

GWU Student Wins JSA Minority Undergraduate Research Assistantship



Arun Selvaratnam
George Washington University,
JSA Undergraduate Research
Assistant

From the time he was a youngster attending Catholic school in Brooklyn, N.Y., Arun Selvaratnam, was the kind of student who took home as many books as the library would allow. A voracious reader and lover of science and math, by the time he was ready for high school he was also ready to take on his first academic challenge: he applied to New York City's Stuyvesant High School for Math and Science and was accepted. He took eight Advanced Placement courses and, in his junior year, took his first course in physics.

"It really got to the core of how the universe works," he recalled. "Every other discipline I had studied, I wanted to go deeper. I kept wondering 'Why? Why?' and when I got to physics I found the answers there."

In his senior year, he took AP Physics C, a course that taught him calculus through physics before he had ever taken that math course.

"My high school was a great environment for learning," he noted. "All the students were really, really smart and the teachers were great."

When he entered George Washington University, he was unsure of his major and actually

envisioned that he might end up in the social sciences. That thought was quickly dismissed. "I found that I wasn't impressed as I had been with physics," he said. "It's too young a science for me. I was looking for those rigorous answers."

He switched his major to physics and found that the more he learned, the more his passion for it increased. "My favorite was modern physics, with the introduction of quantum physics," he noted. "Quantum was really hard, but relativity was really cool."

This summer, Selvaratnam was selected to participate in the Jefferson Science Associates' Undergraduate Research Assistantship Program for Minority Science and Engineering Students at Jefferson Lab. He was nominated by William J. Briscoe, director of the George Washington Center for Nuclear Studies, who referred to Selvaratnam as "one of our best undergraduate physics majors" and suggested that he have the opportunity to work on the Frozen Spin Target, or FROST, experiment at Jefferson Lab, where he would also have the opportunity to work with two GWU graduate students. Under the assistantship, funded through the JSA Initiatives Fund, the junior physics

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JSA Fund Supports Assistantship at JLab

The Jefferson Science Associates' Research Assistantship Program for Minority Science and Engineering Students at Jefferson Lab offers opportunities and support to minorities and underrepresented students pursuing undergraduate degrees in engineering and science at SURA universities.

Criteria for selection are based on scientific qualifications (projects related to Jefferson Lab research) and the academic record of the nominated students. JSA provides funds through the the JSA Initiatives Fund Program to support the student at the university during the academic year, and money to visit Jefferson Lab; combined this award can total \$9,000.

Additional information about this research assistantship may be found at: http://www.jlab.org/div_dept/admin/HR/research.

JSA is a joint venture between the Southeastern Universities Research Association and CSC Applied Technologies to operate and manage Jefferson Lab for the U.S. Department of Energy.

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major worked at the lab from June 28 to Aug. 25.

"I had no idea what being a physicist would really be like, and this was a good opportunity to find out," Selvaratnam said. "And this is a great lab to start my real-world experience."

In addition to his work in physics, Selvaratnam has taken four years of Japanese and hopes to travel to that country in the near future. "I would like to go from being proficient to being fluent," he said. He's also added pre-med studies to his curriculum, with the intention of following his cardiologist father's path.

"Watching my father throughout my life, I really like the comfort that doctors bring to people. It's scary to be sick, and doctors are the ones who have the answers for their patients," he said.

He's also played saxophone since he was 10, and played guitar and bass in a rock band while he was in high school. "If you were successful at that," he said with a laugh, "it would be even better than being a doctor."

He plans to take a year off after graduation, but to Selvaratnam "a year off" will be a busy one indeed. "I just heard about some opportunities

in medical physics research, and that would be ideal for me," he noted.

His summer experience at JLab has been gratifying, fruitful and eye opening. "I think it's been really good," he said. "I thought it might be boring, but it definitely was not. Everyone has been really helpful, and I've made some friends. It was a comfortable environment for me; there are lots of international kids here."

*By Judi Tull
Feature writer*

JSA/Jefferson Lab Graduate Fellowship Awards Announced

Jefferson Sciences Associates awarded seven JSA/Jefferson Lab graduate fellowships for research related to the science program at Jefferson Lab for the 2010-2011 academic year.

The following graduate students from SURA-member universities are working with JLab scientists on their research proposals:

- Dasuni K. Adikaram, Old Dominion University
- William P. Ford, Old Dominion University
- Carlos G. Granados, Florida International University
- Jin Huang, Massachusetts Institute of Technology
- Sucheta S. Jawalkar, College of William and Mary
- John P. Leckey, College of William and Mary
- Diancheng Wang, University of Virginia

Awardees Huang and Leckey are repeat JSA fellowship recipients; they were both at Jefferson Lab for the 2009-2010 academic year.

First established by the Southeastern Universities Research Associate

Board of Trustees in 1989, this graduate fellowship program has been continued by JSA for doctoral students at SURA-member universities conducting research related to the theoretical and experimental programs at Jefferson Lab, including nuclear and related particle physics, accelerator physics, and the laboratory's free-electron laser program. Since program inception, 156 fellowships have been awarded to graduate students from 19 different SURA member universities.

Each fellowship award is comprised of one-half of an academic year research assistant stipend, plus a \$2,000 supplement. The home institution matches half of the research assistantship. An additional \$2,000 is available for research related travel support for the student.

The review committee was chaired by JSA Programs Committee chair and JSA Board Director June Matthews, Massachusetts Institute of Technology and included: Hari Areti, JLab; Rolf Ent, JLab; David Ernst, Vanderbilt University; Gerard Gilfoyle, University of Richmond; Keith Griffioen,

College of William and Mary; Zein-Eddine Meziani, Temple University; Stephen Wallace, University of Maryland and Elizabeth Lawson, SURA.

"JSA is pleased that these students are involved with the JLab science program and approved experiments. One of the primary goals of the JSA/JLab Fellowship Program is to provide opportunities for qualified students to enhance their research capabilities by linking their academic studies with the lab's science," said Matthews. "The research proposals of this year's awardees are clearly focused on important experiments at the lab."

The JSA/JLab Graduate Fellowship Program is supported by the JSA Initiatives Fund and administered by the SURA Office of Strategic Services for the JSA Programs Committee.