

January 14, 2022

Mathematical and Statistical Sciences Clemson University 220 Parkway Drive Clemson, SC 29631

To Whom It May Concern:

My name is Jim Coykendall, and I am a Professor of Mathematics at Clemson University, and it is my pleasure to be able to write to you on behalf of Grant Wilkins for an SMSS Undergraduate Student Award.

I met Grant in the spring of 2021 when he enrolled as a student in my Math 4120 (Abstract Algebra I) class. This class was taught in a hybrid format and the ending enrollment consisted of 24 undergraduate students and 1 graduate student. This class was one of the most successful (of many) abstract algebra classes that I have taught. Among this strong group, Grant Wilkins distinguished himself at the highest level. Numerically, he finished third in the class, but frankly I thought he was the strongest student. The top two scorers were very bright, but they did not demonstrate some of the intangibles that clearly shone for Grant. In my course, Grant was the student who was most independent; although I think that he did work with others in the class on an infrequent basis, it was clear that he was a leader in any group in which he found himself. Additionally, Grant's work always stood out as being the most unique, original, and "out of the box" in the entire class (by a very noticeable margin). I ask much from my students and the weekly assignments often have very difficult components. The students are encouraged to work together and often came to me for help. The upshot is that I would usually get one or two approaches to a typical problem that had varying degrees of proficiency with regard to the write-up/interpretation. On the other hand, Grant's solutions were always intuitive, artful, insightful, and different, and even when they were not completely on track, they still had brilliance and demonstrated a maturity well beyond his years.

In addition to having him as a student, I got to know Grant pretty well outside of class as an informal mentor. At the time he joined my class, Grant was a computer engineering major (which he is still, but has added a major in mathematical sciences) and was taking my class because it seemed "fun" (this speaks to Grant's unique perspective as most mathematical sciences majors tend to dread abstract algebra due to its reputation for rigor and abstraction). As the class progressed, Grant and I had a number of meetings to discuss his future; he was thinking seriously of adding a major in mathematical sciences and based

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on his natural ability and enthusiasm, I encouraged this. During our meetings we often discussed his future, and I was always impressed with the incredibly wide scope of his interests. More than that, I was impressed with the depth of knowledge that he had amassed in a wide variety of fields.

It is also important to note that despite his youth he has been involved in a number of research projects; in fact, his first preprint (on quantum/molecular electronics) was written, mostly independently, as a high school junior (and does not look like it was written by a high school student with respect to either form or content)! Additionally, since coming to Clemson, he has been involved in a number of projects, mostly concentrating on modeling energy on HPC systems.

To give some additional perspective, I was asked to write a letter for Grant's Goldwater Scholarship this year, which I happily and enthusiastically did. I have written five such letters in my career (including Grant's) and (so far, Grant is still pending) two of them were successful. Of these five students, I would rank Grant in the top two (maybe number one). Of the students I have nominated for an SMSS Undergraduate Student Award (and there have been a lot!), only James Stevens (a graduate student in mathematics at the University of Chicago and the most intellectually gifted student that I have encountered at Clemson) and Sylvia Wu (maybe the best "total package" student that I have seen anywhere and a winner at the College of Science level) come to mind as being ahead of Grant Wilkins at this point. I think he should be "automatic" for one of the awards and very likely should be a committee choice to move to the college level.

Please do not hesitate to contact me if you have any questions.

Sincerely yours,

James Coykendall

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**Professor of Mathematics** 

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