

◆ NATIONAL TECHNICAL NEWS ◆

Volume 8, Number 3

Summer 2002

17th NTA Student Symposium in Mathematics and Computer Science Held at Norfolk State University

The Hampton Roads Chapter of the National Technical Association (NTA) co-hosted the Annual Student Symposium in Mathematics and Computer Science with Norfolk State University (NSU) on April 26-27, 2002. This is the 17th year that the NTA and NSU have partnered to conduct the event, which has become so successful that it is now a requirement for all graduating seniors in the NSU Mathematics and Computer Science departments.

The student symposium provides a forum for students to present results of their yearlong research activities to a peer audience of students, faculty, and technical professionals. It is also a culminating academic event, providing invaluable, pre-employment training in the composition of research reports and the art of making technical presentations.

The following NTA Hampton Roads Chapter (NTAHRC) members served as judges for presentations at the symposium:

- Michael A. Chapman P.E., Computer Engineer, NASA Langley Research Center, Past NTA National President
- Yolanda L. Hinton, Mechanical Engineer, U.S. Army Research Laboratory, Past NTA National Secretary
- Elijah C. Kent, Aerospace Engineer, NASA Langley Research Center, NTAHRC Treasurer
- Coletta J. Bey, Electrical Engineer, City of Richmond VA, NTA Richmond Chapter member
- Tifani Garris, Electrical Engineer,

(Continued on page 3)



MEMBERSHIP NEWSLETTER
A Publication of The National Technical Association
Incorporated 1926

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President's Message



Greetings!

Anticipation is growing as we near the date of the 74th annual gathering of **The National Technical Association**. Conference team planners, led by **Mr. Frank Robinson, Jr.**, are working to bring something to the table for every technical palate! The calendar dates that should be circled are **September 24-27, 2002**, location is **Excalibur Casino and Resort Hotel, Las Vegas, Nevada**.

Additionally, in our efforts to develop partnerships, we're also busy planning with **OnClick Corporation of Houston** and **IBM** to partner the first Houston E-learning conference for March, 2003. According to **Billy Rector**, Director E-Learning at OnClick, "E-learning is quickly becoming an essential tool for organizations to achieve their business goals. It enables enterprises to work smarter, improving quality and productivity." So, if you are going to be in Houston on that date or feel the need to travel to a great affair, please plan to

(Continued on page 2)

Also In This Issue:

NTA Societies Projects	p. 4
Fred Gregory NASA Deputy Hd.	p. 5
Hampton University SMEX	p. 6
NTA Conference Updates	p. 6

(Continued from page 1)

attend. We will be at the IBM Building at 2 River Way. More information will be at ntaonline.org beginning July 15, 2002.

On behalf of the National Board of Directors, a special congratulations to **Mrs. Sandy Robinson**, on her recent promotion to Dean, Health Careers and Sciences, Cuyahoga Community College.

Since every president enjoys bringing a special flair to the conference, I wish to invite 2002 attendees to celebrate with me the following: **Wednesday, September 25, Founder's Day – acknowledgement of the founding team of the NTA; Thursday, September 26th -National Colors Day- everyone come in their black and gold; and lastly but not least, Friday, September 26th - Presidents' Day – Special Recognition of all chapter and past presidents throughout the day.**

Finally, I wish to say “thanks” to: **sustaining member Angela White**; NTA Historian **John H. Thompson**; National Committee Chairpersons and their respective team members: **Corliss Johnson (Awards)**; **Darrell Thomas (Website)**; **G. Renae Moon (Membership)**; **Al Johns (Policy and Planning)**; **Terri Rodgers (Nominating)**; **Dr. William Lupton (Operations and Management)**; **Dr. Dexter Johnson (Finance and Budget)**; and **Dr. George Carruthers (Publications and Editorial Review)**, who are serving relentlessly. As a final note, let me encourage you to participate in the 2002-2003 national election. Contact your local chapter president for information. See ya'll in VEGAS!

Katherine W. Coleman

Katherine W. Coleman
NTA National President

Journal of the NTA News

The next issue of the *Journal of the National Technical Association* will be published prior to, and distributed at, the NTA 2002 Conference in Las Vegas, NV (24-27 September). NTA members who are not able to attend the Conference will receive their copies by mail, following the Conference.

The theme of this issue of the *Journal of the NTA* is Education, focusing specifically on mathematics, science, engineering, and technology.

