New commercialization initiative to streamline Tech’s intellectual property

John Toon
Research News

Georgia Tech has launched an aggressive new commercialization initiative designed to streamline the handling of intellectual property, accelerate the licensing of technology and make the Institute’s resources more readily accessible to business and industry.

The new initiative, to be known as Georgia Tech Commercialization Services, will also expand the transfer of technology to Georgia companies while providing stronger marketing and management for Georgia Tech’s rapidly growing and increasingly specialized intellectual property portfolio. Stephen Fleming, a successful Atlanta investor and entrepreneur, will head up the new unit as chief commercialization officer. A Georgia Tech graduate with private-sector experience at AT&T Bell Laboratories and Northern Telecom, Fleming has been a partner in two Atlanta-based venture capital firms, and has managed investments in more than 20 startup companies.

“Better commercializing the technological innovations we develop will enable Georgia Tech to have a larger impact on the local, state and national economies,” said Provost Jean-Lou Chameau. “To accommodate continued growth in our intellectual property portfolio, we need a more effective commercialization process, one that is worthy of the kind of institution we aspire to be.”

Georg picture

Corporate partnership plans wind power project off Georgia coast

Southern Company and Georgia Tech have announced that they will collaborate on the Southeast’s first offshore wind power project off the Savannah coast. The goal of the project is to determine if offshore wind power is a feasible and efficient renewable energy option for power generation. The project concept is expected to include several wind turbines to generate 10 megawatts of power, enough to power about 2,500 homes.

“We remain interested in finding viable renewable energy options that can play a part in meeting the growing demands of our customers,” said David Ratcliffe, president, chairman and CEO of Southern Company. “Our partnership with Georgia Tech presents us with a unique opportunity to assess offshore wind power as a cost-effective option for generating power in our region.”

The first step of the project, a design and conceptual engineering phase, will be conducted using technical expertise from both Georgia Tech and Southern Company. Starting in July, the first phase of the project will evaluate various technology options for wind turbines, platforms, foundations, submarine cable and grid interconnection. Detailed analyses of a site location and...
Gold nanoparticles may simplify cancer detection

Quick and inexpensive method utilizes mineral’s prized property

David Terraso
Institute Communications and Public Affairs

Binding gold nanoparticles to a specific antibody for cancer cells could make cancer detection much easier, suggests research at Georgia Tech and the University of California at San Francisco. The report is published in the May 11, 2005 edition of the journal Nano Letters.

“Gold nanoparticles are very good at scattering and absorbing light,” said Mostafa El-Sayed, director of the Laser Dynamics Laboratory and Regents’ professor in the School of Chemistry and Biochemistry. “We wanted to see if we could harness that scattering property in a living cell to make cancer detection easier. So far, the results are extremely promising.”

Many cancer cells have a protein, known as Epidermal Growth Factor Receptor (EGFR), all over their surface, while healthy cells typically do not express the protein as strongly. In binding the gold nanoparticles to an antibody, suitably named anti-EGFR, researchers were able to get the nanoparticles to attach themselves to the cancer cells.

“If you add this conjugated nanoparticle solution to healthy cells… the cancer cells and you look at the image, you can tell with a simple microscope that the whole cancer cell is shining,” said El-Sayed. “The healthy cell doesn’t bind to the nanoparticles specifically, so you don’t see where the cells are. With this technique, if you see a well-defined cell glowing, that’s cancer.”

In the study, researchers found that the gold nanoparticles have 600 percent greater affinity for cancer cells than for noncancerous cells. Researchers tested their technique using cell cultures of two different types of oral cancer and one nonmalignant cell line.

What makes this technique so promising, said El-Sayed, is that it doesn’t require expensive high-powered microscopes or lasers to view the results, as other techniques do. All that is needed is a basic microscope and white light.

Another benefit is that the results are instantaneous. “If you take cells from a cancer-stricken tissue and spray them with these gold nanoparticles that have this antibody you can see the results immediately. The scattering is so strong that you can detect a single particle,” said El-Sayed.

Finally, the technique isn’t toxic to human cells. A similar technique using artificial atoms known as quantum dots uses semiconductor crystals to mark cancer cells, but the semiconductor material is potentially toxic to the cells and humans.

“This technique is very simple and inexpensive to use,” said El-Sayed. “We think it holds great promise in making cancer detection easier, faster and less expensive.”

