

# TI:GER® > TECHNOLOGICAL INNOVATION: GENERATING ECONOMIC RESULTS

FROM LAB TO MARKET



[HTTP://TIGER.GATECH.EDU](http://tiger.gatech.edu)



“In a very short time, TI:GER® has amassed an extremely impressive track record for commercializing important new technologies. Our commitment to the program is designed to expand the number of graduate students participating in TI:GER, thereby expanding the number of new products coming to the marketplace – products that vastly improve the quality of human life. I can’t think of a better use for these funds.”

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MAJOR TI:GER DONOR AND TECH ALUMNUS WARREN BATTS (EE '61),  
FORMER CHAIRMAN OF PREMARK INTERNATIONAL AND TUPPERWARE CORP.



# Launching Inventions from Lab to Market

Innovations that could improve the lives and health of humanity are making their way from the lab to the marketplace, thanks to the Technological Innovation: Generating Economic Results (TI:GER®) program.

A unique collaboration between Georgia Institute of Technology and Emory University Law School, TI:GER is nationally recognized for its success at developing entrepreneurs.

TI:GER, created in 2002, is the only program of its kind to bring together PhD, MBA, and law students in the classroom and research lab to learn about the challenges of commercializing innovative technologies.

## **Students participating in this award-winning program learn to:**

- Advance early-stage research into real business opportunities.
- Comprehend the economic, regulatory, and legal mechanisms that affect the venture-creation and technology process.
- Maximize the commercial potential of emergent research by considering market goals at an early stage of innovation.
- Understand how the potential market application can influence research direction and priorities.
- Transcend single-discipline perspectives by working in multidisciplinary teams.

# Building a Better Entrepreneur

The main obstacles to commercializing research are almost never technology-related. More often, they involve legal issues and problems interfacing with the public and market.

What separates TI:GER® from other educational tech-transfer programs is the inclusion of law students who deal with the intellectual property side of the business development equation. Georgia Tech MBA students also play a critical role, spearheading the business side of commercializing the research of PhD students in Georgia Tech's Colleges of Engineering, Computing, and Sciences. Students from all of the science and engineering disciplines at Georgia Tech are eligible to apply for TI:GER.

## Business and Legal Mentors

TI:GER students benefit from assigned business and legal mentors who provide contacts and networking opportunities as well as real-world perspectives and insights.

Also greatly contributing to students' education is an industry advisory board composed of angel investors, practicing business and intellectual property attorneys, and technology community leaders.

These board members offer guidance on the program curriculum, keeping faculty and students abreast of industry trends, and they review student presentations twice a year.

Students also have the opportunity to engage in consulting projects for startup companies associated with the Georgia Tech VentureLab, which helps commercialize technologies developed at the Institute.



“The TI:GER program gives PhD students the opportunity to see how their technology will impact people. Understanding the stages required for commercialization helps give the research focus and purpose. The program has helped me clearly articulate my research and its benefits to nonscientists, which is vital to making your science and technology successful in the real world.”

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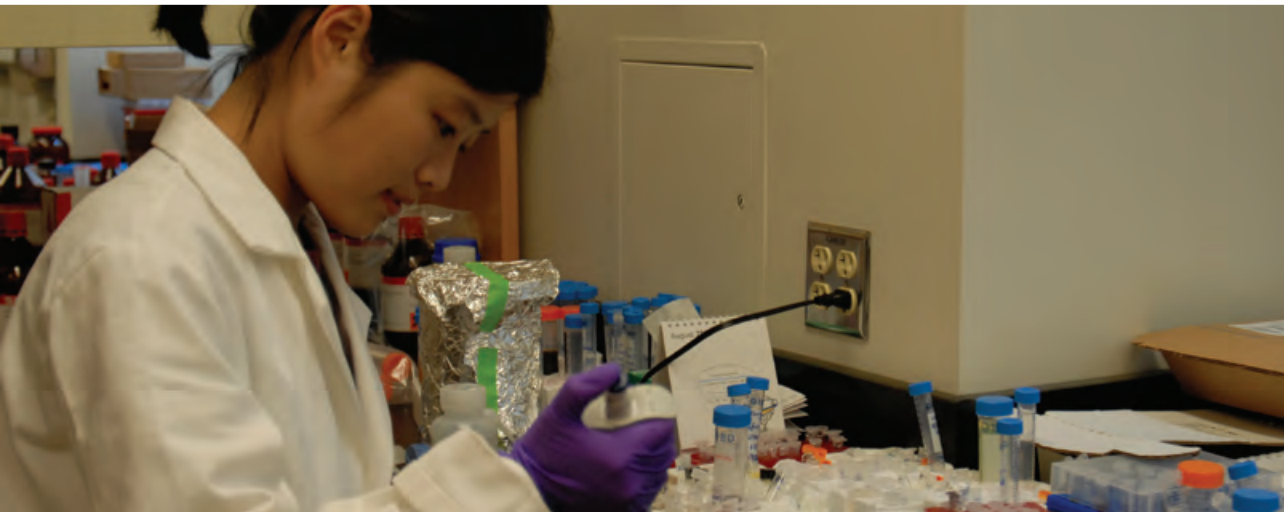
### WALTER VOIT