Technical papers included in this issue are ones written by current or recent past students, who are or have been NTA members, or who have been influenced by NTA education and outreach activities.

Kevin Loney Appointed as New NTA International Liaison



Hello, fellow NTA members. It has been my pleasure to work with many of you over the past years. As the National Technical Association continues to experience tremendous growth, NTA is beginning to extend its programmatic thrust beyond its U.S. borders. It is my pleasure to serve as the International Liaison for NTA. In this capacity it is my goal to craft and administer the international programming for our organization.

We as African American, and members of one of the oldest black technical organizations in the U.S., have the responsibility to extend our mission throughout the Diaspora. We, having the advantage of living in the most technically advanced country in the world, must be in the vanguard of increasing the technical savvy and competence of our community.

It is my belief that African Americans are a unique group, with most of us having the experience of living in a none monolithic community, we must leverage our knowledge and utilize our collective experience of overcoming many challenges and provide leadership within an increasingly complex global community.

Over the upcoming months you may be asked to give of your time or resources to embrace and propel NTA's existing mission. The executive board members and myself are looking forward to working to push the National Technical Association to new heights.

Best Regards,

Kevin Kamau Loney
NTA Washington, DC Chapter

We regret to report that NTA Past President **George F. Washington (1967-1968)** passed away August 8, 2002 in Detroit, Michigan.

(Continued from page 1)

Norfolk Naval Shipyard, prospective member Dr. Sandra DeLoatch (Dean, NSU School of Science and Technology and NTAHRC member), Dr. Phillip McNeil (Chair, NSU Mathematics Department) and Dr. Mou-Liang Kung (Chair, NSU Computer Science Department) worked extremely hard to advise the approximately 40 students who presented in this year's symposium. Dr. George Harrison, Professor of Computer Science, instructed many of the students and coordinated the event. Abstracts and oral presentations were judged on technical merit, knowledge content, appropriateness and quality of the research, effective conveyance, and stage presentation. The symposium winners and the titles of their presentations are given below:

1st Place, Computer Science:

"Development of a Robotic Arm Assisted Sun-photometer Sunspectrometer"

Christopher Green and Curtis Columbus

2nd Place, Computer Science:

"Reusable XSL Style Sheets for Displaying Electronic Publications on WAP Devices"

Eugene Gaddy Jr. and Ian Bradley

3rd Place, Computer Science (tied):

"Web Design: Comparative Analysis of a Basic Web Page vs. Curl Web Page"

Felicia Parson and Rayfield Coston

"Fine Dining Using DHTML and Cold Fusion"

Toi Coleman and Latoya Clark

1st Place, Mathematics:

"An Analysis of Harmonic Oscillator Initial Value Problems with Periodic Forcing Functions"

Denise Robinson

2nd Place, Mathematics:

"Are Online Classes Better Than Traditional Classes?"

Sarah Lyons

3rd Place, Mathematics:

"Stability Analysis of Floating Bodies"

Jermaine Elston

Honorable Mention, Mathematics:

"The Nucleon Form Factor in a Covariant Quark-Diquark Model"

Niatika Kitrell



Student Symposium presenters Felicia Parson and Rayfield Coston



Student Symposium Winners, NSU Faculty Advisors, and NTA Judges

The NSU School of Science and Technology is popular and growing. Persons interested in pursuing undergraduate degrees in mathematics or computer science are wise to consider the NSU programs. NSU computer science graduates are still doing well in the job market. According to Dr. Harrison, this year's graduating class is facing a somewhat constrained hiring environment; however, they are still receiving respectable job offers in the \$60K range.

Michael A. Chapman, P.E.
NTA Hampton Roads Chapter

The NTA Societies Launch Four New Projects Designed to Enhance NTA Growth

In addition to the new format for the 2002 Conference, the NTA societies announces four new exciting projects. These projects are: **I. The NTA Society Student Career Guide; II. The NTA Society Professional Development Guide; III. The NTA Society Journal Advertiser, News, and Readership Generator; and IV. The NTA Society High School Student College Guide.** An outline of each of these projects follows.

The primary purpose of these projects is to provide an alternate source of discretionary revenue for the NTA Organization, as well as to enhance technical leadership, and more participation in the NTA operations and benefits. Former National President Carrington H. Stewart has been facilitating these efforts along with the Region Seven Texas Council. The efforts require the participation of the NTA at large. If you would like to participate and take on a lead role in any one or more of these projects, let it be known.

