

2006 GEORGIA TECH STATE OF THE INSTITUTE

DEFINING THE FUTURE



Georgia Institute
of Technology

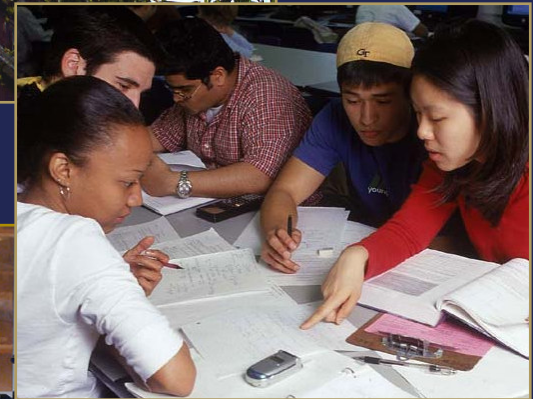
“The emerging global university is set to be one of the transformative institutions of the current era.”

“The brains business”

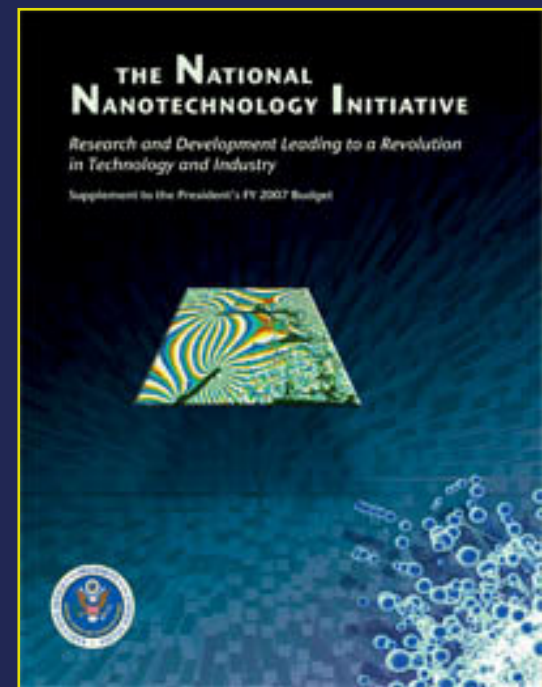
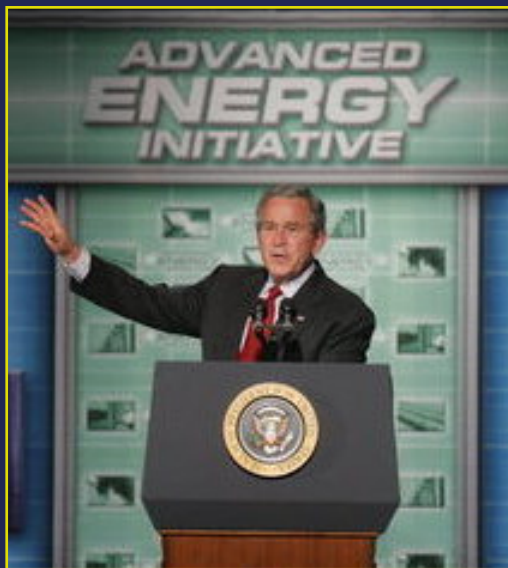
The Economist, September 2005

Georgia Tech vision and mission

Georgia Tech will define the technological research university of the 21st century and educate the leaders of a technologically driven world.



National priorities converge on Georgia Tech's "sweet spot"



2006 GEORGIA TECH STATE OF THE INSTITUTE

OPPORTUNITIES FOR CREATIVITY



Pioneering new fields



Jeff Skolnick



The
Razor

Biomimetics studies nature's solutions to problems for clues to complex engineering challenges.

Computational systems biology is the foundation for the next revolution in biomedicine.



Mark Weissburg, Don Webster test the transport of chemical odors through water.