For more information...
Laser Dynamics Lab
www.ldl.gatech.edu

WWW.WHISTLE.GATECH.EDU
Ferst Center lines up new season

The Ferst Center for the Arts has announced its 2005-2006 schedule, introducing new performers to the Atlanta stage while hosting audience favorites from around the globe. The new season features seven Atlanta premieres, the popular jazz series and top international artists, as well as dance, theater and classical music.

The Ferst Center is offering a 20 percent discount on a five-show subscription package. Patrons can select any five performances to complete a subscription.

Director Jay Constantz said from “Saturday Night Live” repertory player Horatio Sanz to Broadway performer Barbara Cook to a family concert featuring Dan Zanes and Friends, the season will cater to a broad range of interests.

“It is a great balancing act between bringing in old favorites, new artists, artists in the areas that we traditionally program and artists that will appeal to Tech students,” Constantz said.

Tickets can be ordered now from the Ferst Center Box Office at 894-9600. Individual tickets will be available online, by phone or in person on August 8. For more information, visit www.ferstcenter.org.

2005-06 Ferst Center season

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 26</td>
<td>Horatio Sanz</td>
</tr>
<tr>
<td>September 24</td>
<td>Nnenna Freelon</td>
</tr>
<tr>
<td>October 7</td>
<td>The 5 Browns</td>
</tr>
<tr>
<td>October 26</td>
<td>Chris Bott</td>
</tr>
<tr>
<td>October 28</td>
<td>Beijing Modern Dance Company</td>
</tr>
<tr>
<td>November 4</td>
<td>McDuffie Dutton Kirshbaum Trio</td>
</tr>
<tr>
<td>November 11</td>
<td>Laurie Anderson</td>
</tr>
<tr>
<td>November 12</td>
<td>Munich Symphony Orchestra</td>
</tr>
<tr>
<td>December 2</td>
<td>Big Bad Voodoo Daddy</td>
</tr>
<tr>
<td>December 3</td>
<td>Barbara Cook</td>
</tr>
<tr>
<td>December 9</td>
<td>A Peter White Christmas with Mindi Abaar and Rick Braun</td>
</tr>
<tr>
<td>December 10</td>
<td>Dan Zanes &amp; Friends</td>
</tr>
<tr>
<td>January 14</td>
<td>Hallikoin Opera in “Die Fledermaus”</td>
</tr>
<tr>
<td>January 27</td>
<td>The Flying Karamazov Brothers</td>
</tr>
<tr>
<td>February 11</td>
<td>Julio Bocca and Ballet Argentine in “Boca Tango”</td>
</tr>
<tr>
<td>February 12</td>
<td>Aqullo Theatre Company in “Hamlet”</td>
</tr>
<tr>
<td>February 18</td>
<td>Arlo Guthrie</td>
</tr>
<tr>
<td>March 4</td>
<td>Nashville Bluegrass Band with Bering Strait</td>
</tr>
<tr>
<td>March 11</td>
<td>North Carolina Dance Theatre in “Under Southern Skies”</td>
</tr>
<tr>
<td>March 31</td>
<td>Trinity Irish Dance Company</td>
</tr>
<tr>
<td>April 8</td>
<td>National Tour of Tap Dogs</td>
</tr>
<tr>
<td>April 15</td>
<td>Lang Lang</td>
</tr>
<tr>
<td>April 21</td>
<td>The Sax Pack Tour: Jeff Kashiwa, Steve Cole &amp; Kim Waters</td>
</tr>
<tr>
<td>May 5-6</td>
<td>Atlanta Ballet</td>
</tr>
</tbody>
</table>

Awards & Honors

Assistant Professor David Anderson (Electrical and Computer Engineering) has been selected by the National Science Foundation to receive a Presidential Early Career Award for Scientists and Engineers (PECASE).

Assistant Professor Subhash Khot (College of Computing) was selected for a Microsoft Research New Faculty Fellowship Award, a new program that honors early-career university professors.

Assistant Professor Julia Kubanek (Schools of Biology and Chemistry & Biochemistry) has been named the recipient of the 2005 Blanchard Fellowship. The fellowship was initiated through an endowment established by Elwood P. “Doc” Blanchard Jr. to fund an assistant professor who is midway toward tenure.

Professor Tom Kurfess (Mechanical Engineering) received the Charles F. Carter Jr. Advancing Manufacturing Award from the Association for Manufacturing Technology.

