

GEORGIA INSTITUTE OF TECHNOLOGY  
TWO HUNDREDTH AND TWENTY SEVENTH COMMENCEMENT EXERCISE  
FERST CENTER FOR THE ARTS

May 3, 2007, 7:00 P.M.

(Faculty and President's Party will assemble at 6:00 p.m. in the Richards Gallery in the Ferst Center for the Arts).

Processional	Georgia Tech Commencement Ensemble
Master of Ceremonies	Dr. G. Wayne Clough President
Reflection	Rev. J. Al LaCour Campus Minister for International Students and Scholars
National Anthem	Georgia Tech Commencement Ensemble
Commencement Address	Dr. Raymond L. Orbach Under Secretary for Science, U.S. Department of Energy
Presentation of Doctoral Degree Candidates	Dr. Gary Schuster, Provost and Vice President, Academic Affairs
Conferring of Doctoral Degree Candidates	Dr. Clough

Induction into  
Alumni Association

Ms. Janice Wittschiebe  
Class of 1978, 1980  
Chairman, Georgia Tech Alumni Association

Alma Mater

Georgia Tech Commencement Ensemble, Graduates and  
Audience

Faculty Recessional

Georgia Tech Commencement Ensemble

"Ramblin' Wreck"

Graduates and audience

May 3, 2007 - Ceremony Script (PHD CEREMONY)

(Dr. Clough)

Good evening ladies and gentlemen. Will everyone please stand for the reflection by Rev. Al Lacour, Georgia Tech's campus minister for international students and scholars, followed by our national anthem.

(Rev. Al LaCour)

Reflection

(Commencement Ensemble)

National Anthem

(Dr. Clough)

Please remain standing for a moment of remembrance for the faculty and students at Virginia Tech whose opportunity to celebrate at a commencement ceremony like this one was tragically snuffed out. Earlier in my career, I served as Chair of the Civil Engineering Department, then Dean of Engineering at Virginia Tech, and I returned to Blacksburg last Friday to speak at a memorial service for the engineering faculty and students who were killed. That horrific event has had an incredible impact on the Virginia Tech campus, and it is important for Georgia Tech to show our support as that campus community gathers itself together and prepares to move forward again. Please join me in a moment of silence.

*(PAUSE)*

Please be seated. Once again, good evening. It is my pleasure to welcome everyone to Georgia Tech's two-hundred twenty-seventh commencement exercises. This weekend we are celebrating the largest commencement in Georgia Tech history, with the individual recognition of about 2,200 graduates. We will confer the bachelor's and master's degrees at a large ceremony at the Georgia Dome on Saturday morning. This evening we are focused on awarding about 140 PhD degrees.

This ceremony takes me back to when I completed my own PhD at U-Cal Berkeley. The difference between then and now is greater than simply the years that have elapsed, because when I finished in 1969 more things than just academics were happening on Berkeley's campus. To file my dissertation I had to design a travel route around the demonstrations and figure out how to avoid pockets of tear gas. Nevertheless, I look back on my years in graduate school as some of the most intellectually stimulating and satisfying experiences of my life. Lots of great colleagues, wonderful faculty, and all of us involved in creative research.

Today you are probably feeling a great sense of relief from the stress of theses, dissertations, and comprehensive and oral exams. But for the rest of your life you will look back and value the experience of these years. And you will discover that graduate school will continue to shape your life in ways that you do not yet anticipate. I can tell you from personal experience that the level of freedom to develop your mind and pursue your interests during graduate study is rare. The pure intensity of investigating a tough problem for days and weeks at a time and finding a solution, is intoxicating. And, if you are like me, the friends you made during this time will be life-long.

Today, as we celebrate the successful conclusion of one chapter of your lifelong education, it is important to acknowledge that you have not done it alone. With you every step of the way – at least in spirit – were your parents and your spouses, who made all the difference in your success. The faculty and staff of Georgia Tech and our graduates would like to thank you for your support. Would our parents and spouses please stand so that we may recognize you.

*(LEAD APPLAUSE)*

Additional support for our graduates came from the Georgia Tech faculty. I know that when you got papers or tests back you did not always feel loved by the faculty, but today they are here to testify that you earned their respect. So now is the time for all of our

graduates to say thanks for all the help they received from the faculty and I would like to ask the entire faculty present today to rise and be recognized.

*(LEAD APPLAUSE)*

Of course, those who deserve the most recognition on this momentous day are the graduates, who entered this room as students and who will leave as Georgia Tech alumni.

Would all of you please stand so that we may recognize you and your achievement?

*(LEAD APPLAUSE)*

Dr. Raymond L. Orbach made news about a year ago when he was sworn in as the very first Under Secretary for Science in the U.S. Department of Energy, after being unanimously confirmed by the U.S. Senate. But his service at the Department of Energy has come after an academic career that spanned more than 40 years.

He earned a bachelor of science in physics at CalTech, then a PhD at the University of California, Berkeley. Unfortunately, he had already graduated by the time I got there, so our paths did not cross at that time. After completing his PhD, he spent a year as a post-doc fellow at Oxford University, then joined the faculty of Harvard as an assistant professor of applied physics.

He next joined the faculty of UCLA as associate professor, then became full professor. From 1982 to 1992, he was provost of the College of Letters and Science at UCLA, and from 1992 to 2002, he served as chancellor of the University of California, Riverside. Along the way, he was elected as a fellow of the American Physical Society and AAAS.

Ray Orbach became the 14<sup>th</sup> director of the Office of Science in the Department of Energy in 2002. In this capacity, he manages one of the largest federal portfolios of fundamental research, with sponsored research at 275 American universities in energy, nuclear physics, magnetic fusion, biology, the environment, and computational science. The Office also

oversees 17 national labs and operates the world's finest suite of scientific instruments, which are used annually by more than 19,000 researchers in virtually all areas of science.