Technology enlivens the arts



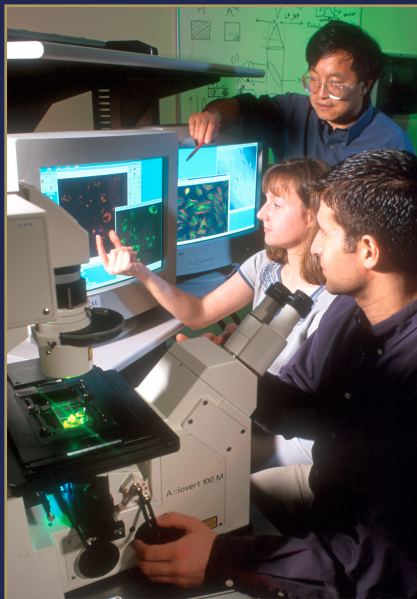
Music Department partners with Computing on new technologies like Haile, the robotic drummer. M.S. in music technology is Tech's first performing arts degree.

LCC Assistant Professor Michael Mateas won the top prize in the Slamdance Grand Jury Guerilla Gameworker competition at the Sundance Film Festival.



Expanding medical research

3 national centers of excellence in nanomedicine with Emory:



Cardiovascular disease
Cancer diagnosis, treatment
DNA, RNA repair

Joint center with
Shepherd Center
to create wireless
technologies for
those with
disabilities.



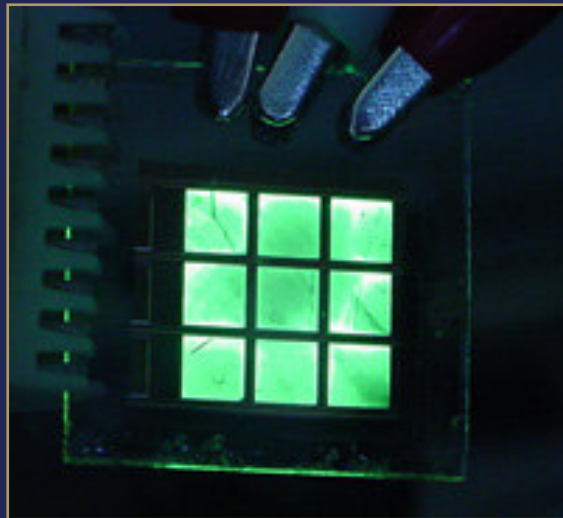
Center for Pediatric
Outcomes and Quality,
joint with Children's
Health Care of Atlanta.

New international research partners

Joint research unit between GT Lorraine and Centre National de la Recherche Scientifique (CNRS) for telecommunications and developing of new materials.



Abdallah Ougazzaden
Georgia Tech Lorraine



Belgian pharma/chemical giant Solvay: \$3 million partnership with Center for Organic Photonics and Electronics for research on organic light-emitting diodes (LEDs).

Expanding east and west



Georgia Tech Ireland: GTRI's first international center for applied research and technology transfer

Dual degree agreement with Shanghai Jiao Tong University



Strategic Energy Institute

- Policy guidance based on big picture concepts
- Alternative energy sources
- Efficiency and demand reduction
- Rapid commercialization of new technologies
- GRA Eminent Scholar in Energy
- Southern Pine to Ethanol initiative
- \$12 million partnership with Chevron: biofuels and hydrogen



Marilyn Brown
School of Public Policy



RIM@GT: Robotics and Intelligent Machines



RALF: Robotic Arm
Long and Flexible

- Partnership of Engineering and Computing in collaboration with GTRI and the Office of Research
- Coordinate Tech's efforts in robotics and facilitate technology transfer to industry
- 31 faculty, 15 labs, 44 academic courses

New facilities

Molecular Science
and Engineering



Klaus Advanced
Computing

Marcus Nanotechnology Building

- Largest in the South
- Three classes of cleanrooms (10, 100, 1,000)
- First in nation, world designed for both physical, biomedical research
- Flexible configuration
- Multi-user access
- Interdisciplinary
- Groundbreaking Aug 7



2006 GEORGIA TECH STATE OF THE INSTITUTE

FROM LAB TO MARKET



Recognized for biotech transfer

- No. 4 in start-up companies
- No. 8 in patents filed
- No. 11 in technology transfer

*Mind to Market: A Global Analysis of University
Biotechnology Transfer and Commercialization*

A study by the Milken Institute



Orthonics



CardioMEMS

“Clean tech” gains traction

- Sustainability and environmentally “clean” technology were the focus of a visit with WalMart executives from around the world.
- Tech’s VentureLab has 5 “clean-tech” start-up companies in development, with 4 more projects in the pipeline.



