

NATIONAL TECHNICAL NEWS

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Fall 2004

NTA 2004 Conference Held November 8-10, 2004 in Tuskegee, AL



The 76th Annual Conference of the National Technical Association was held November 8-10, 2004 in the Kellogg Conference Center of Tuskegee University. This date was a postponement from the originally planned dates of September 14-18, which resulted from the forecast threat of Hurricane Ivan.

At the time the NTA conference planning team arrived in Tuskegee on September 14, the forecast indicated a high probability that Ivan's path would have included the airports (Montgomery, Atlanta) servicing area during the week of our conference. Therefore, the Board of Directors voted unanimously that, in the interest of safety, the best approach was to postpone the conference and to plan a return post-hurricane season.

Although some of the participants who were planning to attend on the originally scheduled dates in September were not able to attend on the later-scheduled November 8-10 dates, this was somewhat compensated by the addition of other participants who had not been able to attend in September (for reasons not associated with weather) being able to attend on the November

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President's Message



Dr. William Lupton

Greetings, Team NTA! As we approach the end of another very productive year, we have many successes for which to be thankful. Paramount among them is the completion of our hurricane-delayed seventy sixth annual conference in historic Tuskegee, Alabama. Although the delay may have negatively impacted attendance, there was certainly no adverse impact on the enthusiasm and participation of those who shared this enlightening, educational experience. Kudos to the conference planning committee for a job well done!

We have a good momentum going, as evidenced by the growing number and strength of our reporting chapters. It is the aim of the new leadership to build on that momentum, to take the organization to the

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next levels of accomplishment and success. There is no other organization with a more dedicated and capable membership that creates the synergy that is NTA. For nearly eighty years we have been dedicated to promoting, encouraging, and advancing individuals who pursue careers in the fields of science and technology. NTA- Nurtures Technical Achievers.

As we approach this holiday season of giving, what better gift than a NTA membership. It's the gift that keeps on giving. Join us as we wish joy and happiness to all! We are NTA !



Shown, from left, are Dr. Sammie Giles (Chair of Electrical Engineering, Tuskegee U.), Dr. William L. Lester (Provost, Tuskegee U.), Mr. Frank Robinson Jr., (Immediate Past President, NTA), and Dr. William Lupton (President, NTA).

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dates.

The Tuskegee University location was unique, in comparison with other, previous NTA Conference locations, in its rich Black history legacy. This legacy includes museums dedicated to the works of Booker T. Washington, George Washington Carver, and the Tuskegee Airmen. The Tuskegee Air Field is located only a few miles from the campus.

We are thankful to the faculty and staff of Tuskegee University, and the Kellogg Conference Center, for their support of, and participation in, the NTA 2004 Conference.

As in previous NTA conferences, the 2004 Conference included technical paper presentations by professionals and students, as well as workshops and invited speaker presentations, and award presentations.

Conference attendees joined NTA members in visiting local schools; in this case, on the last day of the conference (November 10).



Kellogg Conference Center
Tuskegee University



Booker T. Washington Memorial
Tuskegee University



Tuskegee University Chapel

NTA 2004 Technical Achiever of the Year Awards Program

The Annual NTA Technical Achiever of the Year awards program and banquet was held the evening of November 9. At this event, the achievers in several technical categories, as well as the Technical Achiever of the Year, were honored. The awardees were as follows:

NTA Technical Achiever of the Year Award
and

NTA Technical Achiever Award: Technologist

Carlos R. Morrison
Aerospace Engineer
NASA Glenn Research Center

NTA Technical Achiever Award: Chemist

Dr. Sonya V. Roberson
Health Science Administrator
National Institute of Health /
National Cancer Institute

NTA Technical Achiever Award: Educator

Dr. Andrea W. Lawrence
Chair and Associate Professor of Computer Science
Spelman College

NTA Technical Achiever Award: Engineer

Ernest D. Levert
Senior Staff Manufacturing Engineer
Lockheed Martin Missiles and Fire Control

NTA Technical Achiever Award: Scientist

Wanda J. Harding
AST Flight Systems Mission Integration Manager
NASA Kennedy Space Center

NTA Technical Achiever Award: Physicist

Dr. Willie S. Rockward
Assistant Professor of Physics
Morehouse College

Our congratulations to all of the awardees!



From right: NTA Immediate Past President Frank Robinson Jr., Dr. Willie Rockward, Ms. Wanda Harding, Dr. Andrea Lawrence, Dr. Carlos Morrison, NTA President William Lupton. Not pictured are Dr. Sonya Roberson and Mr. Ernest Levert.

