


# ◆ NATIONAL TECHNICAL NEWS ◆

Volume 7, Number 2

Spring 2001

<p style="text-align: center;"><b>16th NTA Technical Student Symposium in Mathematics and Computer Science Held at Norfolk State University</b></p> <p>The 16th National Technical Association Technical Student Symposium in Mathematics and Computer Science was held at Norfolk State University (NSU) on April 27-28, 2001. Approximately fifty (50) Computer Science and Mathematics seniors presented research projects in various topic areas to peer audiences of students and judges in this annual event.</p> <p>The following NTA members from the Hampton Roads and the Richmond Chapters supplied the judges for the competition:</p> <p style="padding-left: 40px;">Coletta J. Bey (Richmond) Michael A. Chapman (Hampton) James Fields (Hampton) Elijah Kent (Hampton)</p> <p>The symposium winners and titles of their presentations were:</p> <p><b>1st Place Computer Science (tied) :</b></p> <p style="padding-left: 40px;">Lavelle Eteridge / James Riddick Jr. "Windows Application Programming"</p> <p style="padding-left: 40px;">Michael Williams / Camilo Saavedra "Biomedical Signal Processing"</p> <p><b>2nd Place Computer Science:</b></p> <p style="padding-left: 40px;">Latita Pratt / Tom Renna "Robots and Path Finding"</p> <p><b>1st Place Mathematics:</b></p> <p style="padding-left: 40px;">Ilyea Shaikh "Experimental and Statistical Analysis of Channel Beam Buckling"</p> <p style="text-align: right;"><i>(Continued on page 3)</i></p>	 <p><b>MEMBERSHIP NEWSLETTER</b> A Publication of The National Technical Association <i>Incorporated 1926</i></p> <hr/> <p><b>2000-2001 NTA BOARD OFFICERS</b></p> <p><b>President</b> Katherine W. Coleman</p> <p><b>Past President</b> Garry A. Harris</p> <p><b>Treasurer</b> Frank Robinson Jr.</p> <p><b>Secretary</b> Yolanda L. Hinton</p> <p><b>Historical Publicist</b> John H. Thompson</p> <p><b>Registered Agent</b> Rupert F. Graham, Jr.</p> <p><b>Executive Directors</b> James L. Harris Gilbert A. Haynes</p>	<p style="text-align: center;"><b>The National Technical Association's 73rd Annual National Conference and Technology Career Fair</b></p> <p style="text-align: center;"><b><i>The Legacy of NTA: Scientist, Engineers, Architects, Technologists and Educators – 75 Years of Turning Dreams into Reality</i></b></p> <p>The National Technical Association (NTA) is pleased to announce that its 73rd National Conference and Technology Career Fair will be held at the Ramada Inn and Conference Center, Atlanta, Georgia September 26-29, 2001. NTA invites African-American scientists, engineers, architects, mathematicians, technology educators and students to participate in one of this year's most comprehensive conferences to address technology development by the minority community.</p> <p>The NTA conference will highlight innovative technology advancements of today's minority technical professionals. It will enable you to network with minority technical professionals who are vital to U.S. global competitiveness. The conference technical sessions, workshops and forums will provide many opportunities to exchange ideas with professionals who develop the nation's leading-edge technology. The conference will address critical issues facing the minority community as key providers of our nation's technology. The conference has something for all professionals and students who use science and information to stay globally competitive.</p> <p style="padding-left: 40px;">NTA invites you to submit abstracts and</p> <p style="text-align: right;"><i>(Continued on page 2)</i></p> <hr/> <p><b>Also In This Issue:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="padding: 2px;"><b>Banneker Museum</b></td> <td style="text-align: right; padding: 2px;"><b>p. 3</b></td> </tr> <tr> <td style="padding: 2px;"><b>Hampton Roads Math Contest</b></td> <td style="text-align: right; padding: 2px;"><b>p. 4</b></td> </tr> <tr> <td style="padding: 2px;"><b>DC Math Contest</b></td> <td style="text-align: right; padding: 2px;"><b>p. 5</b></td> </tr> <tr> <td style="padding: 2px;"><b>Student News</b></td> <td style="text-align: right; padding: 2px;"><b>p. 6</b></td> </tr> </table>	<b>Banneker Museum</b>	<b>p. 3</b>	<b>Hampton Roads Math Contest</b>	<b>p. 4</b>	<b>DC Math Contest</b>	<b>p. 5</b>	<b>Student News</b>	<b>p. 6</b>
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proposals for presentations and workshops you'd like to make at the conference. Topics directly related to the conference theme are strongly encouraged; however, submissions in all scientific/technical and technology education areas are welcome. NTA will evaluate all submitted abstracts based on their suitability for inclusion in the conference program. Full manuscripts are welcome, but not specifically required. NTA may publish abstracts in a Compendium of Abstracts, to be distributed at the Conference, and full manuscripts in a special conference proceedings or a future issue of the *NTA Journal*, NTA's official publication.