Project I. Student Career Guide to:

- A Architects and Architecture
- B Computer Science and Computing
- C Educators and Education
- D Engineers and Engineering
- E Mathematicians and Mathematics
- F Information Science, Systems, and Technology
- G Scientists and Science
- H Technologists and Technology
- I Technical Entrepreneurs and Entrepreneurship

Appendix A. Directory of Role Models

- A Architects
- B Computer Science and Computing Persons
- C Educators
- D Engineers
- E Mathematicians
- F Information Science, Systems, and Technology Persons
- G Scientists
- H Technologists
- I Technical Entrepreneurs

Appendix B. Directory and Profile of Subscribing Employers

- A Architecture Firms
- B Computer Science and Computing Companies
- C Education Organizations
- D Engineering Firms, Companies, and Organizations
- E Mathematics Organizations
- F Information Science, Systems, and Technology Companies
- G Science Organizations and Research Firms
- H Technology Companies
- I Technical Entrepreneurs

Appendix C. Student Resume Package

Project II. Professional Development Guide for:

- A Architects and Architecture
- B Computer Science and Computing
- C Educators and Education
- D Engineers and Engineering
- E Mathematicians and Mathematics
- F Information Science, Systems, and Technology
- G Scientists and Science
- H Technologists and Technology
- I Technical Entrepreneurs and Entrepreneurship

Appendix A. Professional Development Package

- A The NTA Society of Architects and Architecture
- B The NTA Society of Computer Science and Computing
- C The NTA Society of Educators and Education
- D The NTA Society of Engineers and Engineering
- E The NTA Society of Mathematicians and Mathematics
- F The NTA Society of Information Science, Systems, and Technology
- G The NTA Society of Scientists and Science
- H The NTA Society of Technologists and Technology
- I The NTA Society of Technical Entrepreneurs and Entrepreneurship

Appendix B. Directory and Profile of Subscribing Employers

- Senior Level Technical
- Management Level Entry
- Professional Technical
- Management Mid-Level
- Project Management
- Executive level

Project III. Journal Advertisers and Readership

I. Journal Advertisers (*Team develops list to be contacted*)

- A Architects and Architecture
- B Computer Science and Computing
- C Educators and Education
- D Engineers and Engineering
- E Mathematicians and Mathematics
- F Information Science, Systems, and Technology
- G Scientists and Science
- H Technologists and Technology
- I Technical Entrepreneurs and Entrepreneurship

II. Readership (*Team develops distribution list*)

- A Architects
- B Computer Science and Computing Persons
- C Educators
- D Engineers
- E Mathematicians
- F Information Science, Systems, and Technology Persons
- G Scientists

(Continued on page 5)

(Continued from page 4)

- H Technologists
- I Technical Entrepreneurs
- J Public At Large

III. Advertisers Subscription Package (Team seeks advertisers and contributors with information and articles A through E.)

- A Products and Services
- B Processes
- C Employment Opportunities
- D Technical Innovations
- E Consumer Technology

Project IV. High School Student College Guide

High School Student College Guide to Field of Study for:

- A Architects and Architecture
- B Computer Science and Computing
- C Educators and Education
- D Engineers and Engineering
- E Mathematicians and Mathematics
- F Information Science, Systems, and Technology
- G Scientist and Science
- H Technologist and Technology
- I Technical Entrepreneurs and Entrepreneur-ship

Appendix A. Directory of Role Models:

- A Architects
- B Computer Science and Computing Persons
- C Educators
- D Engineers
- E Mathematicians
- F Information Science, Systems, and Technology Persons
- G Scientists
- H Technologists
- I Technical Entrepreneurs

Appendix B. Directory and Profile of Subscribing College and University Offerings

- A Architecture
- B Computer Science and Computing
- C Education
- D Engineering Firms
- E Mathematics
- F Information Science, Systems, and Technology
- G Science
- H Technology
- I Technical Entrepreneurs

Appendix C. Student Application Package

For further information, or to volunteer sponsorship, please respond to:

chsdcerpc@msn.com

Carrington H. Stewart
NTA Houston Chapter and NTA Societies
National Chairman

Frederick D. Gregory Confirmed as NASA's First African-American Deputy Administrator



The U.S. Senate, on Thursday, August 1, 2002 confirmed Frederick D. Gregory as NASA Deputy Administrator. Gregory, a veteran Space Shuttle commander who previously served as the Associate Administrator for Space Flight, is set to become the agency's first African-American deputy. The Senate will now send the confirmation back to the White House for the President's signature. Gregory must be sworn into office before he assumes his new position.

