

◆ NATIONAL TECHNICAL NEWS ◆

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NTA Pittsburgh Chapter Holds Charles Drew Science Fair

The 20th consecutive annual Charles Drew Science fair was held Saturday, March 29, 2003 in the Rangos Auditorium on the campus of Carnegie Mellon University. 75 students participated; most were from the Pittsburgh Public School system – grades six through twelve. There was no problem recruiting the thirty-five fair and impartial judges – in fact, most called to volunteer. Certificates of appreciation were presented to all involved; students, judges and volunteer staff. The distribution of prizes was as listed below:

- First Place:** \$500 Savings Bond and Trophy
- Second Place:** \$300 Savings Bond and Trophy
- Third Place:** \$100 Savings Bond and Trophy

Like prizes were awarded for all grade levels. Runners-up one through five were presented certificates. A lunch was provided to the students and judges. Over 225 persons attended. The turn-out of supporting parents, teachers and friends was indicative of the reception the Charles Drew Science Fair has received from the community.

Participating organizations (and their representatives) were:

- Carnegie Mellon University** – *Stacey Pharrams*, Outreach Coordinator, Mellon College of Science
- National Technical Association** – *Adolphus Patterson*, President
- Urban Youth Action** – *Karris Williams*, Executive Director

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**MEMBERSHIP
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NTA Cleveland Chapter Holds Nsoroma Awards Program

The Cleveland Chapter of the National Technical Association, Inc. (NTA) hosted its Second Annual Nsoroma Awards Program on Saturday, March 29, 2003, at the elegant Windows on the River restaurant in Cleveland, Ohio. The Nsoroma Awards honor Cleveland area women in the fields of science, technology, and education. It also recognizes young women who are poised to make an impact in their community as well as women who have made a continuous impact throughout their lives. The emcee for the event was Mark Ribbins, of local jazz radio station, WJZZ.

The name of the Nsoroma award, which is derived from the Akan language (Ghana), symbolizes a person of exemplary character and outstanding personal attributes. The Adinkra dictionary defines Nsoroma as representing a person who is a leader, a star of a home, school, and institution. It also carries a meaning of faith and female influence.

The 2003 Honorees are: Nsoroma Queen Mother -

Dr. Deforia Lane

Associate Director, Ireland Cancer Center at University Hospitals of Cleveland. Dr. Lane, a distinguished music therapy

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 Special acknowledgement was given to **The Poise Foundation** for funding the Charles Drew Science Fair.

Adolphus Patterson
 President, NTA Pittsburgh Chapter



Stacey Pharrams, Outreach Coordinator, Mellon College of Science, with Zakera Barnes, 6th Grade First Place Winner



Science Fair Award Winners with Certificates and Trophies

Barbara J. Cotton to be Profiled in Marquis "Who's Who" Publication

NTA member Barbara J. Cotton of Cleveland has been selected to be included in a biographical directory published by Marquis Who's Who®, the leading biographical reference publisher of the highest achievers and contributors from across the country and around the world.

Cotton will be profiled in the 2003 edition of *Who's Who in America*, which will be available in November. Ms. Cotton, a member of the NTA Cleveland



Chapter, works at NASA Glenn Research Center and serves as technical lead/project manager in the N.A.S.A. Project program of the Office of Educational Programs. In this position, her activities have included program planning, recruiting and training of NASA volunteers to assist in the program, assisting students in laboratory exercises, and serving as a career awareness speaker.

She also works as a System Analyst in the Scientific Application Development Branch, where she is responsible for documenting an existing data collector system that will move data from test facilities to a UNIX-based mass storage system.

