Building a Technology Commercialization Ecosystem at Georgia Tech

Stephen Fleming
Chief Commercialization Officer
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Stephen Fleming

- 10+ years investment experience.
  - General Partner, Alliance Technology Ventures.
  - 18 investments as lead investor, 15 exits to date.
- BS, Physics, Ga. Tech (*Highest Honors*).
- 15 years operational experience at AT&T Bell Labs, Nortel, LICOM (*venture-backed startup*).
  - Supervised startups developing first ADSL modem and one of the first cablemodems in early 1990s.
- Multiple advisory boards at Georgia Tech; endowed chair in telecomm; occasional instructor in MBA entrepreneurship program.
- Strong regional technology leader.
Organization Chart

Gary Schuster
Provost
Georgia Tech

Wayne Hodges
Vice Provost

Ned Ellington
Director,
Strategic Partners

Todd Greene
Director, Community Policy & Research Services

Stephen Fleming
Director, Commercialization Services & Chief Commercialization Officer

Chris Downing
Director, Industry Services

Tony Antoniades
Director, Entrepreneur Services

Georgia Advanced Technology Ventures

EmTech Bio Incubator
National Rankings


1. Massachusetts Institute of Technology
2. Stanford University
3. University of California — Berkeley
4. Georgia Institute of Technology
5. University of Illinois — Urbana-Champaign
6. Purdue University
7. University of Michigan — Ann Arbor
8. Carnegie Mellon University
9. University of Southern California (USC)
10. California Institute of Technology (CalTech)

# patents

1. 390 University of California (system)  
2. 136 Massachusetts Institute of Technology  
3. 101 California Institute of Technology  
4. 90 Stanford University  
5. 90 University of Texas  
6. 77 University of Wisconsin  
7. 71 John Hopkins University  
8. 71 University of Michigan  
9. 64 University of Florida  
10. 57 Columbia University  

9. 43 Georgia Institute of Technology  
10. 43 University of Pennsylvania  
11. 41 Cornell University
Building an Ecosystem

- Nutrients
- Signs of Life
- Natural Selection
- Renewal
- Incubation
- Growth
Nutrients

- Recruiting research talent—worldwide
- Georgia Research Alliance (GRA)
  - Eminent Scholars
  - Facilities/equipment
- Reinventing academic disciplines
  - College of Computing
  - Emory/GT Biomedical Engineering Dept.
Signs of Life

- Emphasis on interdisciplinary research
- Research centers
  - Over 100 on campus, from textiles to nanoscience
  - MARC, MiRC, GEDC, Broadband Institute, GTEC Tissues, etc.
- GRA Phase Zero awards
Inventions!

<table>
<thead>
<tr>
<th># Invention Disclosures at Georgia Tech</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006*</th>
</tr>
</thead>
<tbody>
<tr>
<td># Patents Issued</td>
<td>40</td>
<td>41</td>
<td>35</td>
<td>43</td>
<td>38</td>
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<tr>
<td># Licenses Issued</td>
<td>25</td>
<td>28</td>
<td>35</td>
<td>34</td>
<td>31</td>
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<tr>
<td># Startup Licenses</td>
<td>7</td>
<td>10</td>
<td>15</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

* FY ending 6/30/2006
Natural Selection

• Intellectual property protection (OTL)
• VentureLab
  – Business plan
  – Management
  – Money
• GRA Phase I and II awards
• GT Innovation Fund
• TI:GER & other MBA

Enterprise Innovation Institute:
Commercialization Services
VentureLab Graduates

May 2007
**VentureLab Projects** (current)

A place for our friends and colleagues in the community to see what's happening at VentureLab, part of the Georgia Tech Office of Commercialization Services.

### Active Opportunities

<table>
<thead>
<tr>
<th>Active Code Name</th>
<th>VL Primary</th>
<th>Description</th>
<th>Management</th>
<th>Primary Professor</th>
<th>Department</th>
<th>Status</th>
<th>Opportunity Type</th>
<th>Serial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Video Quality Measurement</td>
<td>Roberto Gasas</td>
<td>Technology to evaluate the quality of processed video, subject to coding and network errors, in a reliable manner. Measures subjective scores based on objective measurements.</td>
<td>Nill Jayanti</td>
<td>ECE</td>
<td>a. Preliminary Evaluation</td>
<td>Not Yet Known</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- C2 Biofuels: Ben Hill  
  - Cellulosic-based ethanol production.