"I couldn't be happier for Fred. His considerable experience as an astronaut and aviator, and his leadership in space flight safety are needed at this critical time for the agency," said NASA Administrator Sean O'Keefe. "This is a busy time for the U.S. Senate and I'm delighted Fred's nomination was given brisk consideration. I appreciate the efforts of Senator Fritz Hollings and Senator Ron Wyden, both of whom acted in NASA's best interest in expeditiously guiding Fred's nomination through the confirmation process."

It's the first time in more than a decade that the Deputy Administrator position has been filled. Gregory will serve as the chief operating officer for the agency and report directly to Administrator O'Keefe. He will be responsible for directing and managing many of the programs as well as the day-to-day operations and activities at NASA.

Before being named Associate Administrator for Space Flight in December 2001, Gregory served as Associate Administrator for Safety and Mission Assurance and was charged with the oversight of all safety issues within NASA. He developed, implemented and managed quality assurance policies that dealt with reliability and maintainability.

"This is an incredible opportunity," Gregory said after hearing of the Senate's vote. "I appreciate the

(Continued on page 6)

(Continued from page 5)

President's confidence and I'm thankful for the Senate's speedy consideration. We have a lot of work to do and I'm confident we'll be able to continue NASA's historic legacy of accomplishment."

As a NASA astronaut, Gregory logged more than 455 hours in space during three Space Shuttle missions. In 1985, he served as pilot on board *Challenger* during shuttle mission STS-51B. Gregory was mission commander for STS-33 in 1989 and STS-44 in 1991.

Gregory was selected as an astronaut in 1978, after a distinguished career with the U.S. Air Force. He logged nearly 7,000 hours in 50 types of aircraft, including 550 combat missions over Vietnam. He retired as a Colonel in December 1993.

Hampton University Selected by NASA for Small Explorer Satellite Mission

NASA Headquarters recently announced the winners in their most recent proposal competition for the development and implementation of Small Explorer (SMEX) satellite missions. Two missions were selected from a total of 46 proposals submitted in this round of competition (in February 2000).

One of the two winning proposals was submitted by Hampton University, in Hampton, VA. The mission, to be launched in 2006, is the Aeronomy of Ice in the Mesosphere (AIM) Explorer. This is the first such space mission to be carried out by a historically Black college or university. Dr. James Russell III, of Hampton University, is the Principal Investigator.

The scientific objective of AIM is to determine the causes of the highest altitude clouds in Earth's atmosphere (in the region known as the mesosphere). There are indications that the number of clouds in the mesosphere in Earth's polar regions has been increasing over the last few decades, and it is hypothesized that this results from increasing concentrations of "greenhouse" gases at high altitudes.

AIM will measure atmospheric temperatures and water vapor concentrations in the cloud-forming region, as well as the properties of the clouds themselves. This will help to determine the connection between the clouds and their environment, and serve as a baseline for the study of long-term changes in the upper atmosphere.

Our congratulations to Dr. Russell, his proposing team, and Hampton University for their selection to carry out this important space mission!

NTA 74th National Conference Excilibur Resort and Casino Hotel Las Vegas, NV September 24-27, 2002 *Updates and Program Outline*

Reminder to all NTA Members and potential Conference participants!

Please register for the Conference and make your hotel reservations as soon as possible, if you have not already done so!

Conference Registration Fees (Late Rates In Effect)

<u>Category</u>	<u>Plan</u>	<u>Cost</u>
Member	A	\$325
Non-Member	B	\$400
Auxiliary /Spouse	C	\$150
Professional, 1 Day	D	\$150
Student Member	E	\$150
Student Non-Member	F	\$160
High School Student	G	\$ 50

Payments can be made by check, MasterCard, Visa, American Express, or money order, payable to the **National Technical Association**. Registration (and secure credit card payment) by way of the NTA Web Site, www.ntaonline.org is preferred.