MATERIALS SCIENCE AND ENGINEERING PHD  
STUDENT AT GEORGIA TECH, AND CTO OF SYZYGY



Housed in Georgia Tech College of Management, TI:GER® places participants into small teams (each including PhD, MBA, and law students) to explore the following:

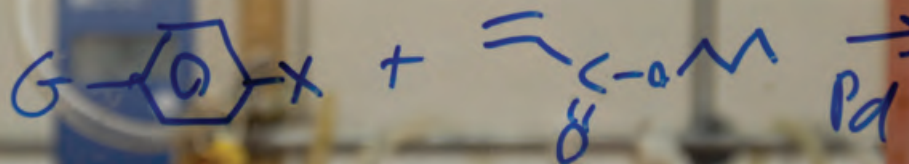
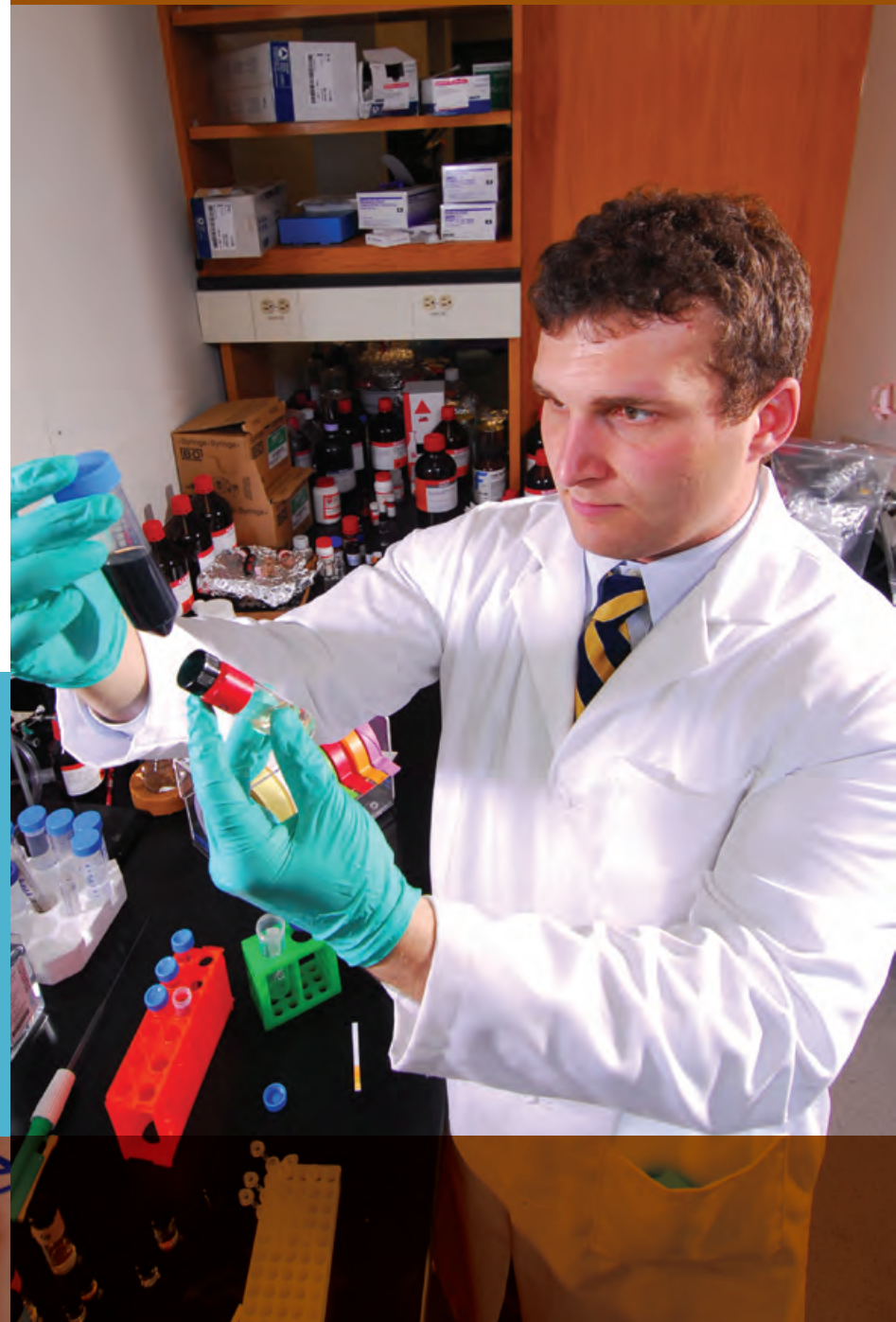
- University-industry technology transfer
- Identification of entrepreneurial opportunities in high-tech environments
- Patent drafting, law, and prosecution
- Market/financial analyses and business structure
- Legal and economic strategies to protect intellectual property
- Quality of patents in emerging fields
- Current policy issues, such as the ethics of patenting certain biotech inventions
- Technology commercialization strategies