All technical presentations will be conducted in session format throughout conference. Each presentation is typically limited to **15 minutes**, with 5 additional minutes for discussion. Material better suited for a forum/workshop setting will be accommodated based on its alignment with the central conference theme, potential audience appeal, and accompanying corporate support/endorsement. Please elaborate on specific needs regarding your desired presentation format when submitting your abstract/proposal.\*

We have designed the conference to attract multifaceted participants; therefore, we extend this invitation to all technical professionals, technology educators, high school and college students. You need not be a member of the NTA to participate. Members of all Black Technical Organizations (BTOs) are especially invited to submit abstracts / proposals.

Submitted abstracts/proposals will be allocated to the conference program at the following participation levels (final conference program may vary based on the number of acceptable submissions):

- Professionals - Technical Papers Sessions, Workshops and Forums
- College Students - Collegiate Technical Papers Symposium (Undergraduate and Graduate Sessions)
- High School Students - High School Technical Papers Symposium

Note that we are soliciting technical papers from professionals (including graduate students) and students (college undergraduate and high school). We are also soliciting high school science projects for our "National Science Fair Competition." Scholarship awards will be presented to the best papers/projects in all student categories.

General topics to consider when developing your abstract or proposals are listed below:

- Technical Sessions: Engineering, Mathematics, Information and Computer Science, Physics, Telecommunications, Space & Aeronautics, Energy, Chemistry, Architecture, Environment, and other Science and Technology fields
- Legislative Updates/Policy in Science, Technology, Energy, Environment, Space & Aeronautics, Research &
- Development, Telecommunications, Academic Standards
- Technology Education; Mentoring with Success; Effective Classroom Visitation; Merging Technology and Local Communities
- Corporate America: Where are the Jobs in 2001 and Beyond?
- Undergraduate/Graduate Research & Educational Opportunities
- Human Resources Development: Workplace Retraining; Career Transitioning; Outplacement; Diversity Management;
- Multicultural Work Environment
- Information Technology; Interactive Classrooms; The Internet

- Distance Learning and Continuing Education
- Charter Schools: Opportunity or Setback for African-Americans Pursuing Science?
- Architecture: Building 21st Century America
- The African/American-African Connection
- Technology as a Tool for Economic and Business Development; Small and Disadvantaged Business
- Professional Development

### ABSTRACT/PROPOSAL SUBMISSION FORMAT AND GUIDELINES

*Abstract and other presentation proposal submissions must provide the following information:*

- **Authors' full name, full mailing address, daytime & evening telephone numbers, e-mail address and fax number.**
- **Professional or student category (if student, provide grade level).**
- **Academic/occupational title, including company/institution name.**
- **Indicate whether you are an NTA member (state your membership classification and chapter affiliation), member of another technical organization, or a non-member.**
- **Type of submission (technical paper presentation, workshop, forum, science fair project, etc.) and applicable support mechanism (i.e., corporate sponsorship)**
- **Title of presentation (15 words or less)**
- **Abstract of presentation (150-300 words).**
- **One copy of the above information (ELECTRONIC SUBMISSION PREFERRED) should be submitted to EACH PERSON listed below:**

Dr. George R. Carruthers	Dr. John Trimble
Naval Research Laboratory	Dept. of Systems & Computer
Code 7609	Science
Washington, DC 20375-5320	Howard University
	Washington, DC 20059
george.carruthers@nrl.navy.mil	trimble@scs.howard.edu
Tel. (202) 767-2764	Tel. (202) 806-4822
Fax. (202) 404-7296	Fax. (202) 806-4531

#### **\*Important Information for Presenters:**

The **only** Audiovisual Equipment that will be provided at the Conference will be overhead transparency (viewgraph) and 2 x 2-inch slide projectors.

**Presenters needing electronic format projection equipment and computers are responsible for bringing or obtaining it themselves.** It is recommended that these presenters bring transparencies or slides as back-ups.

#### **ABSTRACT SUBMISSION DEADLINE: 1 AUGUST 2001**

**For conference information, please contact:  
The National Technical Association, Inc.  
2001 NTA National Conference  
[Http://www.ntaonline.org](http://www.ntaonline.org)**

**For hotel reservations, contact:  
Ramada Inn & Conference Center  
418 Armour Drive  
Atlanta, Georgia 30324  
1-801-315-7442      404-873-4661**

**Banneker Museum Opens  
In Oella, MD**



Recently the **Banneker Historical Park and Museum** opened at 300 Oella Avenue in Oella (near Ellicott City), Maryland 21228 (see also: [www.friendsofbanneker.org](http://www.friendsofbanneker.org) ). The museum and park are located on land that was Benjamin Banneker's home and farm two centuries ago.