- CDMA technology: Jon Goldman  
  - Crest Factor Reduction techniques for forward-link. CDMA applications has potential for significant power savings at base stations. Also, 3G4 may be of interest to Altera

- Climate Forecast Applications: Ben Hill  
  - Probabilistic weather forecasting models for 10d to 30d horizon. Specific application: cyclones/hurricanes.

### Login Information

Login as ‘VL’, password ‘vl’.

Sort columns by clicking on headers.

Incubation

- Advanced Technology Development Center (ATDC)
- GRA Phase III loans
- SBIR assistance program
- Ga. Seed Capital Fund
- National VC attention
- Centers of Innovation
  - Statewide tech areas

Enterprise Innovation Institute:
Entrepreneur Services
Thriving Community

AerovectRx is developing pulmonary drug delivery technology licensed from the U.S. Centers for Disease Control and Prevention (CDC).

Agrios provides a solution to automatically capture, identify and archive damage information on vehicles to reduce losses for fleet owners and insurance companies.

Asankya Networks provides intelligent networking solutions that optimize the performance and security of real-time traffic on multi-site wide area networks.

Attrasoft develops software solutions for companies that require fast, accurate image and video recognition.

Biofisica is a medical device company developing solutions for the wound care market by pursuing bio-natural technologies which activate the current of healing - a naturally occurring biological process.

Cambia CM is security policy enforcement software that safeguards the integrity of network asset configurations while dramatically reducing preparation time needed to pass IT security audits.

Celtaxsys is developing biotechnology that modulates the body’s response to inflammation for the treatment of a number of diseases and conditions.
Growth

- **Industry services**
  - Business consulting for competitiveness, quality, lean mfg, etc.
  - Strategic business services & analysis

- **Community policy & research**
  - Local economic development
  - Balanced growth
  - Sustainability

*Enterprise Innovation Institute:*
- Industry Services
- Community Policy & Research Services
Helping Mature Industries

Simplex Nail
...with Ga Tech Ind. Services:

- Cut inventory costs by 52%
- Resumed production in all of its product lines
- “We are alive because of it. Our cash flow all around has improved and our production is more efficient.”

– Plant Manager Jeff Kurtz
Cycle of Renewal

• Successful companies
  – Sponsoring research
  – Hiring GT graduates
  – Spinning off new companies

• Successful graduates
  – Charitable giving
  – Angel investment
  – Mentoring

• More nutrients for the ecosystem!
Building an Ecosystem

- Nutrients
- Growth
- Incubation
- Renewal
- Natural Selection
- Signs of Life
For Further Information

Stephen Fleming
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<http://innovate.gatech.edu/commercial/>

(404) 385-2360
“Virtually every combination of industry relationship or economic development activity can be found at Georgia Tech, and in a very real sense, the university is an operating partner with Georgia state government in the implementation and management of a variety of technology-focused initiatives. **Perhaps more than any other research university in North America, economic development is an integral, critical component of the mission of the Georgia Institute of Technology**, and this has been true from its very inception.”

– Southern Growth Policies Board, 2002
IP Mgmt./Evaluation

Screens

Export Control

Industrial Contracts

Dept. Chairs / Deans / GTRI

Invention Disclosures

Technology Analysis

Need more information / development

Technology Evaluation

Protect IP?

Rights to Faculty?

Initiate IP Prot.

$ External Counsel

$ Patent Application

Market Analysis

Market Evaluation

Path?

Responsibility

GTRC

EI2 / CS

...continued
IP Licensing/Compliance

License Negotiation

Startup / Spinout

Industrial License

Startup Formed

Incubator?

License

ATDC or EmTech Bio

Successful Startup

Portfolio Liquidation

Equity

Royalties & etc.

Industrial Partner

Distribution of Payments

$ Royalty Collection

Monitoring

Compliance / Litigation

Patent Maint. & Defense

Responsibility

GTRC

EI2 / CS

Inventor(s)

Academic Department(s)

GTRC

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