# Leading the Way

During his years as executive vice president for Equifax, TI:GER® Advisory Board member Rich Crutchfield noticed that universities were failing to produce graduates who understood all the steps involved in delivering high-tech products to the marketplace.

“We were forced to hire people from other companies because we couldn’t hire them right out of college,” he says. Crutchfield, who retired in 2001, believes TI:GER is succeeding where other universities are falling short. “I think it’s one of the most innovative programs Georgia Tech has going on right now.”





“TI:GER has been the defining experience of my MBA education. The professors are very knowledgeable about everything involved in bringing new technologies to market. Eventually, I plan to take what I’ve learned in TI:GER and apply it to an entrepreneurial venture of my own.”

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**QUINCY ROBINSON**  
GEORGIA TECH MBA CLASS OF 2009

## National Acclaim

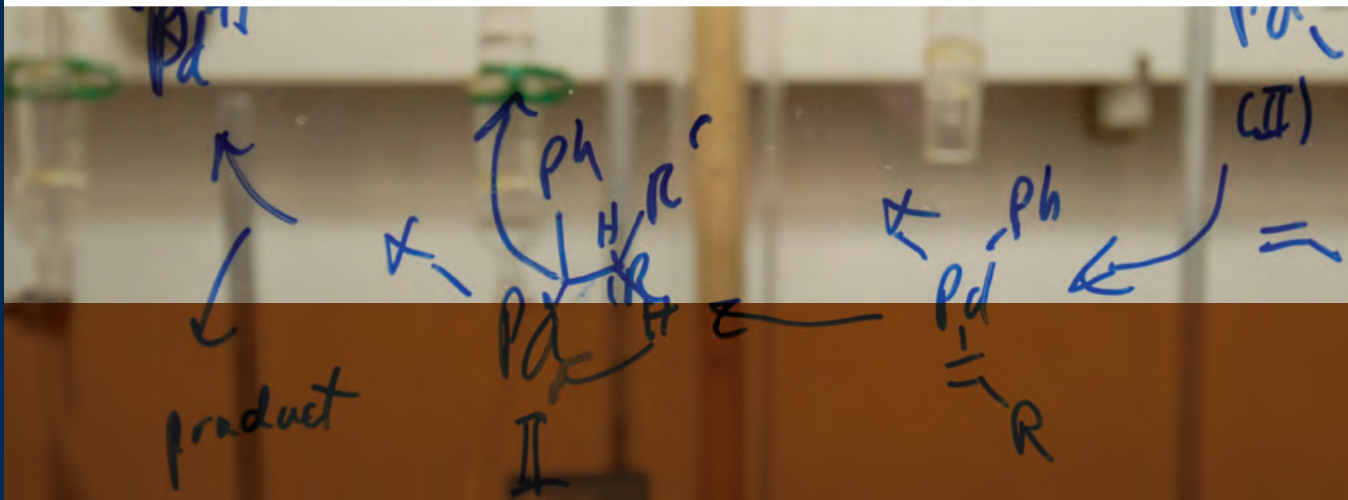
TI:GER® is truly a pioneer in the field, setting a new standard in interdisciplinary, collaborative entrepreneurship education. This one-of-a-kind program is attracting national attention and winning recognition for its ground-breaking approach, including the:

- 2006 Academy of Management Entrepreneurship Division Innovation in Pedagogy Award.
- 2005 National Model Specialty Program in Entrepreneurship from the United States Association for Small Business and Entrepreneurship and Students for Free Enterprise.
- 2003 Price Institute Innovative Education Award from the Stanford University Technology Venture Roundtable on Engineering Entrepreneurship Education.