NTA Student Technical Paper Presentation Awards Program

Excellence in research and dynamic delivery by student presenters were in full effect this year. The student paper presentations were judged by NTA professional members, and ranked in the Undergraduate and Graduate student categories. The presentation awards were as follows:

Graduate Student Presentation Awards

1st Place:

Ronald Cutwright (Florida A&M University)
“An Adaptive Surrogate Constraint Relaxation Procedure for the General Set-Covering Problem”

2nd Place:

Anthony Deanes (Tuskegee University)
“A Comparison of the Technical and Economic Aspects of Inland Shrimp Farming in the Alabama Black Belt”

3rd Place:

Wanda D. Jones, Heshmat Aglan, and Mohamed Fateh (Tuskegee University)
“Evaluation of Mechanical Properties of Three Rail Steels”

Undergraduate Student Presentation Awards

1st Place:

Dionna Dunbar and Franklin Jordan
(Clark Atlanta University)

“Finite-Element Simulations of Magnetic Rotors for Micro-Electromechanical Systems Power”

2nd Place:

Jerome Mitchell (Elizabeth City State University)
“Messaging a Sub-System (XML, FIPA)”

3rd Place:

Sheena Baskin (Case Western Reserve University)
“Recovering and Sequencing Useful Genomic Clones from Flax”

Honorable Mention:

Demetrus Rorie (Elizabeth City State University)
“Data Provider Agents in the Polar Radar for Ice Sheet Measurements (PRISM) Project”

Our congratulations to the student awardees, and to all of the student presenters!



Anthony Deanes

NTA 2004 Conference student technical presentation awardees (from left) Dionna Dunbar, Wanda Jones, Jerome Mitchell, Demetrus Rorie, and Sheena Baskin. Not pictured are Ronald Cutwright and Franklin Jordan.

NTA 2004 Conference Keynote Speakers



Dr. William Lupton, Morgan State University
NTA Membership Luncheon



Dr. Amanda H. Goodson, Raytheon
NTA Student /Auxiliary Luncheon



Dr. Frederick Humphries, Florida A&M University
Technical Achiever of the Year Awards Banquet



William Magwood IV, US Dept. of Energy
Closing Plenary

NTA 2004 Annual Giving Campaign

Dear NTA Members and Supporters:

This campaign is our annual appeal to members, partners, benefactors, and supporting friends for funds to meet the Association's most important needs and opportunities—including educational outreach projects and professional development programs.

Your financial contribution helps the NTA to meet the challenges of students' tuition shortfalls, as well as allow the organization to explore more creative ways to fulfill its mission..

Our 2004 campaign goal is \$10,000 and we can accept payments by check, money order, or by credit card (on or off line). Your gift can be designated as you wish—by chapter, region, or unrestricted General Fund (distributed to programs in greatest need).

We encourage you to explore matching gifts from your employer, and to ask your colleagues and family to support this worthwhile effort.

Dr. Linda Hayden, Chairperson
2004 NTA Annual Giving Campaign Coordinator

2004 NTA Annual Giving Contribution Form

All contributions are tax-deductible, to the extent of the law. Complete and mail form to address below, or donate online at www.NTAonline.org

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NTA 2004 Conference Attendees Visit Local Schools

As part of the NTA 2004 Conference activities, participating NTA members visited local schools in the Tuskegee area, to give educational presentations intended to encourage the students to study and do well in science and mathematics courses, and to consider seeking careers in these fields of employment.

A total of three schools were visited: Booker T. Washington High School; Tuskegee Public Elementary School and Notasulga Elementary/High School .



NTA member participants in the Local School Visitations program at Booker T. Washington High School in Tuskegee, AL.



NTA Baltimore Chapter member Cheryl Brown gives a presentation to students at Booker T. Washington High School.

Dr. Aprille J. Ericsson Appointed to Board of Trustees of Howard University

Dr. Aprille Joy Ericsson was born in Brooklyn, NY. She received her B.S. from M.I.T. and Master's and Ph.D. from Howard University (HU). She is the first African-American female to receive a Ph.D. in Mechanical Engineering from HU.



Dr. Ericsson is currently an aerospace engineer at NASA Goddard Space Flight Center (GSFC). Dr. Ericsson has 12 years of experience in spacecraft structural dynamics and missions controls. As GSFC Instrument/Proposal Manager, Dr. Ericsson won significant amounts of development funds for mission enabling technology.

She is the recipient of the 2002 HU College of Engineering, Architecture & Computer Sciences (CEACS) Alumni Excellence Award and the 1997 Women in Science and Engineering Award for "Best Female Engineer". She has been featured on NBC Nightly News Series "Women to Watch" and recorded in history books honoring African-American Women in Space and Science. Dr. Ericsson is published in Howard Magazine and numerous scientific journals.

