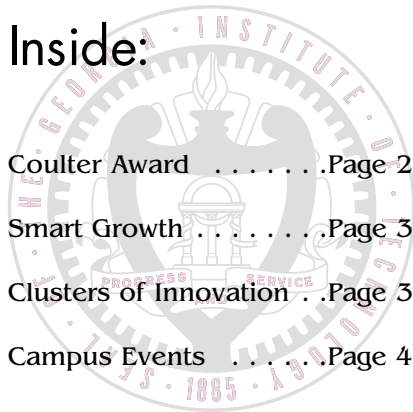


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THE WHISTLE

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THE GEORGIA INSTITUTE OF TECHNOLOGY

Board of Regents announces new USG chancellor

Michael Hagearty
Institute Communications
and Public Affairs

After months of private and public speculation as to who would succeed Stephen Portch as chancellor of the state's university system, the Board of Regents announced last week they had unanimously selected Alabama Chancellor Thomas Meredith. He will assume his new duties on January 1.

In making the formal announcement, Hilton Howell Jr., chair of the board, said, "Dr. Meredith emerged from the selection process with the right blend of experience, vision and personality that the Board felt would best suit its current needs and future plans. He is the right man, for the right job, at the right time."

The 59-year-old Meredith, who was widely believed to be the odds on favorite to secure the appointment, withdrew his candidacy twice because of commitments to the University of Alabama System, but Georgia regents persuaded him to continue the process. As chancellor

of the University System of Georgia, Meredith will earn \$330,000 annually.

Meredith is stepping into his position during a period of economic uncertainty for the state. Gov. Roy Barnes recently mandated the University System of Georgia and the technical college systems shave more than \$35 million off their budgets this year and about \$70 million next year. Meredith himself is no stranger to fiscal restraint, given the chronic money problems the Alabama system has endured.

The regents are enthusiastic that Meredith will focus some of his attention on working to improve K-12 education to better prepare students for college, which both Portch and Barnes view as a priority.

"It requires a maximum commitment between K-12 and higher education," Meredith said in his remarks. "We need to look upon all of this as one public education system."

Commenting on the appointment, President Wayne Clough said, "I look forward to working with Dr. Meredith to sustain the progress of the last

decade. A strong University System is vital to a strong Georgia economy. I hope that we can work together to find ways to further improve this system and enhance economic development."

As chief executive officer of the University of Alabama System since 1997, Meredith managed three doctoral research institutions: The University of Alabama, The University of Alabama at Birmingham (UAB) and The University of Alabama in Huntsville (UAH), in addition to the UAB Health System. The University System of Alabama has a combined enrollment of 40,000 students with some 17,000 employees and an annual budget of \$1.8 billion.

Prior to his arrival in Alabama, he served as president of Western Kentucky University for nine years. He also spent four years as vice chancellor for Executive Affairs and executive assistant to the chancellor of the University of Mississippi.

Meredith earned his bachelor's degree from Kentucky Wesleyan College, his master's degree from Western Kentucky University and his



Thomas Meredith

doctorate in Administration and Supervision from the University of Mississippi.

Other finalists for the position included University of New Mexico President William Gordon and Richard Jarvis, chancellor of U.S. Open University, a distance learning institution in Colorado.

Edwin Harrison, former Tech president, dies

Michael Hagearty
Institute Communications
and Public Affairs

Edwin Harrison, who became president of Georgia Tech at the dawn of the space age and guided the Institute during some of its most important milestones, died October 23 after an illness at his home in Rural Retreat, Va. He was 85.

As Tech's sixth president, Harrison was a 41-year-old dean of engineering at Toledo University when he accepted the position in August 1957. According to Jim Stephenson, who was an assistant professor in the School of Physics when Harrison came to Tech, there were questions among the faculty about his qualifications.

"A lot of faculty were a little bit concerned that he had not come from a highly prestigious institution," Stephenson said. "But he came in and satisfied the faculty that he was a



Edwin Harrison

proponent of quality education and determined to stand up for what he felt were the right things to do. He got a lot of credit for that."

Among the things Harrison orchestrated was the peaceful integration

of Tech in 1961, the first major university in the South to desegregate without the threat of a court order.

"He came at a very difficult time for Georgia Tech because of the integration situation," Stephenson said. "Ed did a very good job of preparing the way — he made certain that there was not going to be any kind of a disturbance."

President Clough was an undergraduate during Harrison's tenure, and called him "a friendly, thoughtful man who made important decisions that helped the future of Georgia Tech."

"It was during his tenure that land was purchased to the west of Hemphill Avenue and north of Ferst that allowed us to build the Olympic residence halls and many research buildings," Clough said. "He also oversaw the integration of Georgia Tech in a positive way that set us on track to be a leading institution serving minorities who wish to study engineering and science."