## Growing Impact

To inspire peer universities to adopt the TI:GER program as a model for teaching and research, the Kauffman Foundation recently awarded a grant that supports workshops to educate other major universities about the program.

Stressing the importance of programs like TI:GER, Kauffman Foundation CEO Carl J. Schramm says, “In a global economy, where researchers around the world are gaining on American universities, more must be done to rapidly and effectively move technology from the halls of academia to the front lines of U.S. commerce.”



A photograph of three men in a laboratory or workshop setting. The man on the left is wearing a light blue and white checkered shirt and is holding a long, black, rectangular component. The man in the middle is wearing a light-colored button-down shirt and glasses, and is holding a cylindrical metal component with a black base. The man on the right is wearing a blue button-down shirt and is holding a small green printed circuit board (PCB) with various electronic components. The background shows various pieces of equipment, including what looks like a microscope or similar optical instrument, and computer monitors.

# Great Success Rate

## Sentrinsic Open for Business

When David Beck enrolled in the MBA program at Georgia Tech, he already knew he wanted to start his own business right after graduation in 2005. He just didn't know what kind. But through TI:GER®, he found promising sensor technology developed by a mechanical engineering PhD student, Haihong Zhu, PhD ME 2005.

Winning first place in the Most Fundable category in the 2005 Georgia Tech Business Plan Competition confirmed to Beck, Zhu, and colleague Mike Orndorff (MBA 2005) that they were on the right track with their company, Sentrinsic. The award goes to the team deemed most ready to enter the marketplace.

*From left to right: David Beck, Haihong Zhu, and Mike Orndorff*

Since then, Sentrinsic has made considerable headway in the marketplace with the position sensors it designs, manufactures, and sells for industrial automation and robotics. The company's increasing list of customers includes Fortune 500 companies, and Sentrinsic continues to attract investors and win grants from such organizations as the Georgia Research Alliance.

"TI:GER was a great help in navigating the university commercialization process, identifying and attracting the people we needed to get on board to make it happen, and understanding intellectual property issues," Beck says.

## Career Potential

Lynn Capadona, PhD CHEM 2004, is grateful that TI:GER® enabled her to expand her career prospects beyond a pure lab role. She went to work for NASA as a chemical engineer, putting her TI:GER training to use by working with outside companies interested in commercializing technology developed at the agency. In 2007, she transitioned into a systems engineering position allowing her to assist with the development of NASA's Crew Exploration Vehicle (Orion), which will replace the Space Shuttle.

“I have been exposed to the full life cycle of technology here at NASA. From conducting very early stage research, to handling technology transfer with outside entities, to witnessing full phase implementation on Orion, my experience has definitely been enhanced by my TI:GER training.”



“TI:GER® was a perfect way for me to diversify. It definitely jumped out at potential employers.”

LYNN CAPADONA, PHD CHEM 2004

## Corporate Entrepreneurship

These days running a startup is far from the only way for innovators to flex entrepreneurial muscle. More and more established companies recognize that they must develop their innovative strengths by fostering an entrepreneurial culture.

TI:GER alumna Elizabeth Gadsby, who earned her PhD in biochemistry in 2004, considers herself more of an “intrapreneur” than an entrepreneur in her role as a research manager for Kimberly Clark Corporation.

Even though she's working for a Fortune 500 company, she regularly draws upon her TI:GER training to evaluate the market potential of new health and hygiene products and protect intellectual property. “It was a very beneficial program,” she says. “I apply it to my current career, and I think it has made me a more valuable employee.”

## Competitive Edge

Many TI:GER teams have enjoyed great success participating in various business plan competitions around the country. In addition to the Georgia Tech Business Plan Competition, these events include the I2P Commercialization Plan Competition, New Venture Championship, and the Rice University Business Plan Competition.

Participation in these contests helps TI:GER teams hone their presentation skills and refine their business plans, based on feedback from judging entrepreneurs and venture capitalists.

# TI:GER<sup>®</sup> Curriculum

At the core of TI:GER is a three-course academic track that provides instruction in technology commercialization processes with a focus on intellectual property / technology law and business fundamentals.

