

IEEE AWARDS \$10,000 SCHOLARSHIP TO FLORIDA STUDENT AT INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR

PISCATAWAY, NJ, 19 May 2000 - The IEEE Foundation sponsored Presidents' Scholarship was presented to Zlatan Ceric, a 16 year old senior at Allen D. Nease High School, St. Augustine, Florida, at the Intel International Science and Engineering Fair (ISEF), which was held from 9-12 May in Detroit, Michigan.



IEEE President-elect Joel Snyder (left) presents the 2000 Presidents' Scholarship to Zlatan Ceric.

The IEEE judging team chose Ceric from among 1500 other contestants to receive the scholarship for his "outstanding achievement in creating a project that demonstrates an understanding of electrical engineering, information technology, or other IEEE fields of interest." Serving as judges were Don Bramlett, Sat Basu, Laurence Dishman, Ted C. Huff, Mitch Van Ochten, William Quinlan, James Stevenson, Adam Stienecker, all from Region 4, and Keith Gudger, Region 6, who will lead next year's judges.

Ceric's project, Optimization of Gallium Arsenide Semiconductor Laser Power Output, proved his hypothesis that longer lattice edges produce lower threshold current densities and higher quantum efficiencies. It demonstrated that an increase in laser transmittance, with less power loss, would yield more efficient semiconductor lasers. This has applications in faster computing, military utility for optical warfare, and guidance of fundamental particles in nuclear reactors.



Ceric's award winning project, Optimization of Gallium Arsenide Semiconductor Laser Power Output.

Ceric's research revealed a phenomenon never before documented. As the current increased into the laser, the power output would move smoothly, then jump suddenly to a higher power output, and then continue smoothly once again. This happened at both shorter and longer lattice lengths. He intends to continue investigating the implications of this phenomenon at Georgia Institute of Technology in the Fall, where he will study Solid State Electro-optics and "keep looking for the optimum lattice length for the least energy loss within laser power output."

IEEE was one of 60 associations and universities presenting at the 11 May awards ceremony. IEEE President-elect Joel Snyder gave the \$10,000 award to Ceric before a crowd of nearly 4,000 people. Other IEEE entities presenting awards were IEEE Computer Society (six awards ranging from \$100 to \$500) and IEEE Region 4 (eight \$500 awards).

"This \$10,000 scholarship is the single largest award given by an organization given at ISEF. I know that our judging team had a difficult task which they discharged with diligence, care, and honor," Snyder said. "The talent demonstrated by these outstanding students from around the world is truly amazing. I applaud the students and their families for their efforts, and I congratulate the winner. I do expect to see significant contributions to technology and science from each and every one of them. The world's largest pre-college science competition, the Intel ISEF is often called the "Olympics" of science fairs because of its international reach and scientific breadth. It is the only global science fair representing all life sciences—from biochemistry to zoology—for students in grades nine through twelve. This year's fair drew students from 40 countries, including Venezuela, Malaysia, South Korea, Italy, Australia, and China. The finalists emerged from a field of approximately one million high-school students who competed in local ISEF-affiliated science fairs in 1999-2000.