C2 Biofuels



Climate
Forecast
Applications

2006 GEORGIA TECH STATE OF THE INSTITUTE

RESHAPING EDUCATION



“Access and achievement gaps disproportionately affect low-income and minority students.”

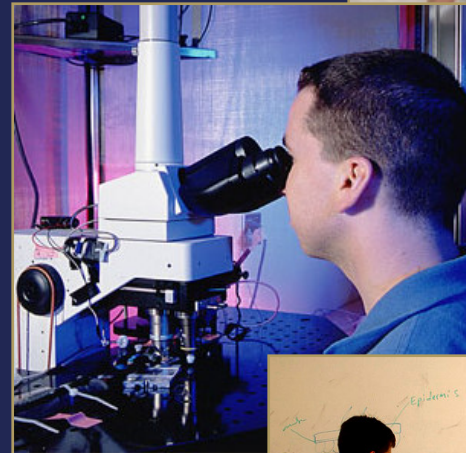
A Test of Leadership

Spellings Commission on Higher Education

- Tech’s tuition rates are among the lowest in our national peer set.
- Co-op Program allows students to work their way through Tech, gaining valuable job experience.
- *Diverse Issues in Higher Education* and *Hispanic Business* rank Tech among the best in the nation in graduating minority engineers.

Reshaping undergrad education

- Honors Program
- New interdisciplinary degrees
- International Plan
- Research Option
- Leadership education
- Revising the curriculum
 - ▷ Problem-based learning
 - ▷ “Threads”



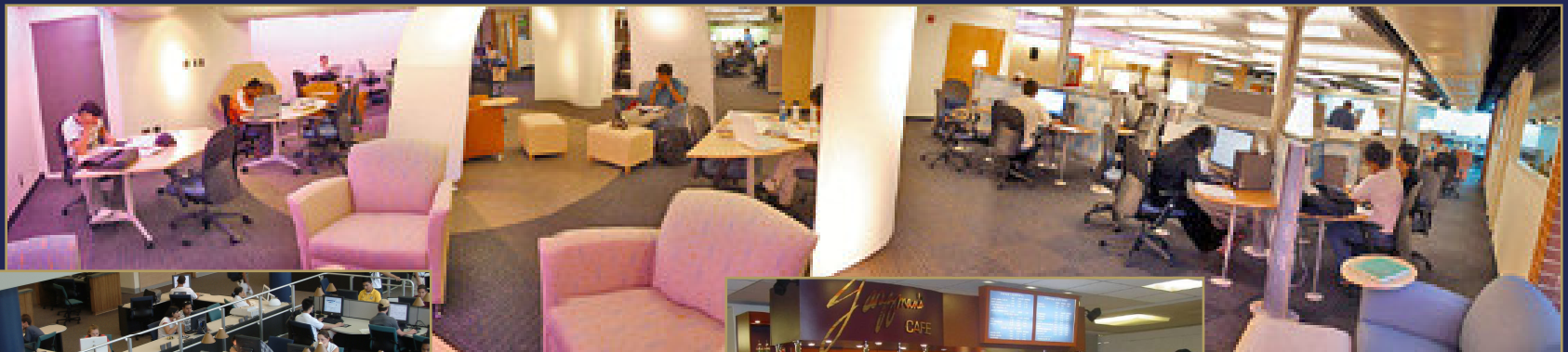
24/7 Library Commons

West Commons

- Multi-media center combines reference desk and IT help desk
- Sophisticated video, Web tools
- Doubled library usage

