, and interim finance lead, an important job which Alice immediately took an interest in during her first few days on the team. UNH SEDS is in an interesting and consequential time of its existence as a relatively new organization that has expanded into now the largest engineering organization within the university, craving for younger members to learn from experienced ones as they begin to transition to the future leaders of the group. As anyone who was a member of a college engineering organization can attest, the dynamics demand and force the engineers to think and act in areas outside of their comfort zone and demand solutions to problems that emerge day by day, situation to situation. Alice immediately took to those challenges with enthusiasm and dedication. Given her passion for commercial space, she took a great interest in the overall goals of the UNH SEDS while also excelling as a frame engineer in addressing the technical challenges of the role, even leading some discussions.

Over the last 2 months of working with Alice, I have been able to watch her as she transitioned from a shy, new student at UNH to an established member (and now board member) of the team. I remember my own experiences as a first-semester freshman and being overwhelmed by the amount of social and technical information to process and understand joining the Formula SAE organization, taking a long time to have confidence in my ability to assess and find solutions to problems, and communicate with the team to yield positive results. I never really seemed to notice any such learning curve for Alice, who jumped into any project that came her way, regardless of her mastery on the subject. Alice remained humble and reserved when needed, always looking for opportunities to learn material and become as informed as possible on any decisions, engineering or otherwise. I remember one weekend the team was taking the long weekend off from SEDS responsibilities after a huge push for a hot-fire test. Alice, however, also celebrating her 19th birthday that weekend, was hard at work creating UNH SEDS' first website with very little guidance from myself, easily spending 10's of hours that weekend diving into our online records to be informed enough on creating not only the structure, but quality content regarding our engineering projects and event history. She spoke with me briefly inquiring about if we had a website, and how it would make a huge impact on reaching companies on a more personal level for sponsorship initiatives. I gave her a few ideas and overall advice on how to go about it, and was surprised 3 days later with a functioning, workable website. Her drive didn't stop there, continuing to lead the project by setting up website meetings, communicating with the right people for additional content and ideas, and working with the school to integrate a donation link to go directly into our school finance account. To me, this displays a true, passionate individual contributor to the team, and the ability to gather others on an outside project. Overall, a very rare find in an underclassman, and especially in engineering.

Always eager to learn and participate, Alice readily took on and helped with all club initiatives. I proposed the idea of scheduling two 24-hour 'Hackathon' work sessions to accelerate the development of our hybrid rocket design

during October. Not only did Alice love the idea, she supported the proposal and encouraged many of the underclassmen to participate. As of this writing, we have completed one of them. With a total of 20 students participating at the beginning, 3 of them were able to stay for the full amount before dropping out, including myself. You can probably imagine who was one of the other powerhouses. Alice also willingly took on extra work within the frame team, taking on more responsibility on certain sections of the design. On one particular part, the original design had probably gone through 4 different design reviews, sometimes even reverting back to ideas and concepts that were previously rejected. Although frustrating, Alice took this as a learning experience and quickly realized this is how professional designs are developed – through collaboration and iteration. There have been several times in just 2 months when Alice was given a suggestion for the design, and after researching it, she would often reply “Wow, I didn’t even know that existed.” Realizing that knowledge can come from any member of the team, regardless of position, Alice was open to these suggestions and understanding of their value. She is as comfortable talking to leading senior engineers as she is with new team members. To me, this shows a level of teamwork and high-level communication skills that trump many people I have had the opportunity to work with.

In summary, Alice’s glowing passion for commercial space, careful technical thinking, creativity and growing leadership skills have helped make her a critical member of UNH SEDS. Getting to know her personally, I have come to value Alice beyond her contributions as an engineer and treasurer. Her positive, cheerful, and focused attitude to important topics is palpable. Just this past week, Alice was rewarded with the “Hungriest Engineer of the Week” award, which is given to a member once every other month. Hungry is only one way to put it – I expect Alice will continue to be hungry, passionate, competent, and disarmingly fun and cheerful wherever she goes. As a fellow of the Matthew Isakowitz Fellowship Program, I can’t recommend her more for the Brook Owens Fellowship class of 2020. The experience will jumpstart her entry into the aerospace industry, which is rare for a student from UNH. Her acceptance will not only represent the New Hampshire/Maine community, but the transgender community throughout the country.

Sincerely,

A handwritten signature in black ink, appearing to be 'CN', with a large loop at the start and a long, sweeping tail.

Charlie Nitschelm
President, Lead Engineer
UNH SEDS
Durham, NH