On March 2, 2001 a group of 25 geometry students and three mathematics staff members from Ballou Senior High School in Washington, DC participated in an all-day field trip to the museum. The activities included viewing a video on the life and contributions of Benjamin Banneker, and an invited presentation by NTA DC Chapter member George Carruthers, entitled "Mathematics in Astronomy and Space Flight", in celebration of Banneker's contributions as a mathematician and astronomer.



**Ballou High School students visiting and touring the Banneker Museum and Historical Park**

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**2nd Place Mathematics:**

Vincent Tucker, Jr.

"Irrotational Flow Past a Circular Cylinder"

**3rd Place Mathematics:**

Wakelin Stoneman

"A Study of the Effectiveness of Microcomputer-Based Laboratories"



**NSU Student Symposium computer science presenters and staff**



**Coletta Bey (Richmond Chapter) and Michael Chapman (Hampton Roads Chapter) present the NTA Mathematician of the Year Award to Dr. Sandra DeLoatch**

Dr. Sandra DeLoatch, NSU Dean of Science and Technology and NTA Hampton Roads Chapter member, is a principal advocate for the student symposium. According to Dr. DeLoatch, *"the student symposium is a vital component of preparing our students for their*

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professional careers. By participating in the symposium, our seniors learn to communicate knowledge through technical presentation. It's a skill that will serve them well in their future endeavors as scientists and technologists." Dr. Phillip McNeil and Dr. Mou-Liang Kung, heads of the NSU Computer Science and Mathematics departments (respectively), both agree with DeLoatch's assessment.

At the Symposium Awards Ceremony, the top presenters received engraved plaques acknowledging their accomplishments. All other presenters received certificates of recognition for their participation. And during a surprise ending, Dr. DeLoatch was presented with the **2000 NTA Mathematician of the Year Award**, an award she was not able to receive at the NTA National Conference held in October 2000 in Hampton, VA.

The student symposium represents the last milestone of a long journey toward graduation for these mathematics and computer science seniors. We wish them well!

Michael A. Chapman  
NTA Student Symposium Chair

### NTA Hampton Roads Chapter Year 2001 Mathematics Contest

The Hampton Roads Chapter of the NTA held its 14th Annual Mathematics Contest at the New Horizons Governor School in Hampton, VA on Saturday, May 12, 2001. This contest was conceived to meet the needs of minority students who are traditionally under-represented in engineering and the sciences. The test is specifically designed to challenge the mind and alleviate the fears and frustrations involved in taking exams. About 75 students participated in either the Basic Test, covering topics of Algebra I and Geometry, or an Advanced Test, covering the topics of Algebra II and Trigonometry.

The invited Guest Speaker was Dr. Carolyn Morgan, Chairperson, Mathematics Department of Hampton University. Sponsors for this contest included: New Horizons Regional Education Center, Prisen Program at Hampton University, and the Newport News Alumnae Chapter of the Alpha Kappa Alpha Sorority, Inc.

**Top Scoring School:**

New Horizons Governor's School for Science & Technology, Hampton, VA



**Students from Achievable Dream Middle School, which had the largest number of participants in the 2001 NTA Hampton Roads Mathematics Contest**



**NTA HRC Chapter president Wayne Boston (left) with students from Davis Middle School, which had the highest school average in the year 2000 NTA HRC mathematics contest, and their award.**

**Advanced Test Winners:**

- 1st Place:* Katherine Whitley, New Horizons Governor's School, 12th Grade
- 2nd Place:* Andrew Pao, Poquoson Middle School, 8th Grade
- 3rd Place:* Yino Chi Chan, Warwick High School, 12th Grade

**Basic Test Winners:**

- 1st Place:* Brian Pulley, Lindsay Middle School, 8th Grade
- 2nd Place:* Jiyati Verma, Grafton Middle School, 7th Grade
- 3rd Place:* Michael A. Chapman Jr., Eaton Middle School, 8<sup>th</sup> Grade

**Grade Winners:**

- 12th Grade,* Danielle Graves, Bethel High School

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*11th Grade, Makara Phor, New Horizons Governor's School*