**TI:GER participants attend these courses as a community of students with course assignments driving their team activities. These team projects are based on the PhD candidates' research and include:**

- Discovering market opportunities
- Industry analysis
- Intellectual property analysis
- Marketing strategies
- Company valuation
- Commercialization strategy and plan

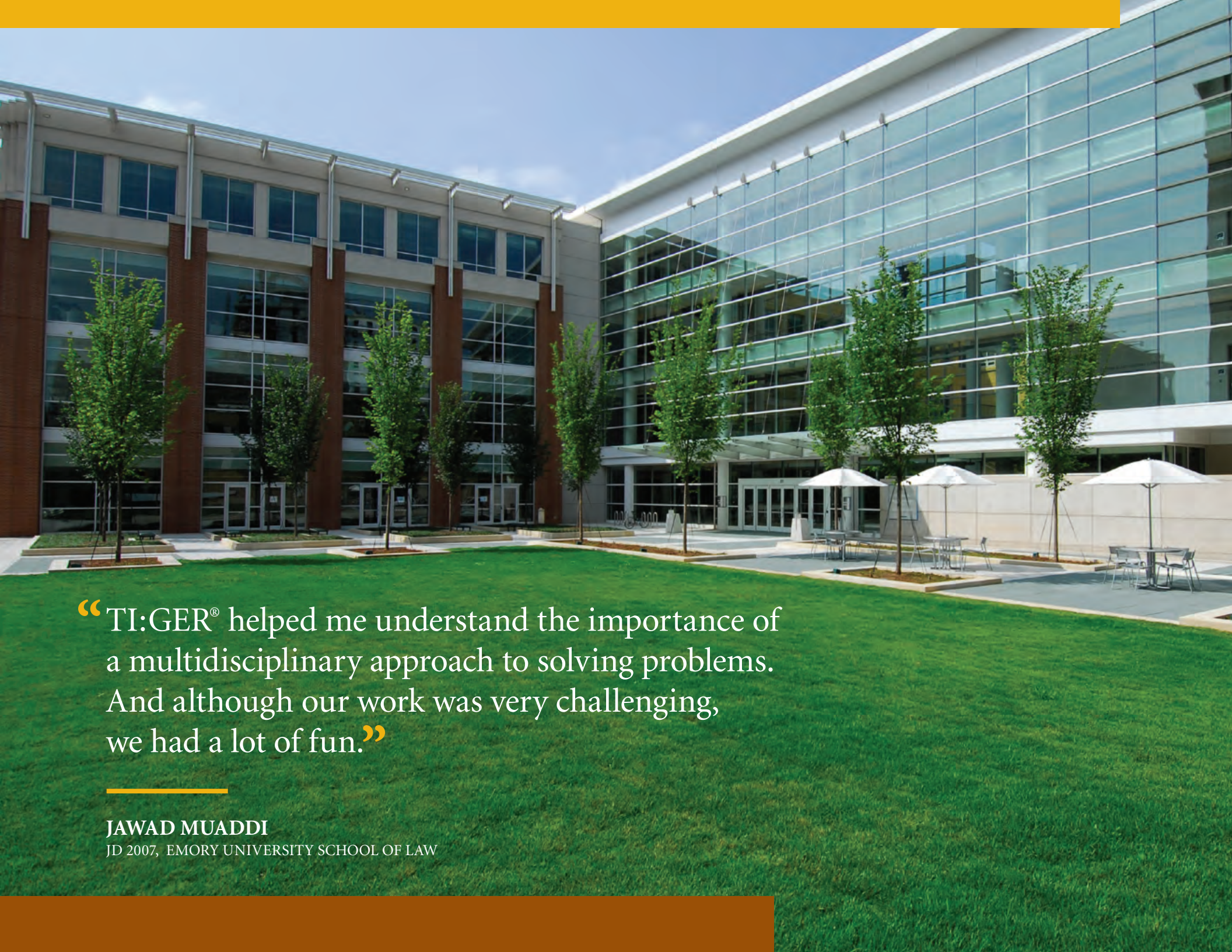
The last semester culminates in developing a business plan, if warranted.



“I’m in the process of deciding what I want to do when I graduate. As a PhD student, this program is helping me explore options beyond academics. If I decide to go into industry, my TI:GER background would make it much easier to move to the business side instead of just staying in the lab working on direct research. Careers involving patent law and technology transfer are also options.”

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**TONI BONHIVERT SOUTH**  
BIOCHEMISTRY PHD STUDENT  
AT GEORGIA TECH



“TI:GER® helped me understand the importance of a multidisciplinary approach to solving problems. And although our work was very challenging, we had a lot of fun.”

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**JAWAD MUADDI**

JD 2007, EMORY UNIVERSITY SCHOOL OF LAW



## TI:GER®

Georgia Tech College of Management  
800 West Peachtree Street, NW  
Atlanta, Georgia 30308



Dr. Marie Thursby, Executive Director  
404.894.6249  
marie.thursby@mgt.gatech.edu

[HTTP://TIGER.GATECH.EDU](http://TIGER.GATECH.EDU)



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