

Dublin, Georgia Rotary Club

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(As written; not necessarily as delivered)

Investing in Futures

Thank you Bob (Walker) for inviting me today. Bob is one of the 66 Georgia Tech alumni in House District 143. Are there other Tech alumni here? I would also like to give a shout out to Rep. Bubba Epps.

We all owe a debt of thanks to our state legislators, like Bubba and Rep. Dubose Porter from right here in Dublin, for long hours and hard work during this challenging session that just ended. In spite of extremely limited resources to go around, they found a way to make the budget work. We are very grateful for their support of higher education to help cover enrollment growth, and major funds among all University System of Georgia institutions to repair aging facilities.

The economy is on everyone’s mind, and I’ve titled my talk “Investing in Futures.” It’s particularly appropriate because of the hiccup, or maybe I should say nosedive, that Wall Street experienced a week ago because of an apparent keyboard mistake by one broker in authorizing the sale of billions in futures.

No matter what the actual cause, Wall Street has its risks. In contrast, higher education is just about the best investment you can make, as an individual, for our state, and for our future.

It is not an accident that the State of Georgia is one of only a handful of states that has two or more public universities ranked in the top 25 by US News & World Report - it’s because the people of Georgia, because of the Regents, because of the Legislature and because the leadership of the state all understand the importance of higher education and what it means to the economy the development of our human capital, and our state and nation.

This week the Board of Regents approved the fiscal year 2011 budget for the University System of Georgia, and set tuition. It includes an increase of \$500 per semester for both in-state and out-of-state tuition at research universities like Georgia Tech.

Georgia Tech is ranked seventh among all public universities in the country. While our out-of-state tuition is comparable with other nationally-ranked universities, our in-state tuition is significantly lower. Even with the \$500 increase, the tuition at Georgia Tech, UGA and Georgia State will be either just below or at the median of undergraduate tuition paid among our national peers.

To offset the increases for the most financially-needy students, the regents have called upon the research universities to provide need-based aid for students on Pell Grants. Because Tech's admission requirements are high, virtually all freshmen are HOPE scholars.

At Georgia Tech, we take it a step further. We have a program based on our commitment that no academically qualified Georgia resident should be denied a Georgia Tech education based on income. Our program is the G. Wayne Clough Georgia Tech Promise, and it has resulted in more than 350 students attending Georgia Tech who wouldn't have been able to do so otherwise. *(Example of Tech Promise student who graduated last week –law school.)*

This fall we welcomed the largest, most diverse and best qualified freshman class in Tech's history. We are seeing the same trend for the new freshman class that is now forming. This year our total enrollment surpassed 20,000 for the first time in Tech history.

We are a national leader in graduating minority and female engineers, ranking #1 in the number of women and African American engineers, and #2 in the number of Hispanic engineers graduated. In addition to engineering, we also have outstanding programs in architecture, computing, management, the sciences, and liberal arts. We are in the business of preparing leaders.

At Georgia Tech this past weekend we had three graduation ceremonies for our 2,800 bachelor's, master's, and PhD graduates, and I think I shook hands with every one of them. Instead of tennis elbow, I'm surprised I don't have graduation elbow. One of my favorite parts about my job is seeing graduates with their family and friends, along with many of the professors who challenged them—they're all investing in futures. I have no doubt that I was shaking hands with future CEOs, inventors, and government and community leaders.

You'll be interested to know that we have 26 students from District 143, with most coming from Dublin, West Laurens, and East Laurens high schools, as well as Trinity Christian School.

Some things about Georgia Tech that may surprise you. It is interesting to note that women make up about a third of the student body, yet occupy 42% of the leadership positions for our student groups. Each year, around 2,000 students participate in music courses or activities.

We're proud of our sports teams. We have 350 student athletes in 17 varsity sports. The 2009-2010 year has been the most successful year in terms of winning percentage since 1980. So far in 2009-2010, we have won ACC championships in football, golf and women's tennis. We have opportunities to win upcoming conference titles in baseball and softball.

This week, five Georgia Tech athletic teams were among teams recognized nationally by the NCAA for their Academic Progress Report, or APR, scores. Our baseball, golf, volleyball and men's and women's cross country teams were recognized for ranking in the top 10% nationally for APR within their respective sport. For Tech's baseball, golf and volleyball teams this marks the second straight year those squads have earned recognition by the NCAA.

Our athletes participate in the Total Person Program that is based on the premise that excellence is the result of a balanced life that encompasses academic excellence, athletic

achievement, and personal well-being.

Tech's Economic Impact

Let's talk about Georgia Tech's economic impact—another smart investment.

At Georgia Tech, we believe that Innovation and technology are going to be the drivers of a diverse and thriving 21st century economy.

Through our research and partnership with business and industry, we're an economic engine for Georgia and the Southeast, with an annual impact of more than \$2 billion, conservatively.

In 2008 alone, Georgia Tech programs helped Georgia companies save or create **20,000** jobs.

We offer a comprehensive array of economic development programs and in fact, we are a national leader among research universities in collaborative research with industry. Georgia Tech research labs produce more than 300 invention disclosures annually and Georgia Tech ranks second in the State of Georgia behind AT&T in terms of the number of patents issued.

Georgia Tech spins off an average of 10 new companies a year based upon technology developed at Tech – significantly more than you'd expect from a university of our size.

Through our Advanced Technology Development Centers – known as ATDC's – we developed the nation's first university-based technology incubator and widely regarded as one of the best.

To date, ATDC has incubated more than 120 start-up companies, and since 1980, its companies have generated about \$13 billion in revenue and more than \$100 million in profits.