Dr. Wesley Harris Selected to Head MIT Aeronautical & Astronautical Engineering Department

Dr. Wesley L. Harris, Professor of Aeronautical and Astronautical Engineering at the Massachusetts Institute of Technology (MIT) and a long-time NTA member, was recently selected as the new head of that department. Dr. Thomas L. Magnani, Dean of the MIT School of Engineering, made the announcement:

Dear Colleague,

I am pleased to report the appointment of Professor Wesley Harris as the next Head of the Department of Aeronautical and Astronautical Engineering, effective July 1, 2003. Wes' broad professional interests include theoretical and experimental aspects of unsteady aerodynamics and aeroacoustics, computational fluid dynamics, and government policy impact on procurement of high technology systems. Within MIT, Wes currently serves as Director of the Lean Sustainment Initiative. He also co-chairs MIT's Council on Faculty Diversity and the School of Engineering's Committee on Minority Faculty Recruitment and Retention. In these latter capacities, he has been an invaluable source

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(Wesley Harris, Continued from page 2)

of wisdom and guidance to me concerning issues of diversity.

Among his many outside professional activities and responsibilities, Wes serves on the Board of Trustees of his (M.A. and Ph.D.) alma mater, Princeton University. Wes's distinguished professional career includes appointments as Dean of Engineering at the University of Connecticut, Vice President and Chief Academic Officer of the Space Institute at the University of Tennessee, and Associate Administrator for Aeronautics of NASA, reporting Directly to the NASA Administrator.

Wes has a passion for scholarship, a deep commitment to educational excellence, and strong values. As a reflection of these qualities, on Wes's 60th birthday, his former students, family, and friends established The Wesley L. Harris Scholarship Fund for MITE2S. One student contributor wrote, "He is a great role model, mentor and supporter."

In making this appointment, I would also like to take this opportunity to thank Ed Crawley for his extraordinary leadership as AAE Department Head the past 7 years. Experiencing the excitement expressed on the faces of faculty and students who are collaborating in the wonderful new AAE laboratories and teaching facilities in the pioneering CDIO curriculum, one can't help but be impressed by the educational innovations that the Department has undertaken under Ed's leadership. Combining this accomplishment with the most impressive strategic plan the Department has embraced, we can all see why the AAE Department remains at the forefront of this field. Thanks Ed, for a job VERY well done.

Wes has many ideas for building upon the outstanding trajectory of the AAE Department and for contributing to the School and Institute, and very much looks forward to collaborating with all of you.

Tom

Student Activities at Texas Southern University

The College of Science and Technology's National Renewable Energy Laboratory, Photovoltaic Associates attended the Gulf-Southwest 2003 Conference of the American Society for Engineering Education at the University of Texas-Arlington, Texas, March 19-21, 2003. During the three-day conference, NTA student members Julie Bush, Hilda Gomez, and Tony Prince attended workshops and seminars, and met with campus representatives to exchange information on research projects.

Spring Semester, 2003

The Solar Club and the National Renewable Energy Laboratory Photovoltaic Associates have accepted invitations to participate in several Earth Day festivals this semester. Students will display their renewable energy projects at the North Harris College Earth Day, Rice University Earth Day Festival, and the KRBE Earth /Green Mountain Energy Day Festival in downtown Houston, and the NTA Science Exposition in Waco, Texas. In Waco, the NTA student members will serve as Student Coordinators for the high school Technical Symposium, focusing this year on Renewable Energy; they will also judge science fair projects. Each NTA student member has worked with a particular high school, facilitating that high school's participation in the Science Fair Exposition and Technical Symposium. The NTA student members will serve technical session leaders as well.

Submitted by Joyce H. Lattimore
Project Coordinator and Student Advisor

The Chicago Teacher's Academy for Mathematics and Science

The Teachers Academy for Mathematics and Science (TAMS) was started in 1989 by a group of citizens concerned about a key problem that plagued Chicago and the education system nationwide: the generally inadequate training of elementary school teachers for teaching of mathematics and science. Following a long series of meetings, in 1991 support by the U.S. Department of Energy, the National Science Foundation, and the Illinois State Board of Education actualized this new experiment in science and math education reform, in creating the Teachers Academy for Mathematics and Science ("Academy").

