

NASA in the South Symposium

Thursday, March 28, 2019

8:30 a.m.

SSB - 112

Altenkirch welcome remarks

- Welcome to The University of Alabama in Huntsville. Thanks for joining us today and we are proud to be a partner with Marshall Space Flight Center on hosting this symposium of NASA's impact on the South.

(Pause)

- Picture Huntsville and Madison County around 1950. Cotton traders toiling around the courthouse square. In the rural areas, growing in abundance was an aquatic plant species, watercress. Leaves from that plant were shipped around the world earning Huntsville the nickname of "Watercress Capital of the World."
- It was that year that two seminal events occurred. Rocket pioneer Dr. Wernher von Braun and his team of scientists and engineers arrived at Redstone Arsenal, and The University of Alabama Huntsville Center offered its first classes.
- It was a decade later when massive change would take place. The nature of this institution and Redstone Arsenal's fortunes would change dramatically. President John Kennedy's challenge to the nation to land a man on the moon and return him safely to Earth would forever alter the history of this community.
- JFK's speech launched a monumental national effort at developing programs and hardware to support that vision. Quite a bit of that responsibility would be placed on the shoulders of Huntsville, rocket pioneer Dr. Wernher von Braun and the newly created NASA installation – Marshall Space Flight Center.
- Dr. von Braun, knowing the vital need of advanced studies and research for this endeavor, spoke to the Alabama Legislature in June of 1961 to establish a research institute at the university to support both the American space program and the missile defense needs of the United States.
- Our campus is an important partner in two key areas — the advanced

workforce and research. Through UAH's efforts in workforce development and research, we focus on how well we are serving the federal agencies at Redstone Arsenal, particularly Marshall Space Flight Center, and the corporate community in Cummings Research Park. Their success translates into success for UAH.

- With that rich history, the environment of the campus is marked by a high-performing student body, robust academic programs, and a valued research enterprise.

High-performing student body, robust academic programs

- Today, UAH is a doctoral-granting, research-intensive comprehensive university. We have an enrollment of nearly 10,000 high-performing students. Our 2018 freshman class scored an average of 28.5 on their ACT, a record for our campus. Forty-five percent of that class had a 4.0 or higher GPA in high school, and 45 percent scored 30 or higher on their ACT. We're extremely proud of the accomplishments of our student body.
- As many of you are probably aware, UAH has a high concentration of technologically-oriented programs. Approximately half of our graduates earn a degree in engineering and science.
- However, we also offer quite a few programs in a diversity of disciplines. We have a total of 85 degree programs, including 41 bachelor's degrees, 29 master's degrees and 15 Ph.D. programs. Areas of study outside science and engineering include: arts, humanities, and social sciences; business; education; and nursing.

Valued research enterprise

- UAH's stature as a nationally prominent research university has been noted by the Carnegie Foundation for the Advancement of Teaching when that group rated the university as a "high" research activity institution.
- Our campus has one of the largest research expenditures in the nation when compared to public universities its size – approximately \$99 million.
- Also, UAH has five disciplines ranked in the top 20 in the nation for federally financed research, according to the National Science Foundation.
 - 5th – aeronautical and astronautical engineering
 - 9th – economics
 - 10th – computer and information sciences
 - 12th – atmospheric science
 - 21st – astronomy

- UAH is also 11th in the nation in NASA-sponsored research.
- And the future continues to shine bright.
- Whether it's breaking the bonds of Earth's gravity with SLS, technology development, scientific discovery, space in the interests of national security, or sustaining a healthy space transportation industry, our faculty, staff and students are engaged.
- Our students use a combination of enthusiasm, a sound understanding of fundamental principles, hands-on experience under the guidance of UAH faculty, and innovation to help solve problems and push the boundaries of the barely possible.
- For example, our ongoing exciting initiatives include:
 - creating an on-campus, high-tech incubator for driving our innovation out to commercial markets through start-up companies;
 - using friction stir welding to understand better how to better bond metals for aerospace structures;
 - and pushing the boundaries of technology by repurposing a piece of equipment originally built for nuclear weapons effects research into a test facility for a spacecraft propulsion system based on nuclear fusion.
- Look around today. There's no need to draw a picture in your mind to see the impact that NASA has had on the South, Alabama, Huntsville and particularly this university. Huntsville's nickname ceased to have anything to do with a vegetable a long time ago. Today, it's Rocket City.
 - Huntsville's population in 1950 was 16,437. Today, the Huntsville metropolitan area is nearing 500,000.
 - UAH's first academic term that year had 137 students signing up for classes paying \$2 a credit hour. Today, enrollment is rapidly approaching 10,000.
 - Huntsville has one of the highest educational levels of cities in the South. The percentage of residents 26 years or older with a college degree is 38%, a good bit higher than the national average of 28% and nearly double Alabama's average of 22%
 - Huntsville has the highest concentration of engineers in the nation, according to the U.S. Census.
 - As a result of this, Huntsville's paychecks, on average, are among the highest in the South.

- You are seated at the nexus of Cummings Research Park, the second largest university-related research park in America with more than 26,000 jobs.
- Down the road is a major federal campus with nearly 40,000 jobs. The U.S. Army, NASA's Marshall Space Flight Center, and the Federal Bureau of Investigation are the major tenants.

Conclusion

- UAH has a proud history of achievements by its students and faculty. We are focused on recruiting and educating the best talent possible.
- When nearly 90 percent of the employees at the Army, NASA's Marshall Space Flight Center and the companies in Cummings Research Park have a four-year or a graduate degree, it shows the clearly defined role for UAH in advanced workforce development.
- Dr. von Braun, the first director of NASA's Marshall Space Flight Center, offered this quote to the Alabama Legislature when making his pitch to create a Research Institute at UAH in 1961.
 - "... By building the academic climate in Huntsville ... this community believes that this area is destined to continue to grow and become a great and permanent scientific, educational and industrial center."
- Is there more that can be said about NASA's impact for Huntsville, Alabama, the South and UAH?

Jody Singer introduction on next page

(Introduce Jody Singer)

Jody Singer is the director of NASA's Marshall Space Flight Center.

Appointed in September 2018, Singer manages one of NASA's largest field installations, with nearly 6,000 on- and near-site civil service and contractor employees and an annual budget of approximately \$2.8 billion.

Prior to being named to the director's position, Singer had served as Marshall acting director since July 2018 and was deputy director from February 2016 to July 2018, assisting the director with the daily management of the center's workforce and operations.

During her 32-year NASA career, Singer has held leadership roles of increasing responsibility in human spaceflight, technology and science flight missions programs and projects and was appointed in 2002 to the Senior Executive Service, the personnel system covering top managerial positions in federal agencies. She began her NASA engineering career in 1985 through the professional intern program in the mission planning and development office.

In 1986, she joined the Space Shuttle Program office, where she was an engineer in the Space Shuttle Main Engine office. From 2002 to 2007, she served as the first woman project manager for the Reusable Solid Rocket Booster Project and led the team during the Columbia Return to Flight activities. From 2010 through 2012, she held deputy positions for three concurrent major programs: the Space Shuttle, Ares, and the start-up of the Space Launch System (SLS).

Jody and her husband, Chris, live in Huntsville. They have three children and two grandchildren.