Postal Mailing Address:

National Technical Association, Inc.
PMB 221, Suite 120
5810 Kingstowne Center Drive
Alexandria VA 22315-5711

Hotel Information:

Excilibur Resort and Casino Hotel
3850 Las Vegas Blvd., South
(Tropicana Exit)
Tel. (877) 750-5464
www.exciliburlasvegas.com/flashindex.php3

Room Rates:

Monday Night-Thursday Night \$55.00 /night
Friday Night \$99.00
Saturday Night \$119.00

For Reservations (Toll Free), call (800) 937-7777 and provide Group Code: XTECH

Tentative Conference Program Schedule

Tuesday, September 24, 2002

NTA National Committee Meetings
 NTA National Board of Directors Meeting
 PERC and Web Site Committee Meeting

Wednesday, September 25, 2002

Local High School Visitation
 NTA Auxiliary Meeting
 Opening Plenary Session (Keynote Speaker:
 Dr. Alma Allen)
 Workshop: "God as CEO" (Presenter: Dr. C. Fred
 Higgs III)

Thursday, September 26, 2002

Graduate/Undergraduate Student Symposium
 NTA Society of Technology Presentation Session
 Workshop "The Cost of Success"
 Past Presidents Council
 NTA Society of Education Presentation Session I
 Career/Trade Fair Opening
 NTA Membership Recognition Luncheon /
 Charles S. Duke Distinguished Lecture
 (Mr. Gerald Reed)

Special Technical Presentation
 (Dr. Woodrow Whitlow)
 Graduate/Undergraduate Student Symposium
 Workshop "Blacks in Management"
 (Dr. Darryl Tukufu)
 NTA Delegates Meeting
 NTA Society of Education Presentation Session II

Friday, September 27, 2002

NTA Business Meeting & Election- Natl. Officers
 Graduate/Undergraduate Student Symposium
 NTA Society of Computer Science Pres. Session
 High School Student Symposium I
 NTA Auxiliary Luncheon (Keynote Speaker:
 Mr. Donald Campbell, Director NASA Glenn
 Research Center)
 Workshop "Managing Personal Finances"
 NTA Society of Science Presentation Session
 Graduate/Undergraduate Student Symposium
 NTA Society of Engineering Presentation Session
 High School Student Symposium II
National Awards Banquet and Reception
 (Keynote Speaker: Mr. Fred Gregory, Deputy
 Administrator, NASA)

NTA MEMBERSHIP APPLICATION OR RENEWAL

Please See Mailing Label for Date of your Last Dues Payment, if not New Applicant

Name _____

Title (Mr., Ms., Dr., etc.) First M.I. Last

Address (If Address Label on back of this page is correct, *check here*)

City or Town State Zip Code

Telephone Number(s) Fax Number E-Mail Address

Primary Occupation _____

(Occupational Goal if Student, Former Occupation if Retired)

Scientific/Technical Interests (in addition to above) _____

College/University Attending (if Student) _____

Current Status (Freshman, Sophomore, etc.) _____ Major Field of Study _____

Payment Method Check/M.O. Amex Master Card Visa

Credit Card Number _____ Expiration Date ____/____

Signature _____

Payment Professional \$25 Student \$10 Tax Deductible Contribution \$ _____

Today's Date _____

Please Mail with Payment (or credit card information) to NTA Return Address

On Back of This Page. (Keep a copy for your records)

**Frank Robinson, Jr. Receives
NASA Award**

A **NASA Special Achievement Honor Award** was presented to NTA President-Elect **Frank Robinson, Jr.**, at NASA Glenn Research Center on August 2, 2002, for outstanding program support for the initial implementation and deployment of the Process Based Mission Assurance Knowledge Management System. The presentation was



made by NASA Headquarters' Safety and Mission Assurance Office.

Our sincere congratulations to Frank!

PLEASE SEND US YOUR NEWS!

Please send news items you feel would be of interest to professionals, students, and educators involved in science/technology fields and/or of interest to the NTA Membership (ELECTRONIC SUBMISSION PREFERRED).

Please include with your submission your name, telephone number, e-mail and snail-mail address. Please also send an information copy of whatever you send us to your Chapter President and/or Regional Director.

We format the Newsletter in Microsoft Publisher 2000. Therefore, submissions in MS Word 97/2000 or PowerPoint 97/2000 are preferred (although Word Perfect and .TXT submissions can be converted). Any photographs or drawings should be black and white or color in .JPG or .BMP format.

Fall, 2002 Issue Deadline: 8 November 2002

NTA Publications Committee

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