

REMARKS BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH  
EMERGE Dinner, April 25, 2003

I'm pleased to welcome all of you to Atlanta to the third annual EMERGE workshop. Tech is proud to serve as your host for this annual workshop.

It is exciting to see so many of you here. As I was looking forward in anticipation to this dinner, I thought back to the very beginning of this program and the hours we spent at Georgia Tech talking about our frustration over the tiny number of minorities represented in the science, engineering and mathematics leadership of this nation, and the little trickle of minority students who were going to graduate school in these disciplines.

Georgia Tech produces more engineers at all degree levels combined than any other university in the United States, and we are a leader in educating minority engineers. But it was clear to us that no matter how successful we became in attracting and graduating minority students at Georgia Tech, it would still not be enough to solve the problem. This issue is much bigger than any one university, and it will take all of our collective efforts to address it. No college or university anywhere can leave the education of minority students in science, mathematics, and engineering to others to address. We all must do our best, and if we collaborate and share best practices, we can make the whole greater than the sum of the parts.

That realization was the inspiration for pulling together a larger group of like-minded institutions and creating EMERGE to tackle the issue of increasing minority participation in mathematics, science, and engineering in graduate education.

In addition to Georgia Tech, there are six other founding universities of EMERGE, and I would be remiss if I did not thank and recognize the representatives from each of them who serve on the Executive Board. They are:

Arizona State University: Dr. Mary R. Anderson-Rowland, Dr. Loui Olivas

Cal Tech: Dr. Miriam Feldblum, Dr. Michael Hoffman

Carnegie Mellon: Sanford Rivers, Dr. Indira Nair

MIT: Leo Osgood, Jr.

North Carolina A&T State University: A. Ayanna Boyd-Williams, Dr. Carolyn Meyers

Spelman College: Dr. Sylvia T. Bozeman, Dr. Pamela Gunter-Smith

University of Michigan: Dr. James Bean, Dr. Christophe Pierre

Clark Atlanta University has also joined the EMERGE Steering Committee, represented by Dr. Ken Perry.

From Georgia Tech, in addition to Shirley, I want to thank Dr. Mark Smith and Dr. Gary May, who have carried the ball on my behalf as executive assistant to the President, and Birgit Burton of our Development Office for providing fund-raising advice.

I especially want to recognize and thank Dr. Roosevelt Johnson of the NSF Division of Human Resource Development, who has been tremendously helpful in this effort. He has not only

supported the development of the EMERGE Cyber-Network, but he also makes this annual workshop possible. In addition to NSF and Dr. Johnson, who are the primary sponsors, the third partner with the EMERGE Consortium in presenting workshop is the American Association for the Advancement of Science. And we appreciate their support.

We are going to begin this special evening with a special performance by the Harmony International Youth Chorus. Following their performance, Georgia Tech Ph.D. student Frank Prytle III will give the invocation, and dinner will be served. So sit back right now and enjoy the music of the Harmony International Youth Chorus.

(CHORUS / PRYTLE / DINNER)  
(SHIRLEY MAKES PRESENTATION)

Tonight we are honored to have a very special guest speaker who is an inventor, an entrepreneur, and a tireless crusader in the quest to awaken curiosity and excitement in kids about science and technology. Dean Kamen's best-known invention has been a two-wheeled, self-balancing, battery-powered scooter called the Segway Human Transporter. The Segway has received the Gold Medal in the transportation category of the Industrial Design Society of America, and can be purchased at the Amazon.com, where it is among the 200 best sellers in the electronics store.

The first customers were private citizens in major urban areas who found the Segway a good alternative to a car for short distances, and found themselves the center of attention from curious passers by. However, many states have now passed legislation on Segway use and safety, and businesses are beginning to see its advantages. Mail delivery persons and meter readers, for example, can park their trucks once they reach their service areas and make their rounds on Segways. And Disney Cruise Lines now offers them to passengers on its large ships.

You might expect an invention like the Segway to come from someone whose career has been immersed in transportation technology, or maybe environmental sustainability, since the Segway is a much cleaner alternative to the automobile. But most of the 150 patents that Dean Kamen holds are in medical devices that have expanded the frontiers of health care worldwide.

His career as an inventor began in high school, when he designed an audiovisual control system that was used in New York's Hayden Planetarium. As a college undergraduate, he invented his first medical device – a wearable fusion pump, which was a welcome improvement in specialties from chemotherapy to endocrinology. Its success turned him into an entrepreneur, and he founded AutoSyringe, Inc. to manufacture and market the pumps. The company grew as demand for the fusion pumps increased and as he created more products, such as the first insulin pump for diabetics.

However, by the time he reached age 30, Dean Kamen was ready for something new. So he sold AutoSyringe to Baxter International Corporation and started another new company called DEKA Research and Development to develop his own inventions as well as new products for corporate clients. Today almost 200 engineers, technicians, and machinists work in DEKA's labs and shops, and Dean Kamen has added climate control systems and helicopter design to his list of patents.

However, the invention that makes Dean Kamen the perfect speaker for this third annual EMERGE workshop is not a unique application of technology, but rather an organization he founded in 1992 called FIRST – which stands for “For Inspiration and Recognition of Science and Technology.” He continues today as its guiding spirit and driving force, recruiting leaders from American industry, education and government to join him in this crusade to stimulate interest in science and technology among children and youth.

FIRST uses wholesale marketing and media techniques to motivate the next generation to want to learn about science and technology. Its signature event is the FIRST Robotics Competition, which teams up professional engineers with high school students. They compete in regions across the country and even in other nations. The competition culminates in a multi-national finale that brings more than 600 teams to Disney’s Epcot Center in Orlando for the largest non-Disney event held there.

Georgia Tech became a participant in the FIRST Robotics Competition when a couple mechanical engineering students who had competed as high school students advocated that our robotics club, the RoboJackets, become a sponsor. In 2001 the RoboJackets joined forces with Atlanta’s Carver High School to field the only Georgia team in the competition. They won the Judges’ Award at the regional competition and finished in the top half of their division at Epcot Center.

In 2002, the RoboJackets worked with a team of students from Roswell High school and put them through a training period in engineering, physics and electronics in preparation for building their robot. This team also went to the national competition and won the National Rookie Award out of 200 rookie teams.

This year, RoboJackets took their efforts to a new level. They rounded up more than a half-dozen sponsors and organized an 11-week series of two-hour Technology Enrichment Sessions put on by faculty and students in mechanical engineering to give high school teams the background knowledge and experience that will prepare them to compete. So, Mr. Kamen, we are true believers here at Georgia Tech, and we are doing our best to prepare more Georgia teams for the FIRST Robotics Competition.

FIRST also provides middle school students with an opportunity to practice for the Robotics Competition by participating in the FIRST Leggo League, in which they build robots using Leggo products. A third program component called FIRST Place offers hands-on science and technology day camps and workshops for schools and home-schools.

As you can see, Dean Kamen is devoted to stirring up curiosity and enthusiasm for science and technology among K-12 students, and his programs and personal efforts are making a wonderful contribution to inspiring the next generation of scientists, engineers, and mathematicians.

Mr. Kamen, we are honored and delighted to have you with us as our keynote speaker. Please join me in welcoming Dean Kamen.

(KAMEN SPEAKS / SHIRLEY MAKES ANOTHER PRESENTATION)

I want to thank Dean Kamen for being here to make this a truly inspirational evening. Encouragement like that will help us do a better job of reaching out to minorities and engaging them more fully in science, engineering and mathematics.

This concludes our program. Thank you all for coming and good night.