Associate Professor Marc Levinson (Mechanical Engineering) was selected as a winner of the Negma-Laros International Prize for Research on Mechanobiology of Cartilage and Chondrocyte. This award from the European Society on Cell and Tissue Engineering and Therapy was given at the 4th International Symposium on Mechanobiology of Cartilage and Chondrocyte, held last month in Budapest, Hungary.

Professor Steven Liang (Mechanical Engineering) has been honored by the American Society of Mechanical Engineers (ASME) with the 2005 Blackall Machine Tool and Gage Award.

Professor Cheng Zhu (Mechanical Engineering) will receive the “Hemorheology and Microcirculation Award” for his paper on “Direct Observation of Catch Bonds Involving Cell Adhesion Molecules” during the joint meeting of the International Society of Bioreology (ISB) and the International Society for Clinical Hemorheology (ISCH).

Library renovation under way

The Library’s 1st Floor East is in the midst of a profound transformation, closing most of the area to the public. Photo copiers have temporarily relocated adjacent to the service desk on 2 East, though the Circulation Desk and staff offices on 1 East remain open.

Renovations completed in fall 2005 will include Jazzman’s Café, new group and individual computer workstations, new study and work spaces, improved leisure and popular reading areas, art displays featuring Tech students and theater space.

Renovations are in part by the Class of 1955 for its 50th Reunion fund raising drive. For questions or comments, e-mail library@gatech.edu or call 894-6473.

Alumnus to spend six months aboard Space Station

NASA and its international partners have named new crew members for upcoming missions to the International Space Station (ISS).

U. S. astronaut William S. McArthur Jr., who earned a master of science degree in aerospace engineering from Georgia Tech in 1983, and Russian cosmonaut Valery I. Tokarev will serve on the International Space Station as the crew of Expedition 12. They will travel to the ISS on board a Russian Soyuz spacecraft later this year for their six-month mission.

McArthur is the Expedition 12 commander and Tokarev is the flight engineer.

McArthur has flown on three Space Shuttle flights and has logged more than 55 days in space, including more than 1.5 hours spacewalking. On his last two missions, he visited the Russian Space Station Mir and the ISS.

Baseball team wins conference tournament

Georgia Tech won its seventh Atlantic Coast Conference baseball championship last month when the Yellow Jackets scored twice in the seventh inning on a bases-loaded walk and a wild pitch to edge Virginia 4-3 in the championship game at the Baseball Grounds of Jacksonville.

In winning its second league crown in the past three seasons, the Yellow Jackets earned the league’s automatic berth to the NCAA postseason tournament and hosted one of 16 regionals that determine the field for the College World Series.

Crew wins gold

Georgia Tech’s men’s light four-plus crew scored a gold medal in the Dad Vail regatta — the national championships of collegiate rowing — held last month on the Schuylkill River in Philadelphia. This is the third consecutive year that a Tech team has brought home a gold medal.
CAMPUS EVENTS

Arts & Culture

June 13
The American Museum of Papermaking hosts "Weaving Fabric from Paper (Shifu)," a demonstration by artist Deepak Shrestha, at 5 p.m. in the Institute of Paper Science and Technology. For more information, visit www.ipst.gatech.edu.

Brown Bags/Conferences/Lectures

June 15
The Office of Organizational Development hosts a brown bag on "Violence in the Workplace: Creating a Safe Environment," to address concerns about violence in the workplace, from verbal threats to physical aggression, at 11:30 a.m. in room 308, Savant Building. Participants will have time to ask questions and to discuss concerns. To register, visit www.trainsweb.gatech.edu.

June 16
The Office of Organizational Development hosts "Power Communications for Women" for a half-day session in room 308, Savant Building. To register, visit www.trainsweb.gatech.edu.

July 12
The Office of Organizational Development hosts a 10-week session of "Workplace Spanish Level I," held from 12:50 - 2 p.m. in room 208, Savant Building. Participants will learn vocabulary and expressions specific to their individual needs on the job. To register, visit www.trainsweb.gatech.edu.

July 14
The Office of Organizational Development hosts a 10-week session of "Workplace Spanish Level II," held from 12:50 - 2 p.m. in room 208, Savant Building. This course will concentrate on increasing vocabulary and verb tenses for acquiring some fluency in speaking and comprehending Spanish. To register, visit www.trainsweb.gatech.edu.