The Academy established an effective, 3-year-long professional program in math and science, working with pre-K through 8th-grade teachers, principals, parents, and other leaders within each school community. The TAMS program *simultaneously* performs the following activities:

- Builds capacity of teachers by a long-term, intensive professional development program in mathematics and science
- Embodies best practices in professional development and math & science teaching and learning while ensuring alignment with national, state, and local standards
- Builds capacity of parents, principals, and others to

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(*Nsoroma Awards, Continued from page 1*)
 practitioner and researcher, has become one of the world's leading ambassadors and advocates for music as medicine.

Nsoroma Princess - Ynes S. Arocho
 Cuyahoga community College. Ms. Arocho, a talented and promising environmental scientist, conducts research in urban wetland ecosystems.

Nsoroma Science - Dr. Charity A. Kankam,
 Nephrologist Cleveland Renal Associates. Dr. Kankam, recently peer-elected president of the medical staff at St. Vincent Charity Hospital, provides consultations and has medical privileges at four major hospitals in the area. She teaches future doctors at Case Western Reserve University.

Nsoroma Technology - Rochelle May
 Electrical Engineer, Flight Software Engineering Branch, NASA Glenn Research Center. Ms. May, a former NASA high school student program participant and intern, is responsible for developing software for microgravity space experiments.

Nsoroma Education - Dr. Tyjaun A. Lee
 Director, Counseling Department, Cuyahoga Community College. Dr. Lee, a former national director for SEMAA (Science, Engineering, Mathematics and Aerospace Academy), has been recognized for her creative recruitment and retention efforts.

Khary I. Parker
 NTA Cleveland Chapter



Nsoroma Awards Winners (from left):- Dr. Deforia Lane, Dr. Charity Kankam, Ms. Ynes Arocho, Ms. Rochelle Mays, Dr. Tyjaun A. Lee

(*TAMS, Continued from page 3*)
 ensure that the entire school community is committed to an effective school improvement process

- Builds upon instruction with school-site implementation and follow-up consistent with national standards in professional development
- Offers training in, and models use of, educational technologies
- Draws from experience serving Chicago's school communities which include populations traditionally underrepresented in mathematics and science.

Follow-up evaluations have verified that the TAMS teacher enhancement programs have significantly increased the performance of students in math and science in Chicago-area schools.

The Academy recently moved from its offices on the campus of the Illinois Institute of Technology to its own new building, located at 501 W. 35th Street in Chicago. The new facilities will greatly improve the efficiency and capabilities of TAMS operations.

TAMS also supports/seeks collaborative efforts with other organizations (such as NTA) with similar goals.

Information Provided By
 Andrea D. Graham
 TAMS Executive Representative

NTA Washington, DC Chapter Holds Year 2003 Mathematics Contest

The NTA DC Chapter's Year 2003 Mathematics Contest was held at Ballou Senior High School on Saturday, May 3. This was the second year in a row that we have held the contest at Ballou, and the event was highly successful. The total number of student participants (70), in grades 6 through 12, was significantly higher than last year's, and a larger number of DC-area schools were represented. 42 students took the Basic Test, and 28 took the Advanced Test (students taking or had Algebra II and Trigonometry, or above).

Prizes awarded were as follows:

Basic Test:

First Place:

Torrence Marunda II, Beville Middle School, VA

Second Place:

Fanchon Hall, Ballou SHS, DC

Third Place (Tie):

Iheoma Umez-Eronini, Hardy MS, DC
 Bryan Bemley, Carroll HS, DC

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(NTA DC Math Contest, continued from page 4)

Advanced Test:

First Place (Tie):

Kevin Wingfield, Banneker SHS, DC
Tana Jambaldorj, Hardy MS, DC

Second Place (Tie):

Michael Dickerson, Jr., Eastern SHS, DC
Parris Bourne, Banneker SHS, DC

Third Place:

Cody Dodson, Banneker SHS, DC

Highest In-Grade: (exclusive of above)

