



Computer Science
at the
University of Virginia

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University of Virginia (UVA)

- **Founded by Thomas Jefferson in 1819**
 - Jefferson was the author of the declaration of Independence
 - Also, an early president of the U.S.
- **University has strong humanities departments**
- **Research university**
- **Ranked best public university in U.S. since 1993**
- **Has professional schools: medical, law, business**
- **Sited in Charlottesville - one of the best places to live in the U.S. - 100 miles from Washington, D.C.**

- **Computer Science is in the School of Engineering**

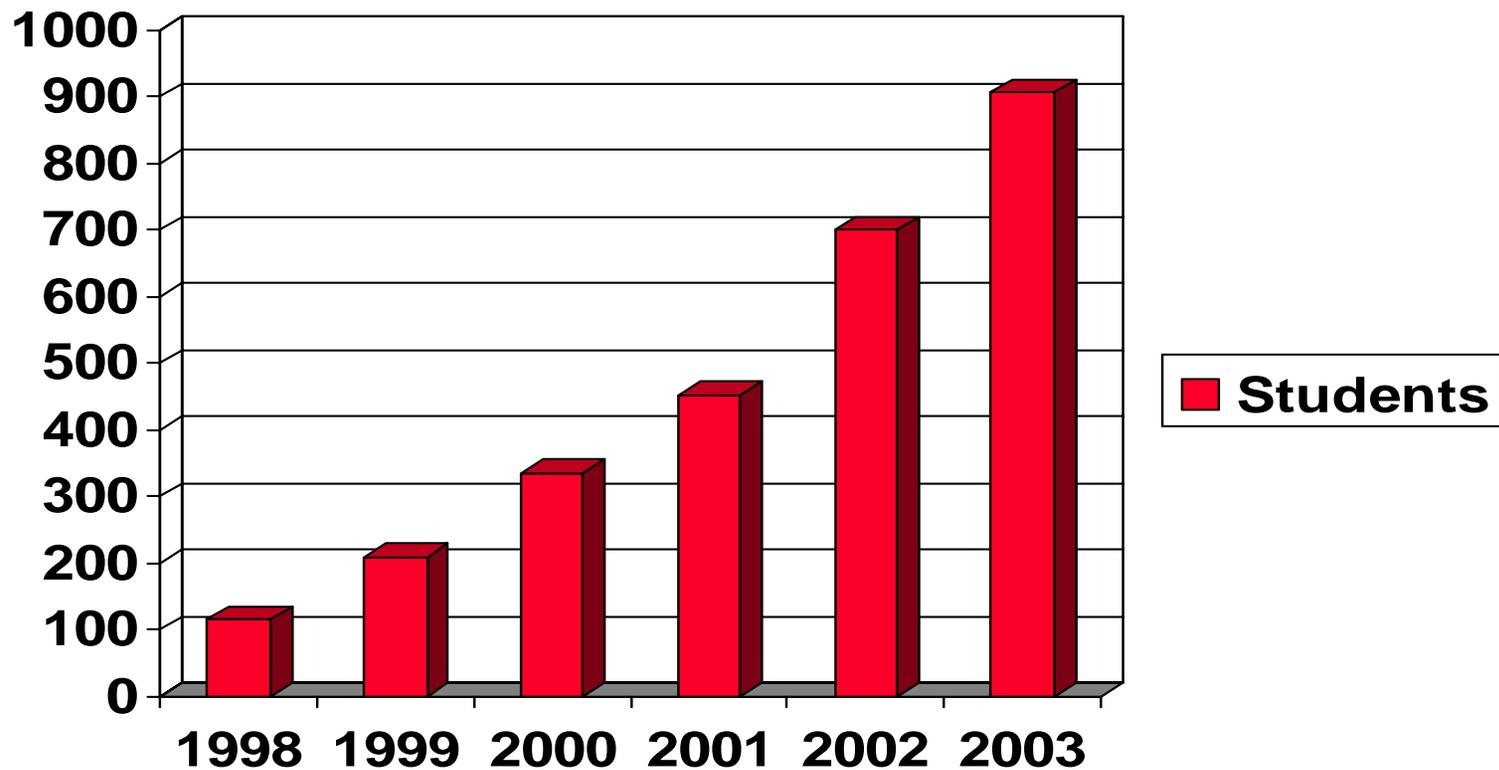


Computer Science Department is "middle sized"