As director, Dr. Orbach has reshaped the work of the Office of Science, expanding its relationships with universities and refocusing its priorities on emerging fields like high-performance computing and nanotechnology that are key to the nation's competitiveness. He has also reached out to engage with other organizations working on issues of economic competitiveness, including the Council on Competitiveness, which I serve as vice-chair. And it has been a privilege for me to work closely with Ray on the task of bringing industry more fully into our nation's science initiatives.

These efforts positioned both Dr. Orbach and the Office of Science to undertake an expanded role at the Department of Energy. In December of 2005, Congress passed the Energy Policy Act, which created the position of Under Secretary for Science, expanding Dr. Orbach's role and elevating it to a higher level. He continues as director of the Office of Science, but in addition, he now advises Energy Secretary Samuel Bodman on science policy and the scientific aspects of everything the department does – from fundamental research to nuclear energy, from the environmental clean-up of Cold War legacy sites to defense programs.

No sooner had Congress created this new position of Under Secretary for Science than President Bush announced the American Competitiveness Initiative, which includes a proposed doubling of the DOE Office of Science budget over a ten-year time frame. The additional funding would be focused on research and innovations in high-end computing, nanotechnology, biotechnology, energy sources, and materials science and engineering.

In this new, expanded role, Dr. Orbach is keenly aware of the importance of making the right scientific research and policy choices on the right timetable to maintain U.S. technological and economic leadership. And he has increasingly become a spokesperson

for the critical role of science in determining our nation's ability to compete in a global economy.

It is an honor to introduce Dr. Raymond Orbach to deliver this evening's commencement address.

**(DR. ORBACH'S REMARKS)**

Thank you, Dr. Orbach, for taking time from your busy schedule to speak to our PhD graduates and their families.

We come now to the time that all of you have been waiting for – the conferring of your degrees. Dr. Gary Schuster, Provost and Vice President of Academic Affairs will present the candidates for the doctor of philosophy degree.

(Dr. Schuster) Will the candidates for the doctoral degrees please rise.

(Dr. Schuster) Mr. President, I have the honor of presenting to you for the doctoral Degrees those candidates who have completed all requirements for those degrees.

(Dr. Clough) Upon the recommendation of the faculty of the Georgia Institute of Technology and by authority of the Board of Regents of the University System of Georgia, I confer upon each of you the degree of doctor of philosophy with all the rights, privileges, and responsibilities thereunto appertaining.

Congratulations on your earning of Georgia Tech's highest academic degree. Will you please come forward and receive your

diplomas.

*(Dr. Schuster presents diplomas, Dr. Clough shakes hands, and advisors step on stage to hood their students.)*

(Dr. Clough) Please join me in congratulating these doctoral graduates.

*(LEAD APPLAUSE)*

(Dr. Clough)

Near the close of the 1800s, a young man sent a sheaf of poems to the foremost American writer of the day to be critiqued. Ralph Waldo Emerson read the manuscript, which was entitled “Leaves of Grass” and was destined to become one of America’s best-loved volumes of poetry. And he wrote back to the young Walt Whitman: “I greet you at the beginning of a great career.”

And as I look out over this sea of newly minted Georgia Tech alumni, I echo his words. I greet you at the beginning of a great career. As of this moment, you are no longer merely graduate students. You are the scholars and technological leaders of tomorrow... the role models for future generations of aspiring scientists and engineers.

I would like to offer my personal congratulations on your accomplishment in attaining a degree from one of the top institutions of higher education in the nation. It was true for me and it will be even more true for you that your degree from Georgia Tech will open doors for you.

You have helped Tech achieve the highest national rankings of its storied history. Our College of Engineering ranks among the top five in the nation. The College of Management has been steadily rising, and in the latest round of graduate rankings, it moved into the top ten public universities in the United States. Our programs in the



sciences, computing, humanities, and architecture continue to attract national attention for excellence and innovation. We are among the top ten universities in the nation in the number of patents awarded. Our leadership is recognized around the world, as our international platforms in France, Singapore, and Ireland expand, and a growing number of international universities are approaching us, wanting us to partner with them.

So you can see that you are leaving our campus with a degree that means something special. Still, the pace of change today means that education has become a “K to Gray” activity. Anyone who does not continue to learn will be left behind, so I encourage you to never stop learning.

You are primed to be the technological leaders of tomorrow. Nurture your talents, balance your career with your family and service to your community, and you will become one of those Tech graduates we read about and brag about as great success stories. I wish you all the best in the future!

To induct our graduates into that special group of Georgia Tech alumni, I would like to present Janice Wittschiebe, class of 1978 and 1980. She is a partner in the firm of Richard & Wittschiebe Architects of Atlanta, and she chairs the Georgia Tech Alumni Association. Janice will welcome the members of this graduating class into the fellowship of Tech alumni.

(Ms. Wittschiebe)

Induction of graduates into the Alumni Association

(Dr. Clough)

I would like to express my appreciation to the Georgia Tech Music Department for their participation in our program this morning. Thanks also to Dr. Masato Kikuchi for calling the graduates’ names. And many thanks to all my associates for arranging this important event.

At this time, the Georgia Tech Commencement Ensemble will lead us in the alma mater, followed immediately by the faculty recessional. The graduates and the audience are requested to remain standing for the faculty recessional. Then I invite all of you to join in the singing of the Ramblin' Wreck, which will accompany the student recessional.

Thank you for your attendance this evening.

*(At the end of the alma mater, the mace bearer will be the first one off the stage. Dr. Clough will follow immediately, then the remainder of the President's Party, Deans, and Faculty.)*