One of these is Suniva, an early-stage company assisted by Georgia Tech, located in Gwinnett County. Using technology developed at Georgia Tech's University Center of Excellence in Photovoltaics, Suniva became the Southeast's first solar cell manufacturer in early 2009. I mentioned Secretary of Energy Dr. Steven Chu earlier. This week he called Suniva "An American Success Story" on the White House blog. He wrote "This center and this company are powerful examples of how clean energy technology can drive job creation in the U.S. and increase our competitiveness." Suniva has created more than 150 clean energy jobs manufacturing high-efficiency silicon solar cells and modules.

Local Economic Impact

Georgia Tech activities in Dublin are coordinated through the Central Georgia Regional Office, which is headed by Alan Barfoot, a member of this Rotary Club. In 2009, the U.S. Manufacturing Extension Partnership selected Alan to receive one of its "practitioner of the year" awards for his long-term support of manufacturing clients in central Georgia. Alan couldn't join us today because he is out of town for his daughter's graduation, but Randy Green from that office is here. We appreciate their good work.

Let me share just a few examples of local impact.

New government contracts won by Dublin companies with assistance from the Georgia Tech Procurement Assistance Center totaled more than \$10 million over the last three years, making our overall impact on the community more than \$28 million. In addition, the companies estimated that nearly 70 jobs were created or retained through Georgia Tech's help.

Since 2005, Georgia Tech's Enterprise Innovation Institute has completed more than 50 projects for companies and economic development organizations in the Dublin area. Investments made by companies as a result of Georgia Tech recommendations produced savings and sales increases that the companies estimated to be worth more than \$18 million.

Georgia Tech has also assisted the OneGeorgia Authority, led by Nancy Cobb, which is supporting the Georgia Entrepreneur & Small Business Program -- a new initiative operated jointly by Georgia Tech and the University of Georgia's Small Business Development Center.

Georgia Tech has worked with Case New Holland on site expansion and layout projects, on training and implementation for process improvement and lean manufacturing assistance, and on training for quality processes.

Georgia Tech has supported the Dublin-Laurens County Development Authority on a broad range of projects. These projects have included support for several major industrial location projects.

Georgia Tech has also done projects for several other Dublin companies, including TUG Trailers, Flexsteel, Circle R Gate, Benchmark Fabricating, the Farmer's Distribution Center and YKK America. These projects have ranged from assistance with reducing energy costs and designing facility expansions to training and other assistance in the development and implementation of quality systems and lean processes.

The economic impact of Georgia Tech's work in Dublin has been dramatic. Companies served by Georgia Tech have estimated that they have gained \$17.3 million in savings on investments made as a result of Georgia Tech recommendations for improvements -- and seen \$725,000 in increased or retained sales. The companies estimated that nearly 70 jobs were created or retained through Georgia Tech's help.

Research

Another very important aspect of what we do is our research -- Through breakthroughs and new discoveries we're able to help business and industry, and help society solve some of its most pressing problems.

Let me share a few examples of what we're doing in research.

Research at the Georgia Tech Research Institute (GTRI) includes the development of nanocomposite materials that could significantly increase the capacity of lithium-ion batteries used in a wide range of applications from hybrid vehicles to portable electronics.

The simple, low-cost fabrication technique was designed to be easily scaled up and compatible with existing battery manufacturing.

GTRI has also developed a new material that may make all-optical switching and computing practical. It involves a class of molecules whose size, structure and chemical composition have been optimized for beams of light that replace electrons, that could provide the demanding combination of properties needed to serve as the foundation for low-power, high-speed all-optical signal processing. That could allow dramatic speed increases in telecommunications, and facilitate photonic computers with similar speed advances.

Several dozen researchers are finding clues and developing solutions to fight the war on cancer. They are contributing expertise in multiple disciplines, including basic cancer biology, the design of new intervention methods, and development of detection and monitoring technologies in bioinformatics, biosensing and bioimaging.

Researchers have developed arthritis simulation gloves designed to help companies develop easy-to-use products for those consumers.

Georgia Tech professors are frequently the “go to” experts in natural disasters, including the earthquakes in Haiti and Chile.

We encourage innovation and emphasize leadership. As an example, this spring we held our second annual **InVenture Prize** competition for undergraduate students—a sort of American Idol for those who “invent” rather than “sing.” The eight finalists had entries ranging from the winning invention, OmegaWear, a type of weighted clothing that enhances training and weight loss for a wide range of athletes, to a drum tuning device. Not only did the winners receive cash awards; the two finalists received a free U.S. patent filing from the Georgia Tech Office of Technology Licensing, each valued at approximately \$20,000.

Strategic Plan

All universities educate students, and many pursue research. Great universities also lead in education by changing what and how we teach, and by how our students learn. They lead in research by creating new knowledge and by identifying new solutions. Great universities define and direct the way our world changes rather than just waiting for it to happen.

For the past nine months, the entire Georgia Tech community has been involved in a comprehensive and inclusive strategic planning process to develop a plan to take the Institute to its 150th anniversary 25 years from now. In fact, just last week we published the first public draft. You can find it on the Georgia Tech Web site by clicking on the Strategic Vision icon on the home page.

The Strategic Planning Process will chart a new course for Georgia Tech over the next 25 years, providing greater agility in a rapidly changing environment, helping us to better serve the state, nation, and world through our education, research, innovation and service, improving the human condition, and enabling us to make the best investments today to prepare for tomorrow. Thank you for inviting me to join you today. I am always glad to share how Georgia Tech partners with business and industry to help shape the economic future of our state and our country, and our role in preparing tomorrow's leaders.