*10th Grade, Kelsey Boitnott, New Horizons Governor's School*

*9th Grade, Namrata Verma, York High School*

*8th Grade, Darnell Vennie, Lindsay Middle School*

*7th Grade, Paris Moon, Gildersleeve Middle School*

*6th Grade, Cassandra Mugler, Reservoir Middle School*

**Honorable Mention:**

*4th Grade, Prakriti Verma, Coventry Elementary School*

**Participating Schools were:**

Bethel High School

Coventry Elementary School

Crittenden Middle School

Davis Middle School

Denhigh High School

Dunbar Erwin- An Achievable Dream Academy

Eaton Fundamental Middle School

Gildersleeve Middle School

Grafton Middle School

Great Bridge High School

Hampton High School

Huntington Middle School

Jones Magnet Middle School

Lindsay Middle School

New Horizons Governor's School

Oscar F. Smith High School

Phoebus High School

Poquoson Middle School

Princess Anne High School

Reservoir Middle School

Ruffner Middle School

Spratley Middle School

Warwick High School

Western Branch High School

York High School



**NTA DC chapter president James Harris calls the students to attention, with his group-interactive presentations.**



**Etan Eitches receives 1st Place Advanced Award from Richard Thomas and Wyllona Harris.**



**Alex McCall receives 1st Place Basic Award from Richard Thomas and Wyllona Harris.**

**NTA - DC Chapter Year 2001  
Mathematics Contest**

The annual Washington, DC Chapter Mathematics Contest was held on Saturday, May 5, 2001 at Wakefield High School in Arlington, Virginia. Students from seventeen different schools representing Maryland, DC, and Virginia participated, in grades 6 – 12.

Juice, fresh fruit, and Danish pastries were available upon their arrival. After the intense testing pe-

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riod, there was an interactive session led by James L. Harris, president of the DC Chapter, which included word and math puzzles and games. Towards the end of that session, a delivery of pizza was heartily welcomed by all.

The awards program, conducted by Chairperson Wyllona E. Harris, included the presentation of beautiful certificates and goody bags to each student present. Trophies and monetary announcements were given to the following students as a result of their scores on the tests:

#### Advanced Test Winners

- 1<sup>st</sup> Place:** Etan Eitches, Grade 11, Thomas Jefferson High School  
**2<sup>nd</sup> Place:** Brett McKinney, Grade 11, Wakefield High School  
**3<sup>rd</sup> Place:** Elliott Robinson, Grade 11, Flint Hill High School

#### Basic Test Winners

- 1<sup>st</sup> Place:** Alex McCall, Grade 8, Thomas Jefferson Middle School  
**2<sup>nd</sup> Place:** Pamela Torres, Grade 9, Wakefield High School  
**3<sup>rd</sup> Place:** Bradley Dixon, Grade 7, Thomas Jefferson Middle School

#### In-Grade Awards

- 6<sup>th</sup> Grade:** Elaine Sylvester, Arlington, VA  
**7<sup>th</sup> Grade:** Natasha Metts, Thomas Jefferson Middle School  
**8<sup>th</sup> Grade:** Christine Robinson, Farmwell Station Middle School  
**9<sup>th</sup> Grade:** Thomas Bishop II, Yorktown High School  
**10<sup>th</sup> Grade:** Dominic Lawrence, Ballou Senior High School  
**11<sup>th</sup> Grade:** Gwyneth Acee, Ballou Senior High School  
**12<sup>th</sup> Grade:** Cintia Lijeron, Wakefield High School

Ballou Senior High School will hold the perpetual plaque for one year, for the highest student attendance (17 entrants) for the 2001 contest.

Other persons on hand to assist for the day were Marylin Alexander (Lexington, VA), Ron and Donna Aikens, Richard Thomas, George Carruthers, Lester Clemons, and Jesse Bemley. Thanks to one and all for assistance, but a special thanks to Richelle Alexander (1<sup>st</sup> grader whose favorite subject is mathematics) for being a terrific special assistant!

## Experiences of a Howard University Graduate Student NTA Member

by Kevin A. Loney, MSEE May, 2001

My tenure at Howard University has been a great experience. It has given me the opportunity to study under world-renowned scholars and with other stellar students from diverse backgrounds. Howard University is in the vanguard of HBCUs that provides advanced degree programs. My areas of interest include ad-hoc heterogeneous network communications and signal processing, along with modeling and simulation. While attending Howard University, I served as a research associate within the Advanced Telecommunication Information Research Program, an Army Research Lab research initiative.