Dr. Ericsson is known as motivational speaker, mentor, and friend to students and professionals. She has increased the number of students entering the NASA science, mathematics, and engineering educational pipeline. She is the creator of an email pipeline distribution of grants, internships and employment opportunities. The HU Upper Bound Math & Science Initiative Program is named in Dr. Ericsson's honor.

Dr. Ericsson is an adjunct professor at HU. She serves on the Board for Forestville Military Academy, HU Science Engineering Mathematics Program and the proposed HU Middle School of Mathematics and Science. Dr. Ericsson is a Charter Member of the HU CEACS Alumni Network.

Celebration of Nuclear Excellence and Diversity Program and Luncheon Held

Program Overview by Garry A. Harris

Please accept my sincere appreciation to NTA for your support of the recent "Celebration of Nuclear Excellence and Diversity Event" at Tuskegee University. By all measures it was, and continues to be, a successful event. In fact, recent telephone conversations with senior administration officials at Tuskegee revealed a strong continuing interest and lasting effect of the program on the face of the engineering department, and perhaps the entire student body.

The event also had some unexpected positive results, in that not only were the students motivated to pursue careers in nuclear power given the positive role models, both present and mentioned, but the academic nuclear program at Tuskegee was challenged to grow as well, into the first 4-year degree program in nuclear engineering in the country at a minority institution. This challenge is being taken seriously by the Dean of the Engineering at Tuskegee, and steps and activities were immediately initiated to explore this historic opportunity.

Further, the students were exposed not only to the content of a singular lunch time presentation but to a significant triad of relevant nuclear industry related topics presented by industry experts on (1) Space Nuclear Power; (2) Challenges of Diversity and Opportunities in the Nuclear Industry; and (3) Future of Nuclear Power.

The seminars and lectures were presented by internationally known experts, Dr. Larry Foulke, Chief Scientist, Space Engineering Activity, Bettis-Bectal Laboratories, and William (Bill) Magwood, IV, Director Nuclear Energy, Science and Research (Department of Energy). The students were exposed to both significant nuclear related research opportunities as well as career and professional advancement options. In addition, given nuclear industry workforce realities, corporations and institutions were asked to make diversity in the nuclear industry a top priority.

Nearly twenty (20) different organizations and nuclear industry entities directly participated or supported and were visible in some manner at the event. The students were exposed to a myriad of role models both current and past in the nuclear industry as many senior industry leaders both participated and were profiled, including the guest of honor, Bill Magwood IV. In fact, one senior utility official company's corporate jet flew into historic Tuskegee

airfield, loaded with both plant and corporate nuclear experts in engineering, operations, plant support, training and reactor engineering, in a deliberated effort to directly meet and interface with the students, to serve as both future contacts, and to present-day role models, as well as seeking recruitment opportunities.

Another nuclear utility brought along engineering personnel, as well as other senior staffers, for student exposure as well. Other senior persons recognized/mentioned at the event included:

- Daniel Packard, President, Entergy New Orleans
- George Williams, Site Vice President, Entergy
- Jerome Randle, Outage Coordinator, Exelon Nuclear
- Susan Landle, Plant Manager, Exelon Nuclear
- Mary Kosloski, Site Vice President, Constellation
- Richard Blount, Site Vice President, Dominion Virginia Power
- Bill Jefferson, Site Vice President, Florida Power and Light
- Jeffery Archie, Site Vice President, SCANA
- Ladoris Harris, Manager, GE Energy Services

Further, the students and faculty were exposed to the latest information, and some major industry announcements were made: (1) the creation of another minority partnership program at Wilberforce University; and (2) the creation of the national nuclear energy research laboratory at DOE's Idaho facility.

Finally, to cap off the event, Bill Magwood IV chose two Tuskegee nuclear engineering students to accompany him to Paris, France next month to participate in a significant international conference on advanced nuclear reactors.

To my personal surprise and delight, and as a mark of permanency of the event, I was asked to serve on the Engineering School's Industry Advisory Board, and to assist with the university's efforts to broaden its nuclear program and capabilities. Since being named to the advisory board I have been given major assignments, such as creating a energy/electrical engineering related research center for the university, as well as increasing applied and basic research among faculty members. It was my personal pleasure also to receive NTA's Samuel R. Cheevers Award for Distinguished Service at the luncheon.

Again, special thanks to the Georgia Section of the American Nuclear Society, The National Technical Association, and the American Association of Blacks in Energy for providing leadership to make this event happen, and impactful on the lives of our students.

Thanks to all of you for your support!!



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