

## Union Math Alumnus, Nikhil Srivastava '05, Awarded Prestigious Prize by National Academy of Science

The National Academy of Science recently awarded **Nikhil Srivastava '05** and his collaborators, **Adam Marcus (EPFL)** and **Daniel Spielman (Yale)**, the 2021 Michael and Sheila Held Prize for their work solving “longstanding questions on the Kadison-Singer problem and on Ramanujan graphs, and in the process uncovered a deep new connection between linear algebra, geometry of polynomials, and graph theory that has inspired the next generation of theoretical computer scientists.” The prize honors “outstanding, innovative, creative, and influential research in the areas of combinatorial and discrete optimization, or related parts of computer science, such as the design and analysis of algorithms and complexity theory,” and carries with it a \$100,000 prize. [\[http://www.nasonline.org/programs/awards/2021-awards/Marcus-Spielman-Srivastava.html\]](http://www.nasonline.org/programs/awards/2021-awards/Marcus-Spielman-Srivastava.html) Their work, announced in 2013 and published in 2015 in (perhaps the world’s most prestigious math journal) *Annals of Mathematics*, also garnered the trio the 2014 Polya Prize.



Professor Alan Taylor (left) with Nikhil Srivastava at a graduation in June 2003.

Nikhil, recently tenured in the math department at the University of California, Berkeley, was a double Math and Computer Science major and English minor at Union. He wrote to the math department, “*It feels great to use this as an excuse to get in touch with so many of my mentors and teachers at Union. I will never forget the generosity of the math department faculty, who raised me as a mathematician and as a person in countless meetings in and out of Bailey Hall, and set me on the path of doing research. I always felt like I could go there, which meant a lot for an international student who went home once a year. I remember drawing my first vector in **Bill Zwicker’s** class as a Freshman, reading **Daide Cervone’s** inspirational quotes with procrastinating, and sitting on (or wanting to sit on) the huge ball in **Kathryn Lesh’s** office. **Alan Taylor** told me once when I really needed it that you can change your behavior, but you can’t change your feelings, which is still true. Being a professor now myself, I am inspired by these memories to be as giving as I can to my students.*”

**Professor Alan Taylor**, reflecting on Nikhil’s time at Union: “*Nikhil was obviously a truly outstanding student. But he was also a joy to have around, and by his senior year it was hard not to think of him as a colleague. And it was a particular pleasure to supervise his senior thesis, in part because it really required no supervision on my part, right? I did correct his top-ten-movies-ever (in first place, he had Groundhog Day with Bill Murray instead of Casablanca with Humphrey Bogart).*”

“*Nikhil’s success is also due in part to something he shares with many former and current students at Union: the support of a wonderful family. You can see his father’s pride in the article on Nikhil’s award [TimesOfIndiaLink], and that kind of love and support for Nikhil from his whole family is very evident when you meet them in person. But of course, it was Nikhil himself who rolled up his sleeves and earned every accolade that has come his way.*”

**CONGRATULATIONS, NIKHIL SRIVASTAVA!**

### Problem of the Newsletter

A solution to last week’s problem has been posted at the math newsletter sites in Bailey Hall. As **this week’s problem**, see what you can do with the above algebra problem.

Send solutions to **Professor Paul Friedman** ([friedmap@union.edu](mailto:friedmap@union.edu)) by noon, Friday, February 5, 2021.