"Perhaps his most famous decision to the students of my day was to give us a holiday after Tech beat Kentucky's famous, Adolph Rupp-led basketball team twice in one year. The amazing thing was that Tech's team that year did not win many more games than those two."

Harrison remained popular with the students and faculty during his 11-year tenure as president, despite the social upheaval of the time. Under his supervision, 50 new buildings and/or complexes were constructed or funded.

Robert McMath, vice provost for undergraduate studies and one of the principal authors of "Engineering the New South: Georgia Tech 1885-1985," said Harrison's mark on the Institute was substantial.

"Ed Harrison presided over Georgia Tech in a period of remarkable change and growth," he said.

Harrison continued, page 3

“QUOTE—
UNQUOTE”

“On any street corner in New York City, you can take an air sample and probably find some asbestos in the air. But you may well have problems with PCBs from the electrical systems, and when they burn they release dioxins, which are even nastier. You now have this huge mass of contaminated material and high exposure to the rescue workers and others in the immediate area.”
—Robert Schmitter, a senior research scientist at the Georgia Tech Research Institute, on the air quality in NYC following the collapse of the World Trade Center. (The Journal News)

Inventor of DNA chip reader wins \$100,000 Coulter Award

Larry Bowie
Institute Communications
and Public Affairs

Wallace Coulter is not a household name, but his contributions to medicine are recognized every day in thousands of hospitals and clinics around the world. His Coulter Counter is used to perform medicine’s most requested and informative diagnostic test — the complete blood count, or CBC.

Coulter, who died in 1998, sought no public acclaim. Instead, he derived satisfaction from the knowledge that his work had improved the quality of life for millions of people.

His legacy is the Wallace H. Coulter Foundation, which created the Wallace H. Coulter Award for Innovation and Entrepreneurship in 1998. The award provides \$100,000 to a unique individual with the potential to achieve the highest level of engineering innovation, resulting in technological advances in health



Perry Sandstrom

care.

This year’s recipient of the Coulter Award is Perry Sandstrom. The award was presented during the College of Engineering Alumni Awards Induction Ceremony.

Sandstrom’s invention, called the SynchroGene Reader, provides a completely new way to analyze DNA chips. Current methods depend on

scanned imaging of the entire chip and require subsequent image analysis and feature extraction. The SynchroGene Reader, by contrast, is a self-contained instrument that provides simple numeric “scores” for selected gene sites within a DNA chip’s probe array.

With the sequencing of the genomes of a number of organisms — including humans — at or near completion, DNA chips have become the primary research tool for elucidating gene function and regulation pathways. DNA chips are high-density arrays of single-stranded DNA “probes” that are used to identify complementary sequences in genetic material from living cells. Because

of their parallel format, DNA chips have the unique ability to provide a genome-wide analysis of the activity and variability of an individual organism’s genes.

By providing the first random-access reader for DNA chips, the invention constitutes a digital data interface between computers and the genomes of living organisms.

The Coulter Award selection committee noted that the SynchroGene Reader technology holds great promise as a research tool, and because of its low cost and ease of automation, the Reader is well suited for emerging applications of DNA chips — as powerful diagnostic tools — in clinical and point-of-care settings.

The selection committee for the Coulter Award also chose four semifinalists, each receiving \$10,000. Semifinalists are:

- David P. Dumas, Ph.D., CEO, ProtoPharm, San Diego;
- Paul L. Gourley, Ph.D., distinguished member of technical staff, Sandia National Laboratories, Albuquerque, N.M.;
- Philip R. Kennedy, M.D., Ph.D., CEO and chief scientist, Neural Signals, Inc., Atlanta; and
- Erez Nevo, M.D., D.Sc., vice president for research & development, Robin Medical, Inc., Baltimore.

Graduate engineering students receive financial support

Larry Bowie
Institute Communications
and Public Affairs

Georgia Tech’s Shannon Stott will find solutions to the scientific challenges that puzzle the human race. A group of philanthropic Atlantans is so sure of it, they’re putting their money on her.

Stott, a Ph.D. candidate in bio-engineering, and nine other Tech graduate students earned \$5,000 scholarships last week from the Atlanta chapter of the ARCS Foundation (Achievement Rewards for College Scientists). In addition, two other Tech students received \$2,500 scholarships. In all, a total of 33 financial awards were presented to graduate students at Tech, Emory University, Morehouse College and the University of Georgia.

The awards were handed out during the 10th anniversary celebration of ARCS’s Atlanta chapter, which has granted financial awards to students majoring in the fields of science and engineering in the Atlanta area since 1992.

