Two Caltech Seniors Win Hertz Fellowships

Arvind Kannan and Brian Lawrence join the 50th cadre of fellows

The Fannie and John Hertz Foundation has selected two Caltech seniors, Arvind Kannan and Brian Lawrence, among 15 students to receive the Hertz Fellowship for the applied sciences and engineering this year. Selected from a pool of more than 600 applicants, the awardees will receive up to five years of support for their graduate studies.

Kannan and Lawrence bring the number of Caltech undergraduate students who have received the Hertz fellowship to 58. Ninety-three past Hertz fellows have attended Caltech for graduate school.

According to the Hertz Foundation, fellows are chosen for their intellect, their ingenuity, and their potential to bring meaningful improvement to society. "We invest in young people who will solve our most daunting problems," said Jay Davis, Hertz Foundation president, in a statement. "These men and women show extraordinary promise. They join the community of leaders who produce advances in science, medicine, technology, business, academia, and government. They bring forth innovation for the technical and economic security of our nation."

Arvind Kannan, a chemical engineering major and English minor at Caltech, is passionate about engineering proteins to perform chemically useful functions with applications in synthetic chemistry, medicine, and alternative energy. Since his freshman year, he has undertaken protein engineering projects in the lab of Frances Arnold, the Dick and Barbara Dickinson Professor of Chemical Engineering, Bioengineering, and Biochemistry at Caltech.

Kannan, from Saratoga, California, has also been awarded an NSF fellowship and has been selected by the Winston Churchill Foundation to be a Churchill Scholar for the next academic year, allowing him to pursue a Master of Philosophy in chemistry at the University of Cambridge. Following that, Kannan plans to return to the United States to pursue a PhD in chemical engineering with a focus on computational protein design.

"The primary benefit of having the Hertz is the freedom to pursue my own research interests," Kannan says. "I will impose absolutely no financial burden on my graduate department and advisor. This should allow me to propose an ambitious thesis project without being constrained by existing projects or by
limited funding."

Brian Lawrence, a math major, is another senior standout at Caltech. Lawrence has participated in the William Lowell Putnam Mathematical Competition, considered by many to be the most prestigious university-level mathematics examination in the world, all four years he has been at Caltech. And all four years, he has been named a Putnam Fellow—an honor that goes to the top-five ranking individuals. He is the eighth person to accomplish that feat in the competition's 73-year history.

Lawrence, originally from Kensington, Maryland, plans to work on number theory in graduate school. At Caltech, he has studied semi-classical limits of chaotic quantum systems under Barry Simon, Caltech's International Business Machines Professor of Mathematics and Theoretical Physics, as well as number theory under Dinakar Ramakrishnan, the Taussky-Todd-Lonergan Professor of Mathematics. Also interested in foreign languages and cultures, Lawrence took a year off to study Chinese history at Peking University.

Since 1963, the Hertz Foundation has awarded fellowships to students they describe as "the best and brightest" from the fields of science and engineering. The highly competitive selection process for the Hertz Fellowship includes a comprehensive written application, four references, and two rounds of technical interviews.

Kimm Fesenmaier
kfesenma@caltech.edu

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