- 26 faculty
- Teach large percentage of all UVA undergraduates
- About 300 undergraduate majors
- Undergraduate and masters degrees in computer science and computer engineering
- PhD degree in computer science
- 110 graduate students - mostly PhD students
- Almost all graduate students are funded
- "Friendly place"
 - Orientation program for arriving graduate students
 - Every student assigned a mentor (senior student)
 - Common computing environment for the department

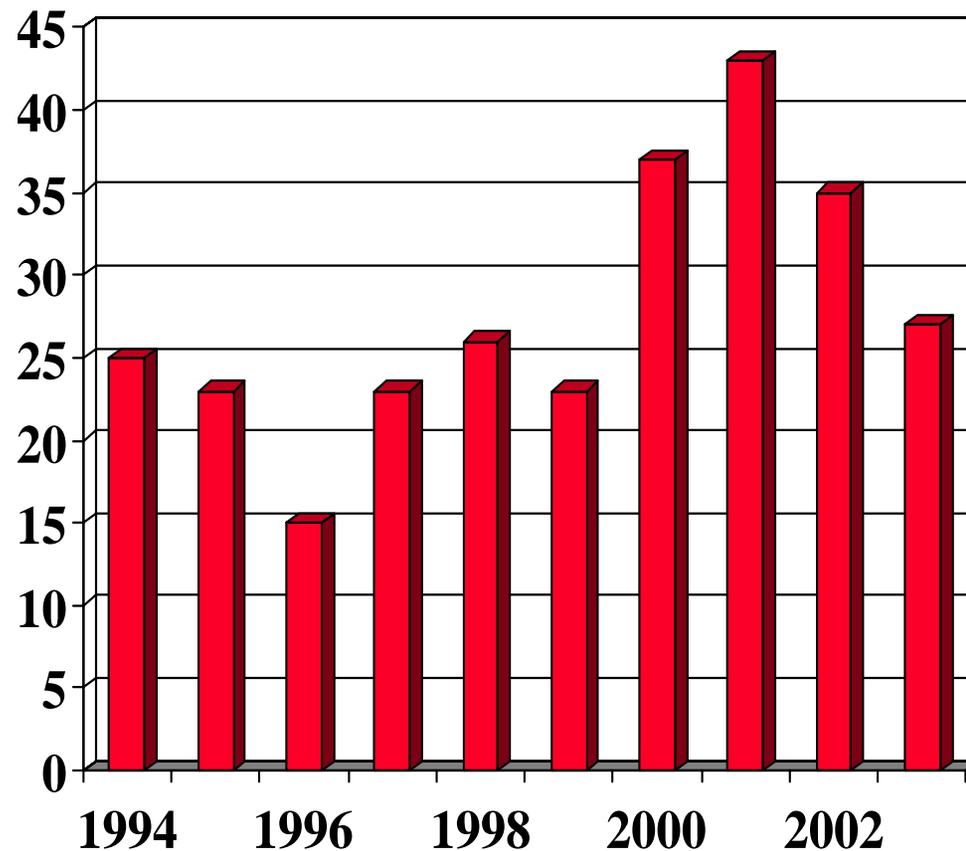


Graduate Applications in Computer Science





Graduate Students - Entering Class Size

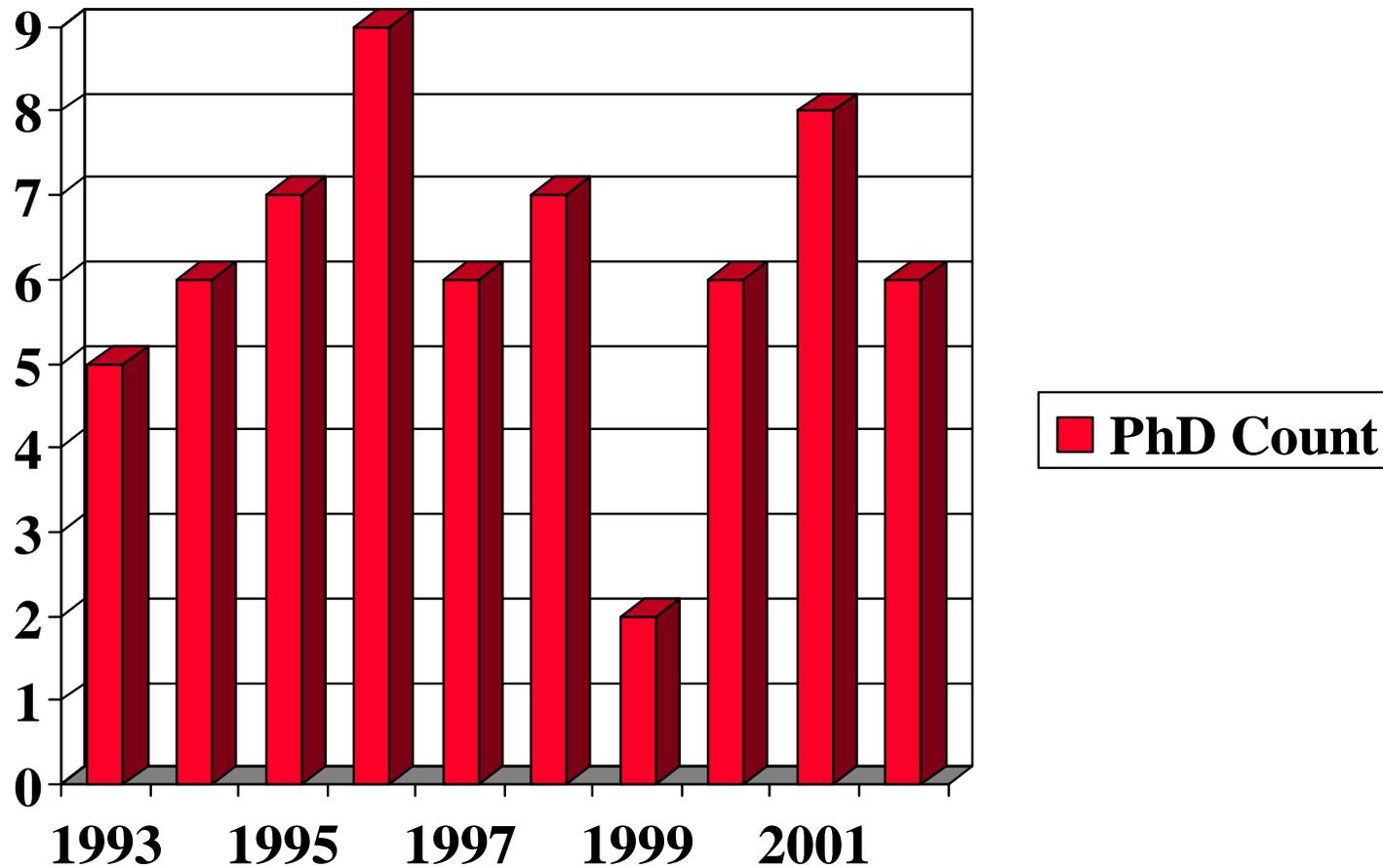


**Almost
all PhDs
now**

■ Count

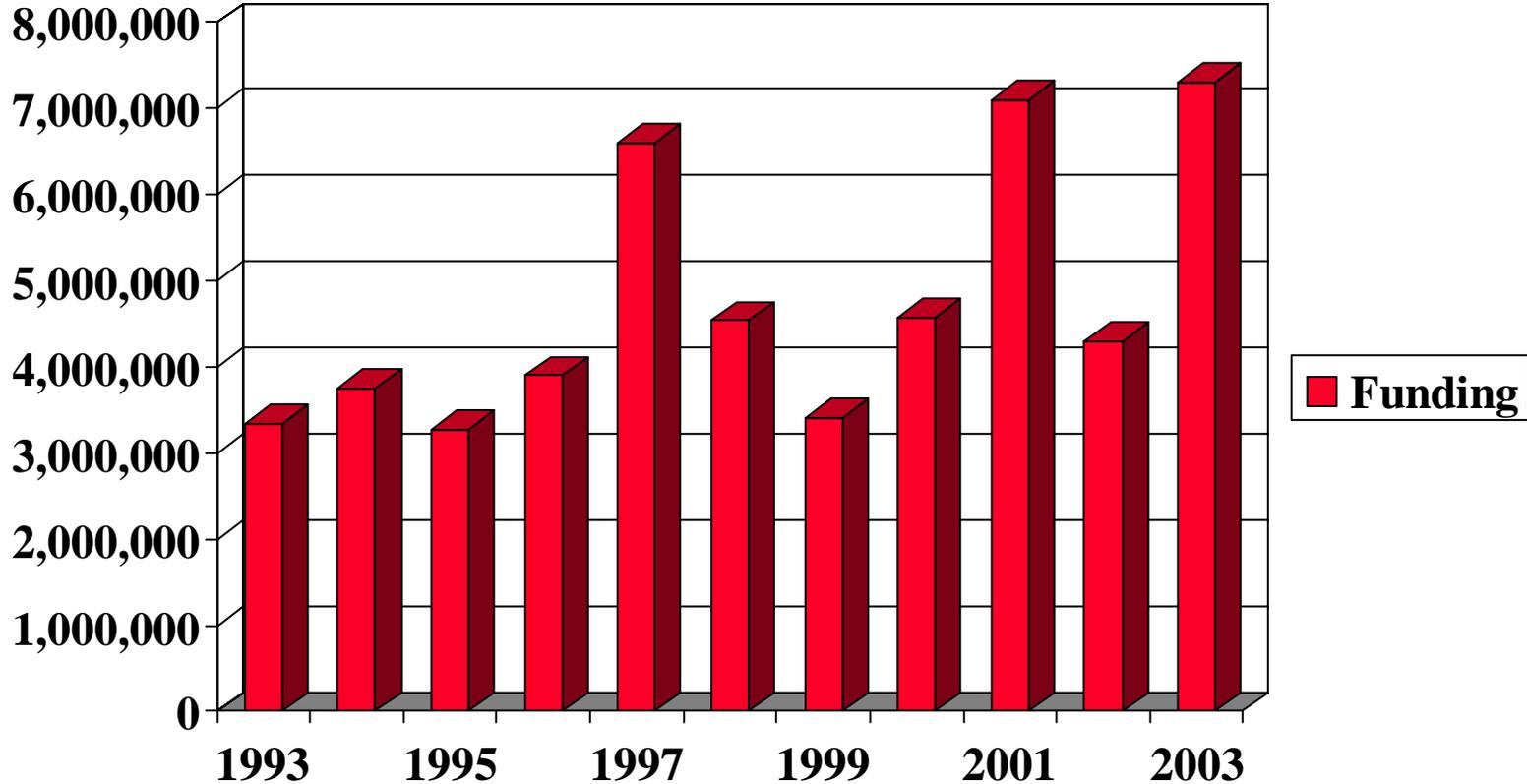


CS PhDs Graduated Each Year





Computer Science Department Research Funding





Distinguished Faculty

- 4 ACM Fellows; 3 IEEE Fellows
- 6 NSF Career Awards - recognizes young researchers
- Many "best paper awards"
- Organizers of important conferences
- Editors of journals, e.g.
 - IEEE Network
 - Real Time Systems Journal
 - IEEE Transactions on Parallel and Distributed Systems
 - ACM Transactions on Software Engineering and Methodology