12th Grade: Mikias McKonnen, Eastern SHS, DC
11th Grade: Jessye Bemley, Carroll SHS, DC
10th Grade (Tie): Sharnetta Tyler, Eastern SHS, DC
Tierra Haynes, Ballou SHS, DC
9th Grade: Jachin Leatherman, Ballou SHS, DC
8th Grade: Jessica Hemsley, Kramer MS, DC
7th Grade: Charles Thomas, P. R. Harris EC, DC
6th Grade: Jonathan Davies, McHenry ES, MD

Among other activities, NTA DC Chapter member William O. Glascoe, III (Major, USAF Reserves) gave an inspirational speech for the students, while the tests were being scored. The parents and other adults who accompanied the students viewed the NTA video, "The Charles S. Duke Story" and a video on "MoonLink", an educational activity associated with the *Lunar Prospector* mission held at Ballou in 1998, dedicated to the late Ballou HS science teacher and department head, Clarence L. Taylor, Jr.

A copy of Microsoft Office software, donated by Microsoft, was awarded to Torrence Marunda II, Basic Test first place winner.

The NTA DC Chapter is very thankful for the participation and support by the staff of Ballou High School (especially Dr. Art Bridges, Principal, and mathematics teachers Dianne Carson and Karen Wingfield), and the many others who donated funds and/or assistance in carrying out this activity.



Ballou HS math teacher Mychael Brown assists students in a mathematical construction activity while tests are being scored.



First Place Basic Test prize is awarded to Torrence Marunda II, by (from left) Arthur Southerland, Ballou HS math teacher Karen Wingfield, and Richard Thomas.



First Place Advanced Test (Tie) is awarded to Tana Jambaldorj and Kevin Wingfield.

NTA Member George Carruthers Inducted Into National Inventors Hall of Fame

The National Inventors Hall of Fame (NIHF), headquartered in Akron, OH, annually inducts to its membership inventors they consider to be of special distinction. In 1986, when Lawrence P. King was National President of NTA and one of the founding board members of the National Inventor's Hall of Fame, the NTA was added to the list of technical societies on the selection committee for the Hall. Since then, the NTA has continued to nominate distinguished African American men and women who are our "Unsung Heroes" of invention and creativity. NTA member Hattie Carwell is a current NIHF board member.

This year, in celebration of the 100th anniversary
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Last Call For Participation
NTA 2003 Conference
September 9-13, 2003
Orlando, FL

NTA invites you to participate, and to submit abstracts and proposals for presentations or workshops you would like to give at the Conference. Presentations dealing with all areas of science, mathematics, engineering, technology, and related education are appropriate. Deadlines for Presentation Abstract submissions and Workshop or Panel Discussion proposals are **June 28, 2003**.

Abstracts must have a **title** (15 words or less) and be of **150 to 300 words** in length, and must be accompanied by **full contact information** (not just e-mail address) for the author(s). Submit to **each** of the two editors below (**Electronic Submission Preferred**) no later than **June 28, 2003**.

Dr. George Carruthers
 Code 7645, Naval Research Laboratory
 Washington, DC 20375-5320
 E-mail: george.carruthers@nrl.navy.mil

Dr. John Trimble
 Dept. of Systems and Computer Science
 Howard University
 Washington, DC 20059
 E-mail: trimble@scs.howard.edu

As was the case for the 2002 Conference, the professional technical paper presentation sessions will be associated with the **Societies of the NTA**, which include Science, Engineering, Technology, Education, Mathematics, Computer Science, Information Science, and Architecture. **Each abstract submission must indicate to which Society the presentation is relevant** (and secondary area, if applicable).

All presentations should be prepared as PC-compatible **MS Word or PowerPoint files** and provided, at the Conference, on floppy disk, compact disk (CD), or 100-MB Zip disk (as appropriate). The media to be used should be indicated at the time of abstract submission. Presentation time allowed is 15 minutes.

NOTE:

Lap-top computers and LCD projectors will be the only audiovisual equipment available at the Conference, unless other arrangements are made at least 2 weeks in advance of the Conference starting date.

