



## From the Department Head...

Physics Lab, Hughes Aircraft, Litton Poly-Scientific and IBM.

Since that time, the department has supported 77 undergraduate students on the Bradley Scholarship and 60 graduate students on the Fellowship. In this annual Bradley Report, we celebrate this first decade of graduates from the Bradley program, with features on students who have been graduated 10 years, and five years, and students who are still in the program. Their stories illustrate how the Bradley Endowment has enabled us to select top students and give them the freedom to develop their unique capabilities.

There have been other changes in the ECE Department as well, including a new name. We are now officially referred to as the "ECE" Department, and future courses will be labeled ECE instead of ECPE. A survey we conducted showed that out of 57 departments called electrical and computer engineering, all but one use the ECE designation.

A major note of progress this year has been the addition of

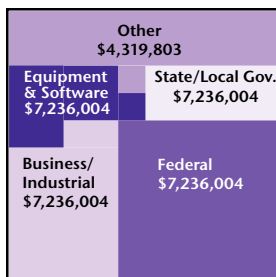
17,000 square feet of space for ECE. Torgersen Hall, the impressive new building that is connected to the library with a bridge, is now home to several ECE faculty members, mainly in the area of computer engineering. Also, the Photonics Laboratory moved from Whittemore Hall to rental space just off campus in the new Collegiate Square shopping center on Prices Fork Road. These expansions in space have provided considerable relief to our growing programs.

This year also marked the opening of the university's first major clean room facility. Now operational on the sixth floor of Whittemore Hall is a 1,800-sq.-ft., Class 1000 clean room that will be used as a teaching laboratory for early undergraduate science and engineering majors. The room will be used to fabricate p-n junctions, resistors, and field effect transistors on 4-inch Si wafers at approximately 100-micron design rules.

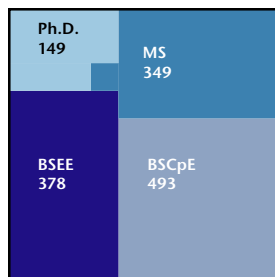
The next phase of the MicroON (Virginia Tech Center for Microelectronics, Optoelectronics, and Nanotechnology) program is

The past year has been significant for the Bradley Department of Electrical and Computer Engineering in many ways. It marks a major milestone in our Bradley Fellowship and Scholarship program. Ten years ago, we started sending our Bradley Scholar and Bradley Fellow graduates into the world. In 1991, Phil Danner and Anne Palmore Stublen received BSEE degrees and started their careers at GE Fanuc and DuPont respectively. Brad Duncan earned a Ph.D. and took a faculty position at the University of Dayton. Dwayne Hawbaker, Steven Schultz, David Tarnoff and Greg Zvonar earned master's degrees and moved on to the Applied

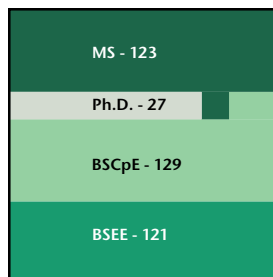
### Research \$20,479,203



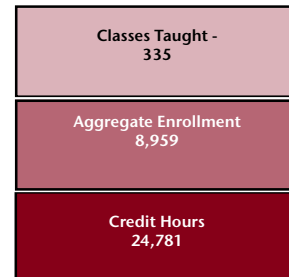
### Current Enrollment 1,369



### '99/'00 Graduates 400



### 2000 Teaching Statistics



the construction of a clean room in Hancock Hall to support research in microelectronics. This major initiative is being led by Bob Hendricks. For the last couple of years, Hendricks has worked tirelessly to make our microelectronics program a reality. He is to be commended for working across departments and colleges to gain consensus on the vision and structure of Virginia Tech's program. As described on page 32. His dedication to undergraduate education and attention to detail enabled us to build and operate a world-class undergraduate clean room and establish an exciting new curriculum.

Change is also occurring in the leadership in ECE. After serving as department head for five years, Leonard Ferrari was appointed vice provost for special initiatives. Leonard's duties include off-campus programs, microelectronics, and information technology. ECE is heavily involved in these areas, so our close relationship with Leonard continues.

During Leonard Ferrari's ten-

ure as head, the department experienced major expansion in research funding, growing from \$6 million to \$20 million in annual research expenditures. These funds are vital to ECE. They are used to support students performing research. In addition, overhead money is returned to the department that is shared with principal investigators, permitting them to expand their facilities.

The number of graduates is the university's most important productivity measure. The ECE department produces a significant fraction of Virginia Tech's graduates. We are responsible for 5 percent of the undergraduate and 10 percent of graduate degrees in the university. In the College of Engineering, ECE produces 28 percent of the undergraduate degrees, 34 percent of MS degrees, and 31 percent of the college's Ph.D. degrees.

The strength of our department is becoming widely recognized due to both its quality and productivity. ECE has one National Academy of Engineering member

(Arun Phadke), 15 IEEE Fellows, and four Fellows of other major societies. The quality of our student body also continues to rise. ECE is currently supporting 31 Bradley Scholars and 21 Bradley Fellows. One Bradley Scholar who deserves to be highlighted this year is Sarah Airey (see page 14). Sarah spent last summer with villagers in Ghana showing them how to use computers and learning how the people live. She was named one of the top 20 students in the nation by *USA Today*. Sarah is leaving us to pursue graduate work in computer engineering at the University of Edinburgh on a prestigious Marshall Scholarship.

I became the interim department head in October and it has been my pleasure to help the department during this period of transition. It is certainly easy to lead a department of this quality.

**Warren L. Stutzman**  
**Interim Department Head**