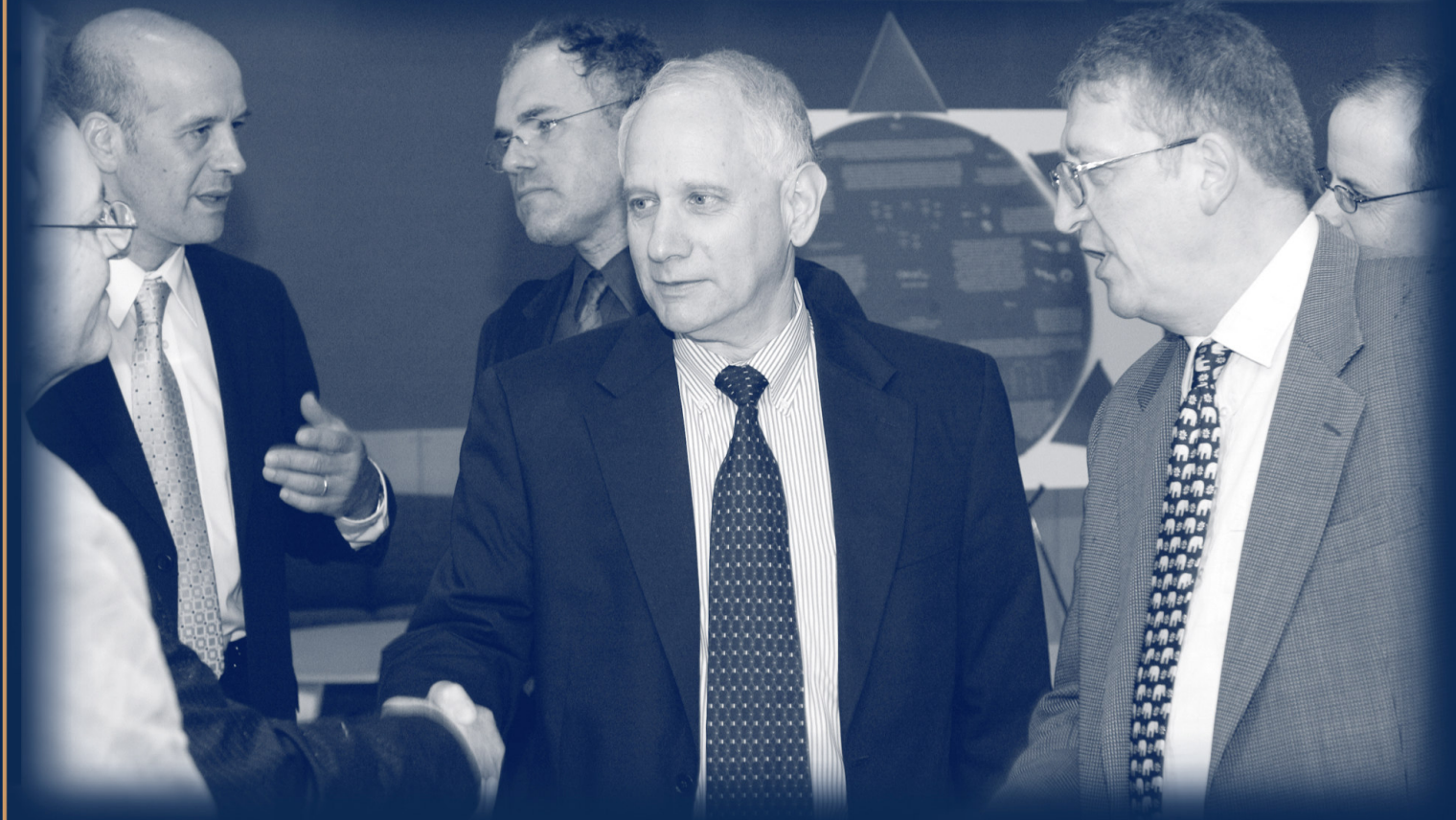
East Commons

- Flexible space combines living room comfort with latest in presentation technology
- Focus on group projects, collaborative study