All Presenters and Participants must register (see Rate Table). Fees include admittance to Conference technical sessions and workshops, career development

seminars, and the career opportunity fair, as well as selected meal functions and receptions.

Conference Pre-Registration Fees
Deadline (Web Site or Postmark) 25 July 2003

<u>Category</u>	<u>Plan</u>	<u>Cost</u>
Member	Includes Luncheons & Banquet	\$300
Non-Member	“ “ “	\$375
Student	Includes Luncheons Only	\$150
	Banquet	\$50 Extra

For those not registering for the full Conference, the cost of each Luncheon is \$50 and for the Awards Banquet is \$100.

Charge for Corporate Sponsor Table is \$2500, which includes a full-page ad in the Conference issue of the NTA Journal.

Registration, and payment (by credit card) via the NTA Web Site (<http://www.ntaonline.org>) is the preferred method of registration and payment of fees. Payments can also be made by mail, by check, MasterCard, Visa, American Express, or money order, payable to the **National Technical Association**. **Late Fee** for registrations received or postmarked *after* July 25 (including on-site registrations) = **\$75 Extra** (except Students).

Mailing Address:

National Technical Association, Inc.
1761 East 30th Street, Room 100A
Cleveland, OH 44114
 Tel.: (216) 298-4425

Hotel Information:

Rosen Plaza Hotel
 9700 International Drive
 Orlando, FL 32819
 Tel.: (407) 996-9700

NTA Conference Room Rate \$85.00/night

WANTED:

NTA Professional Members

Who Plan to Attend the NTA 2003 Conference:

To Chair (and/or help solicit presentations for) the **NTA Society Sessions** (Professional Technical Sessions), and/or to Chair and/or Judge **Student Paper Presentation Sessions** and **Science Fair Session**.

To Volunteer Your Services, please contact one or more of the following:

Dr. George Carruthers
 Dr. Jesse Bemley
 Dr. John Trimble

(see page 8 for contact information)

(NIHF Induction, continued from page 5)

of the Wright brothers' first flight of a heavier-than-air craft at Kitty Hawk, NC, the 17 inductee selections were focused on those whose inventions had special significance to air and space flight, such as the ones who figured out how to break the sound barrier, who designed the ships that took us into space, the ones who first imagined fighters that could land on oceangoing vessels, or the jets that could fly travelers around the world. Only seven of the inductees are still alive. A member of the National Technical Association, Dr. George R. Carruthers, Naval Research Laboratory scientist, Editor of the NTA Newsletter and Journal, and the only African-American in this year's class, is among the group. The program was held in Akron, OH on May 3, 2003.

Dr. Carruthers was honored for his patent number 3,478,216, the "Far Ultraviolet Electrographic Camera". The purpose of the camera was to use far-UV light to examine Earth's upper atmosphere, stars, and gases in interstellar space. It was first used in sounding rocket



George Carruthers presents acceptance speech at the NIHF induction ceremony in Akron, OH May 3, 2003

flights to study stars in 1966, and made the first discovery of molecular hydrogen in space in a 1970 flight. The camera is best known for its use in the Apollo 16 mission to the Moon in 1972, examining

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(NIHF Induction, Continued from page 7)

both Earth's far outer atmosphere and deep space from the lunar surface. Instruments he and his co-workers designed and developed were also used in numerous other space flight missions, including Skylab, four Space Shuttle flights, and most recently, the Department of Defense's ARGOS unmanned satellite mission.

We acknowledge and recognize Dr. Carruthers for being that "beacon of light" that has led so many of us from students in the sciences to the professionals and leaders that we are today. I (Frank Robinson) had the opportunity to accompany Dr. Carruthers when he received this honor, and I was especially proud of his accomplishments and his work to assist those in the NTA who will continue his legacy. Congratulations Dr. George Carruthers!

Frank Robinson, Jr. (NTA President)
Lawrence P. King (NTA Past President)

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.

Summer, 2003 Issue Deadline: 8 August 2003

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