One area of particular interest to me is data-centric network development in *developing* countries, in particular Africa. Fellow NTA member Dr. John Trimble and I are exploring novel ways in which African countries can improve the quality of their Internet connectivity, without resorting to costly land-line installations. One such method is to utilize low Earth-orbiting (LEO) communication satellites to provide gateway connections (from the sky to the ground terminal). Many such systems are already in place and being utilized by the United States, Europe, and other developed countries. One of the most robust networks in operation is the Teledesic network ([www.teledesic.com](http://www.teledesic.com)). The Teledesic network is a high-capacity, broadband network that combines the global coverage and low latency of a LEO constellation of satellites and a "fiber-like" Quality of Service (QoS). Another alternative is to utilize the AT&T's recently installed fiber optic channels off the West Coast of Africa.

One of the industries that would benefit from greater Internet access is the Tele-medicine industry in Africa. Simply put, Tele-medicine encompasses live video, audio, and data streaming, whereby allowing doctors at remote sites to provide a cavode of diverse medical services such as X-rays, Electroencephalograms, Cardio-Ultrasounds, Angiograms, Electrocardiograms, and Esophagus Gastric Cathode diagnosis and analysis.

So far, my research has lead me to perform field studies in Senegal, China, Egypt and Jamaica.

Currently, I'm preparing to complete a research initiative in Ghana during the late summer. After returning from abroad, I plan to continue the development of my business, Aggregate Network Solution, which specializes in wireless network design, model-

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 ing, and deployment. Howard's Department of Electrical Engineering will soon be offering a Telecommunication program that will allow graduate students to pursue advanced EE degrees with focus in Telecommunications. I would recommend that any undergraduate student who's interested in telecommunication or wireless communication to explore opportunities for advanced degrees at Howard or other universities.

career opportunities in math, science, and engineering. We believe that we must be examples and role models for younger students to follow. We are also trying the remove stereotypes that discourage our youths from pursuing degrees in engineering and science curriculums.

A technical magazine called "Technically Speaking" has published an article about me, and I will send you the article.

Manasseh Robinson  
 SNTA President  
 University of Cincinnati

**News from the Student NTA Cincinnati Chapter**

Sent to Ms. Katherine Coleman, NTA President:

Dear Ms. Coleman,

This year, our student branch has been very active in community and on-campus activities. Currently, we are working with a neighborhood public school, and we are sharing with them our advice about the importance of education and some of our college-life experiences. We will be working with the school's eighth grade science teacher, and in the fall, SNTA plans to help coordinate and develop their first science fair exhibition. Our goal is to reach out to youths in urban communities and inform them about the "exciting"

**NTA Documentation Now Available in Electronic Format**

A number of important NTA documents, including the *NTA Profile* brochure, Conference information and registration forms, and information about NTA-sponsored scholarships are now available in e-mailable Microsoft Word format.

Chapter presidents, other NTA officers, and members with specific needs should contact NTA Co-Executive Director Gilbert Haynes (gahaynes@eng.morgan.edu).

**NTA MEMBERSHIP APPLICATION OR RENEWAL**

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

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*Telephone Number(s)                      Fax Number                      E-Mail Address*

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(Occupational Goal if Student, Former Occupation if Retired)

**Scientific/Technical Interests** (in addition to above) \_\_\_\_\_

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

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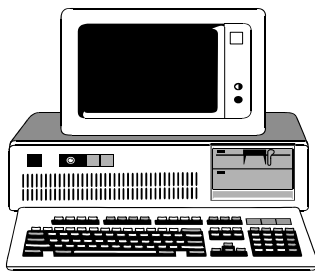
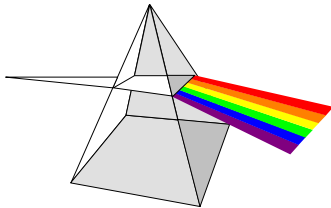
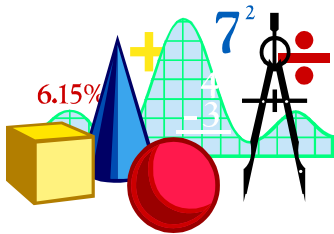
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**On Back of This Page.** (Keep a copy for your records)



## PLEASE SEND US YOUR NEWS!

We are hoping to enhance the frequency and timeliness of the National Technical Association (NTA) Newsletter. 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.

In our attempt to be faster and cheaper, and eventually better, 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.

### Please submit to EACH of the following:

Dr. George Carruthers  
george.carruthers@nrl.navy.mil  
(202) 767-2764

Dr. Jesse Bemley  
Jesse.Bemley@hqda.army.mil  
(703) 601-4162

Dr. John Trimble  
trimble@scs.howard.edu  
(202) 806-4822

***Please Contact the NTA Office for ADVERTISING RATES in this Newsletter!***

**In This Issue...**

***NTA 2001 Conference - NSU Student Symposium - 2001 Math Contests***

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Here