“After I meet with ARCS members, I am reminded why I originally entered this field,” said Stott, who has received the ARCS scholarship for the past three years to support her cancer-related research. “When they tell me their personal stories of how cancer has impacted their lives and how excited they are about my research, my own excitement and drive increase. I have this wonderful team of women that support and encourage me every step of the way.”

ARCS — founded as an all-female



Photo by Sue Cilles

Shannon Stott thanks ARCS for their continued support of her research.

organization in 1958 — has a total of 1,500 members in 12 chapters nationwide. Since its inception, the organization has given more than \$37 million to almost 8,000 students at 43 colleges and universities.

President Sally Hinkle announced that the scholarship funds raised by the chapter have grown from \$15,000 in 1992 to \$165,000 this year — a 1,000 percent increase. To date ARCS Atlanta, which has 131 members, has awarded \$721,000 to 146 students in the area, Hinkle said.

Rebecca Covert, a Ph.D. candidate in mechanical engineering whose research focuses on biomedical devices is evaluating the durability of several materials that may be used as cartilage replacements in the knee joint for patients with arthritis or sports injuries.

She said being an ARCS fellow has allowed her to purchase needed materials for the lab and join professional organizations without having to worry about financial constraints.

“I have more resources on hand,” she said. “The scholarship also has allowed me to purchase a personal laptop, software and other equipment, all of which enable me to be more efficient with my time.”

For more information...

ARCS Foundation
www.arcsfoundation.org

ARCS 2001-2002 scholarship winners:

- Brent Bailey, Ph.D. candidate, Mechanical Engineering
- James Brooks, Ph.D. candidate, Industrial & Systems Engineering
- Rebecca Covert, Ph.D. candidate, Mechanical Engineering
- Jeffrey Day, Ph.D. candidate, Industrial & Systems Engineering
- Chad Duty, Ph.D. candidate, Mechanical Engineering
- Lisa Evans, Ph.D. candidate, Industrial & Systems Engineering
- Braden Hunsaker, Ph.D. candidate, Industrial & Systems Engineering
- Peter Kottke, Ph.D. candidate, Mechanical Engineering
- Jay Rosenberger, Ph.D. candidate, Industrial & Systems Engineering
- Susan Stewart, Ph.D. candidate, Mechanical Engineering
- Shannon Stott, Ph.D. candidate, Mechanical Engineering
- Michael Swinson, Ph.D. candidate, Mechanical Engineering



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Gov. Barnes, policy makers address smart growth at Tech conference

Sean Selman
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Gov. Roy Barnes told Georgia Tech researchers, state and local policy makers, area developers and leading financial officials gathered here recently that they must embrace new ideas and find new ways of working together if they are to advance smart-growth initiatives in and around metro Atlanta.

"We've heard a lot about the consequences of the way we've developed our area in the past," Gov. Barnes said. "I think it's time for us to figure out how we can come together and take more constructive steps in solving the problems we've identified."

Gov. Barnes was the keynote speaker for The Synthesis Event: Overcoming Barriers to Smart Growth, held Oct. 22 at the Georgia Center for Advanced Telecommunications Technology. The event — presented by the Metro Atlanta Chamber of Commerce, Georgia Tech, Robert Charles Lesser & Co. and SMARTRAQ, or Strategies for

Metropolitan Atlanta's Regional Transportation and Air Quality — brought together key businesspeople, legislators and researchers to discuss the barriers to and best practices for smart growth within Atlanta.

The ideals of smart growth — in terms of improved urban land-use and development policies — are worth pursuing, the governor said. That's because, ultimately, growth means jobs.

"I've tried to get away from using the term smart growth in the past. The development of the past few decades wasn't all 'dumb growth.' But we need to move on to see how we solve the problems that exist," he said.

The governor pointed to Georgia Tech's SMARTRAQ study as one tool in this education effort. SMARTRAQ is a research and outreach program funded by the Georgia Department of Transportation, the Georgia Regional Transportation Authority, the Federal Highway Administration, the U.S. Centers for Disease Control, the Turner Foundation and the U.S. Environmental Protection Agency.

Its goal is to assess which combinations of land-use and transportation policies have the greatest positive outcome for the Atlanta metropolitan region.

"Through SMARTRAQ, we want to have a better understanding of the implications of how land-use and transportation investment practices converge to ultimately affect our mobility, our time-use patterns, our quality of life, our health and our air quality," said Associate Professor Larry Frank, director of SMARTRAQ.

Prior to the meeting, SMARTRAQ sponsored three assemblies to identify barriers to smart growth in the Atlanta region. The first included large, national developers plus Atlanta-area developers.

Bill Hudnut, a senior fellow with the Urban Land Institute who spoke at the event, said the community-outreach sessions produced several ideas for future growth initiatives in and around Atlanta. However, a laundry list of barriers stand in the way of those goals, Hudnut said. Foremost are inflexible zoning codes that make it difficult for developers to build new communities and commercial

spaces along smart-growth guidelines, he said.