Faculty/Staff Development

June 14-15
The Office of Organizational Development offers a free, two-hour course on time saving tips and tricks for Microsoft Outlook and Exchange. Morning and afternoon sessions are available. To register, visit www.trainsweb.gatech.edu.

June 22

Ongoing

Faculty, staff, alumni and graduate students are invited to join Georgia Tech's chapter of Toastmasters International, which meets every Thursday at 7:30 p.m. in room 102 of the Petit Microelectronics Research Center. For more information, visit www.techmasters.gatech.edu.

Miscellaneous

June 15-16
A representative from TIAA-CREF will be on campus for individual financial counseling sessions. To schedule an appointment, call 800-842-2005 or visit www.tiaa-cref.org/moc.

June 25
Georgia Tech's Professional Education hosts a course in defensive driving at the Global Learning and Conference Center. This six-hour, classroom-based course can reduce your insurance premium by 10%. For more information, visit www.pe.gatech.edu or call 804-0374.

June 30
The last day to register for permit parking. Visit www.applyparking.gatech.edu for details.

The Whistle is on a biweekly publication schedule during the summer semester. The next issue will be published on June 20. E-mail all calendar events to editor@icpa.gatech.edu.

C L A S S I F I E D S

APPLIANCES

New 30-inch Frigidaire gas range, Model #FGF316DSA. White, 4-burner w/ manual and broiler pan. Never been used. $6250. E-mail tanah.barchial@eas.gatech.edu.

AUTOMOBILES

1992 Honda Civic DX sedan. White, 4-door, PS/PW/PL, cruise, CD player. $2,500 OBO. Call 678-787-2904.

1992 Subaru Legacy Wagon. 5-speed stick-shift with all-wheel drive. 97k miles. Burgundy exterior and gray cloth interior. Very reliable, $2,000 OBO. Call 804-735-6855 or e-mail bob.harty@icpa.gatech.edu.

1995 Nissan Maxima GL in very good condition, dealer maintained, leather seats, sun roof, automatic, air, Bose stereo. 118k miles. $4,700. E-mail bfunia@bellSouth.net.

1996 Volvo 850 Turbo, 54k miles. Single owner, maintenance records, Great condition. Automatic, sun roof, A/C, a/c, cruise, dual front air bags, cassette stereo, alloy wheels. $6,500. Call 804-4378 or e-mail srq301@virgina.net.

REAL ESTATE/RROOMATES

4BR/3BA, formal living & dining, large family room, eat-in kitchen, large fenced back yard. Approximately 20 miles from Tech in Clayton County, close to I-75 and I-16. $1,200/month. Call 356-8772.

2BR East Atlanta townhome offered at $204,900. Two full baths, 2 half baths. Stainless appliances. Deck, private fenced yard, garage w/storage. W/D, gated, pool, alarm. E-mail raheem.beah@ece.gatech.edu.

3BR/2BA house in South Clayton County for rent. Lovejoy Middle/High, Marietta square, $274,900. Also, 3BR/2BA brick ranch near the Marietta square, $274,900. Also, 2BR/1BA farmhouse on 1.5 acres, $140,000. www.owners.com/digit8553. E-mail em106@mail.gatech.edu or call 404-452-2532.

1BR/1BA newly renovated, furnished apartment in Morningside. Off-street parking. 10-year tax abatement. $1,600/month. Call 404-862-2648.

Fully furnished downtown 1BR condo. Cable, DSL, gas, electric paid with association fee. Pre-paid parking, 24/7 concierge. 10-year tax abatement. $115,000. th3will@comcast.com. Call 404-255-9249 or e-mail omaar-keiko@netscape.com.

2BR/2.5BA townhouse in Norcross. Basement and one-car garage. Six years old. Ideal roommate plan. Very clean and well maintained. $139,900. Owner may pay part of closing cost. E-mail ed3008@mail.gatech.edu or call 770-368-8017.

MISSOURI:

FOUND in the area of the ISyE complex: a silver necklace. Call 894-8039 and describe.

AKC Old English Sheepdog puppies. Raised using New Skelet Methodology. Health guarantee; all shots. Males and females, $600-$800. Call 404-271-6900 or e-mail wid@mindspring.com.

46-inch rear projection RCA HME Theater. $250 OBO. Currently not in working order. Buyer must pick up. Call 804-1028 or e-mail robert.gregor@ap.gatech.edu.