2006 GEORGIA TECH STATE OF THE INSTITUTE

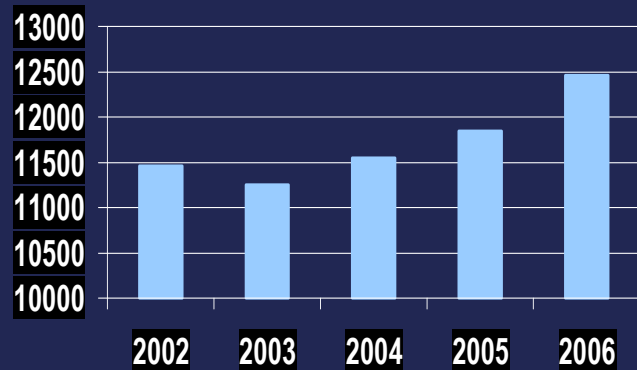
OUTSTANDING PEOPLE



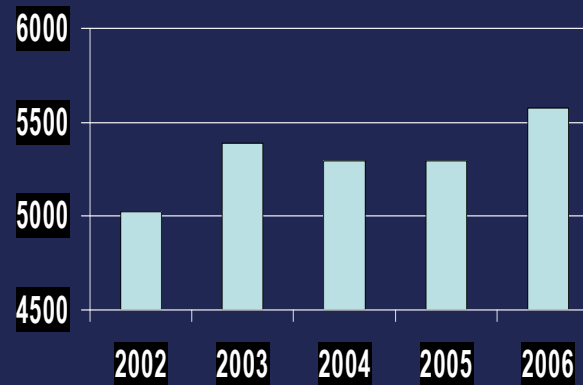
Enrollment trends

Record enrollment of 17,933

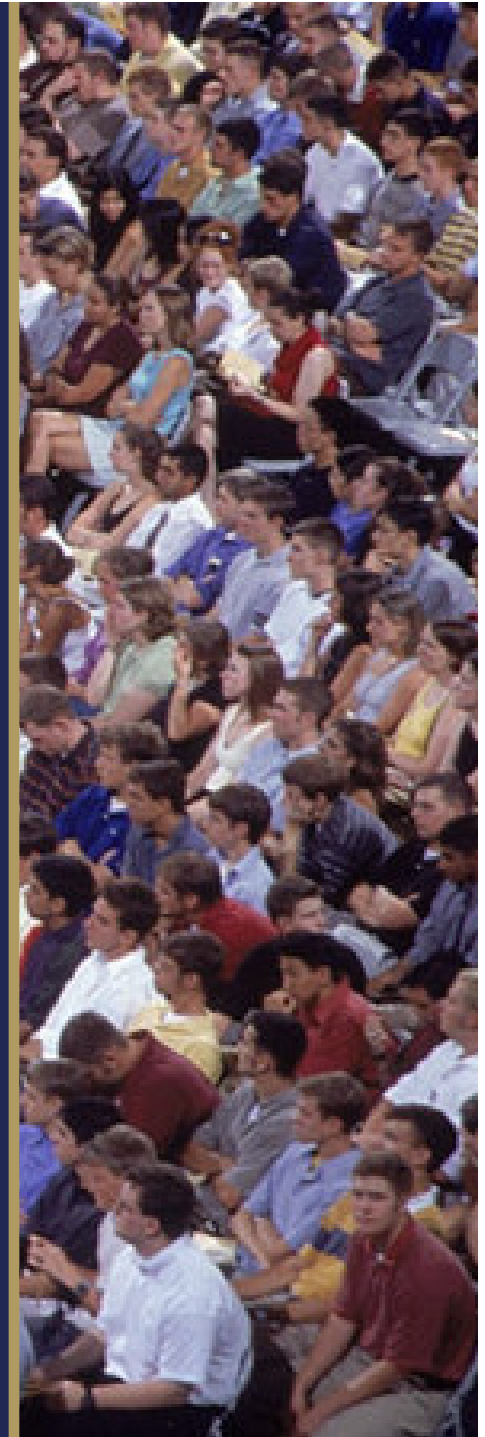
Undergraduate



Graduate



- Record freshman class of 2,800 +
 - ▷ 60% from Georgia; 40% from outside state
 - ▷ Women make up 31% of class
 - ▷ College of Sciences up 22%
 - ▷ Ivan Allen College up 11%