Other problems include Georgia's property tax structure; a lack of incentives for developers to build middle-income, residential infill projects within the city; the generally poor quality of urban schools; inadequate policies that might encourage brownfield redevelopment inside Atlanta; and lender hesitation when it comes to funding smart-growth developments.

Joe Riedel, chair of the environmental committee for the Metro Atlanta Chamber of Commerce, said that those gathered for The Synthesis Event were among the best positioned to affect positive change in Atlanta's future development.

"What we really need to do is come up with a description of our goals and hoped-for outcomes," Riedel said. "We have today to find common ground that we can use to overcome those barriers. Let's find a way to collaborate ... and find ways to overcome these barriers to enlightened land use."

Study assesses health of Atlanta's economic growth engines

Elizabeth Campell
Institute Communications
and Public Affairs

According to Harvard Business School professor Michael Porter, Atlanta's rapid growth is due primarily to its status as an efficient and inexpensive place to do business, but continued prosperity in the region will require a different strategy.

Speaking to an audience of area business, education, and government leaders last week, Porter presented the conclusions of the Council on Competitiveness' Clusters of Innovation study.

The Council on Competitiveness, a non-profit organization based in Washington, D.C., seeks to shape the national debate on competitiveness by concentrating on critical issues of technological innovation, workforce development and the benchmarking of U.S. economic performance against other countries. Council members include corporate chief executives, university presidents and labor leaders.

Atlanta was one of five U.S. regions examined that also included San Diego, Wichita, Kan.,

Pittsburgh and the Research Triangle in North Carolina. The Council's Clusters of Innovation Initiative culminates with a national report on December 13.

Georgia Tech President Wayne Clough serves on the Council's executive committee and co-chaired the Atlanta regional study with Duane Ackerman, chair and CEO of the BellSouth Corporation. Terry Blum, dean of the DuPree College of Management, participated in the Atlanta study by advising the steering committee, critiquing the methodology and surveys, assisting with the local details of attracting participants and sponsors, and collecting and interpreting the data.

Covering 23 counties spanning Atlanta and Columbus, Ga., the study assesses the competitive position of the regional economy and investigates three leading industry clusters — information technology, transportation and logistics, and financial services. The study defines a cluster as a geographic concentration of companies, suppliers and service providers, along with associated institutions — including government and universities — that

develop in a particular field. Clusters are drivers of growth and prosperity in regional economies, and wages, innovation, productivity and new business formation are generally higher in clusters than in isolated firms and industries.

Gov. Roy Barnes strongly backed the study's conclusions and said it reinforced his message to the legislature to avoid emotional issues and focus on the building blocks of K-12 education, transportation, technology and water.

"The growth data shows that we have achieved a lot and that there is lots to be proud of," said Blum. "The data also shows that we need to focus on innovation and commercialization. We need more risk capital, more earlier stage investments, more investments in patents, and more IPOs."

Citing specific clusters, Porter reports that the information technology cluster, including telecommunications and media companies, ranks 18th among the top 20 IT clusters in the nation. The communications system, upgraded to support the 1996 Olympics, helped retain such companies as Turner Broadcasting, CNN and Cox Communications. Georgia Tech's

top-ranked engineering program contributes to an especially high concentration of scientists and engineers.

The transportation and logistics cluster ranks fifth largest nationally and traces its roots to Atlanta's history as a railroad hub. Today, Delta Air Lines and United Parcel Service are major employers in the cluster, which also includes many smaller firms providing transportation services such as logistics software, Internet travel sites, and regional distribution centers.

Atlanta's financial services cluster ranks seventh largest nationally. The region has attracted banks, insurance companies and large offices of many banks headquartered elsewhere. Several of the first successful Internet banks are in the region.

In conclusion, Porter urges area business, education, and government leaders to organize their industries to strengthen their clusters and to foster regional cooperation to bring Atlanta to the next level of prosperity.

For more information...

Clusters of Innovation Initiative
www.compete.org

Harrison, continued from page 1

"In the post-Sputnik era, he elevated academic standards and helped position Tech for growth in research in science and engineering. He courageously led Tech through a

successful and voluntary process of desegregation. He led the biggest campus expansion and building boom in the school's history until the 1990s."

Above all, McMath said, "He was a man of quiet integrity whose love

for Georgia Tech and its people were obvious to all."

After his retirement, Harrison maintained an affiliation with the Institute. "He loved to come to football games," Clough said, "and we enjoyed having him in the

President's Suite as often as he could come."

Harrison is survived by two sons, Robert W. and Richard M. Harrison, and four grandsons, Matthew, Michael, Daniel and David.