- Authors of key textbooks
- President of U.S. National Academy of Engineering



Research at UVa

- Research
 - Grid Computing
 - Galileo (Fault Analysis Tool for NASA)
 - VintLAB - Internet Engineering Lab - copied by other universities
 - Wireless Sensor Networks
 - Linux - adopted UVa code optimization for open source C compiler
 - Computer security
 - Dependable systems and software

Research with impact - "systems" emphasis



Research at UVa

- Research
 - Swarm computing
 - Computer architecture and CAD
 - Power aware architectures
 - Visualization/Graphics
 - Large scale interactive rendering
 - Internet multi-cast and quality of service
 - Real-time databases
 - E-commerce
 - Formal techniques for software engineering

Research with impact



**“Always work on
important problems”**

- Thomas Jefferson



Education - Undergraduate

- **Innovative Undergraduate Curriculum**
 - Disseminated to about 100 other schools
 - Taught the teachers in summer programs
- **Our faculty author widely used textbooks**
 - "C++ Program Design" by Jim Cohoon & Jack Davidson
 - "Physically Based Rendering" by Greg Humphreys
- **VINTLab**
 - First University-based internet engineering lab
 - Funded by Industry (MCI and others)
 - Laboratory instruction materials transferred to other universities
- **Many undergraduates involved in research**



Education - Graduate

- Graduate degrees:
 - MS, MCS in Computer Science
 - MS, MCS in Computer Engineering
 - PhD in Computer Science
- Students co-author papers with faculty
- Many best paper awards



Relations with other Universities

- Graduate Students - Recent PhD grads took positions at Yale, Berkeley, CMU, Washington University, William and Mary, Utah, Cornell . . .
- Joint research projects with
 - Carnegie Mellon
 - MIT
 - Berkeley
 - Illinois
 - Stanford

**UVa excels in research
& is linked nationally**



External Perceptions

- UVa Computer Science is ranked 27th by U.S. News & World Report
- Top 15% of CS departments
- Not ranked in 1988
- Ranked 36th in 1996

We're increasing the quality of our program and it is visible to others



UVa Welcomes Foreign Students

Nguyet Thi Minh Nguyen
from Hanoi University of Technology
arrives at UVa this month (August, 2004)



Questions?