Outstanding students



Michael Haynes:
Marshall Scholar



Jarret Lefleur:
USA Today Academic All Star
Astronaut Scholarship
Foundation Scholar

John Crocker: Fulbright Fellow



Isaac Penny:
Astronaut Scholarship
Foundation Scholar



Goldwater Scholars:



A.J. Friend
Jonathan Diaz
Andrew Marin



Anita Borg Memorial Scholars:

Gillian Hayes
Delphine Nain
Laura Rouse
Tracy Westeyn

Faculty honored



Jim Meindl, ECE,
2006 IEEE Medal of Honor



Carol Colatrella, LCC
Fulbright New Century Scholar

Robert Loewy, AE
Daniel Guggenheim
Medal



Frank Rothaermel,
Management
Sloan Industry
Studies Fellow



ACM Fellows:
Vijay Vazirani, Computing
Krishna Palem, Computing

Faculty win awards

CAREER Awards:

Victor Laurens Breedveld, ChBE
Nirin Murthy, BME
Alexandra Boldyreva, Comp
Gregory Durgin, ECE
Elliott Moore, GT Savannah, ECE
Jeffrey Todd Streelman, Biology
Frank Rothaermel, Management
Sung-Kyu Lim, ECE

Fulbright Scholars:

David Goldsman, ISyE
Stuart Goldberg, Mod Lang
Fei-Ling Wang, Int Affairs

AAAS Fellows:

Charles Liotta, ChBE, Chemistry
James Foley, Computing
James Gole, Physics
Willie Pearson, Jr., HTS
Peter Webster, CEE
Evans Harrell, assoc dean,
Sciences
Boris Mizaikoff, Chemistry
Nancy Nersessian, computing,
public policy
Z L Wang, materials sci & eng

New leaders step up to the plate

Gary
Schuster,
Provost



Steve Salbu,
Dean
College of
Management



Dan Radakovich,
Athletics Director



Jim Fetig, AVP
Communications



Ronald
Baylor,
HTS School
Chair

At the top

Top 10 public university
Top 5 engineering program
Top 10 rating for all
engineering disciplines

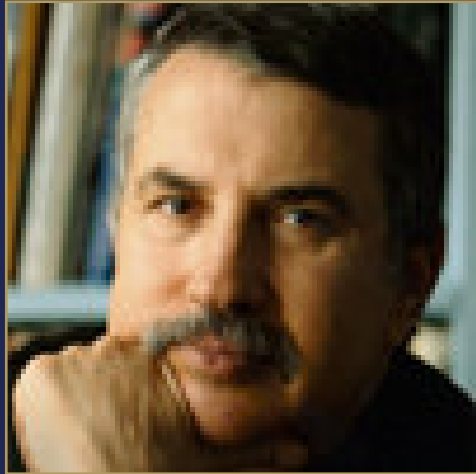
Top 5 in average SAT score
among public universities
Top producer of minority,
female engineers
Top 5 in alumni giving

Best campus rec center
Best golf program
Best collegiate tennis
athlete

Top 2 in engineering research
Top 5 in nanomedicine research
Top 5 in biotech start-ups
Top 10 in patents
Top university-based incubator

Top 2 in NSF CAREER Awards
Top 10 in National Academy members
Top 10 in PECASE Awards

Top 5 among publics in alumni giving
Top 10 transformative urban development
Top 12 best value in public education
Top 12 academic places to work



Tech has the “right stuff”

“What the Georgia Tech model recognizes is that the world is increasingly going to be operating off of the flat-world platform, with its tools for all kinds of horizontal collaboration.”

Thomas L. Friedman
The World is Flat

