

STC Director's Meeting August 27-29, 2012 Arlington, VA

The Impact of Minority Professional Organizations Partnerships on STC Education and Diversity Efforts

Linda B. Hayden, Ph.D.

Education Director

NSF STC Center For Remote Sensing of Ice Sheets

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CReSIS Diversity

Mission Statement for Diversity: Increase the number of students, staff, and faculty from underrepresented groups in science and engineering by fostering an interest in science throughout the K-16 minority community, and among women and individuals with disabilities. Ensure diversity in all aspects of the Center.

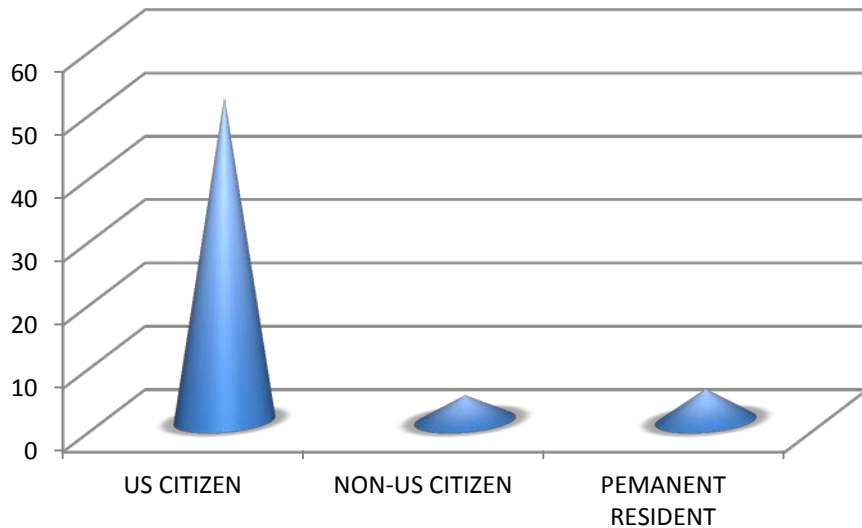
Diversity: Students (A)

Year 7	Number	Minority	Women
Undergraduates	45	51%	44% (remained steady)
REU	35	63%	63% (remained steady)
Graduate Students	47	30%	23% (up from 7% in yr.2)

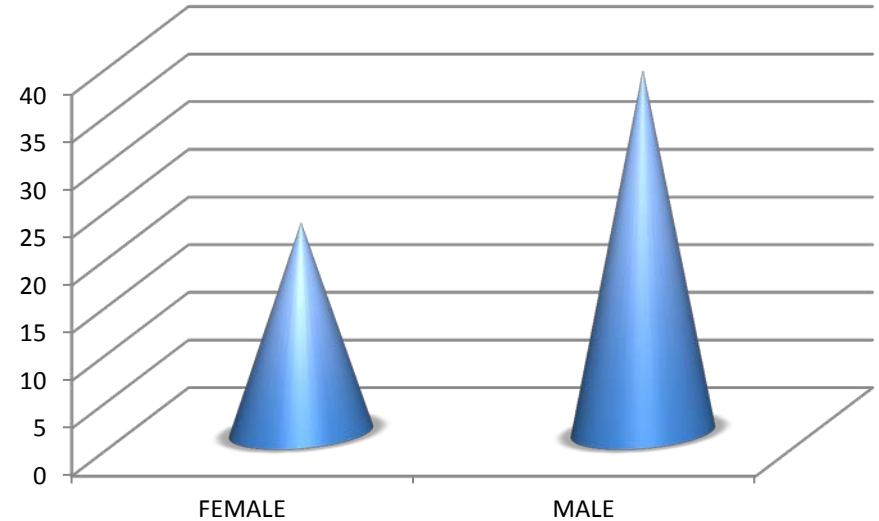
	UNDERGRADUATES	Women	% Women	White	% White	Black	% Black	Hispanic	% Hispanic	Asian	% Asian	Native American	% Native American	% Under-represented
Year 2	59	26	44%	22	37%	24	41%		0%	4	7%	9	15%	53%
Year 3	32	12	38%	13	41%	11	34%	1	3%	2	6%	5	16%	53%
Year 4	51	26	51%	19	37%	22	43%	3	6%	4	8%	6	12%	61%
Year 5	38	18	47%	13	34%	14	37%	3	8%	3	8%	3	8%	53%
Year 6	39	17	44%	18	46%	18	46%	2	5%	1	3%	0	0%	51%
Year 7	45	20	44%	20	44%	20	44%	3	7%	2	4%	0	0%	51%
	REU (all CReSIS)	Women	% Women	White	% White	Black	% Black	Hispanic	% Hispanic	Asian	% Asian	Native American	% Native American	% Under-represented
Year 2	3	1	33%	1	33%	1	33%	1	33%		0%	0	0%	67%
Year 3	15	6	40%	7	47%	3	20%	4	27%		0%	1	7%	53%
Year 4	20	6	30%	6	30%	10	50%	4	20%		0%	0	0%	70%
Year 5	6	4	67%	3	50%	1	17%		0%	2	33%	0	0%	17%
Year 6	26	11	42%	7	27%	14	54%	1	4%	1	4%	0	0%	58%
Year 7	35	22	63%	12	34%	21	60%	1	3%	1	3%	0	0%	63%
	GRADUATES	Women	% Women	White	% White	Black	% Black	Hispanic	% Hispanic	Asian	% Asian	Native American	% Native American	% Under-represented
Year 2	71	19	27%	42	59%	1	1%	4	6%	24	34%	0	0%	7%
Year 3	57	11	19%	35	61%	2	4%	2	4%	16	28%	2	4%	11%
Year 4	62	16	26%	43	69%	5	8%	3	5%	12	19%	2	3%	16%
Year 5	60	13	22%	41	68%	6	10%	7	12%	6	10%	2	3%	25%
Year 6	40	9	23%	24	60%	4	10%	3	8%	7	18%	2	5%	23%
Year 7	47	11	23%	21	45%	10	21%	3	6%	10	21%	1	2%	30%

Diversity: Staffs and Faculty

Citizenship and Gender: (Center staff/faculty + ADMI faculty participants = 60)



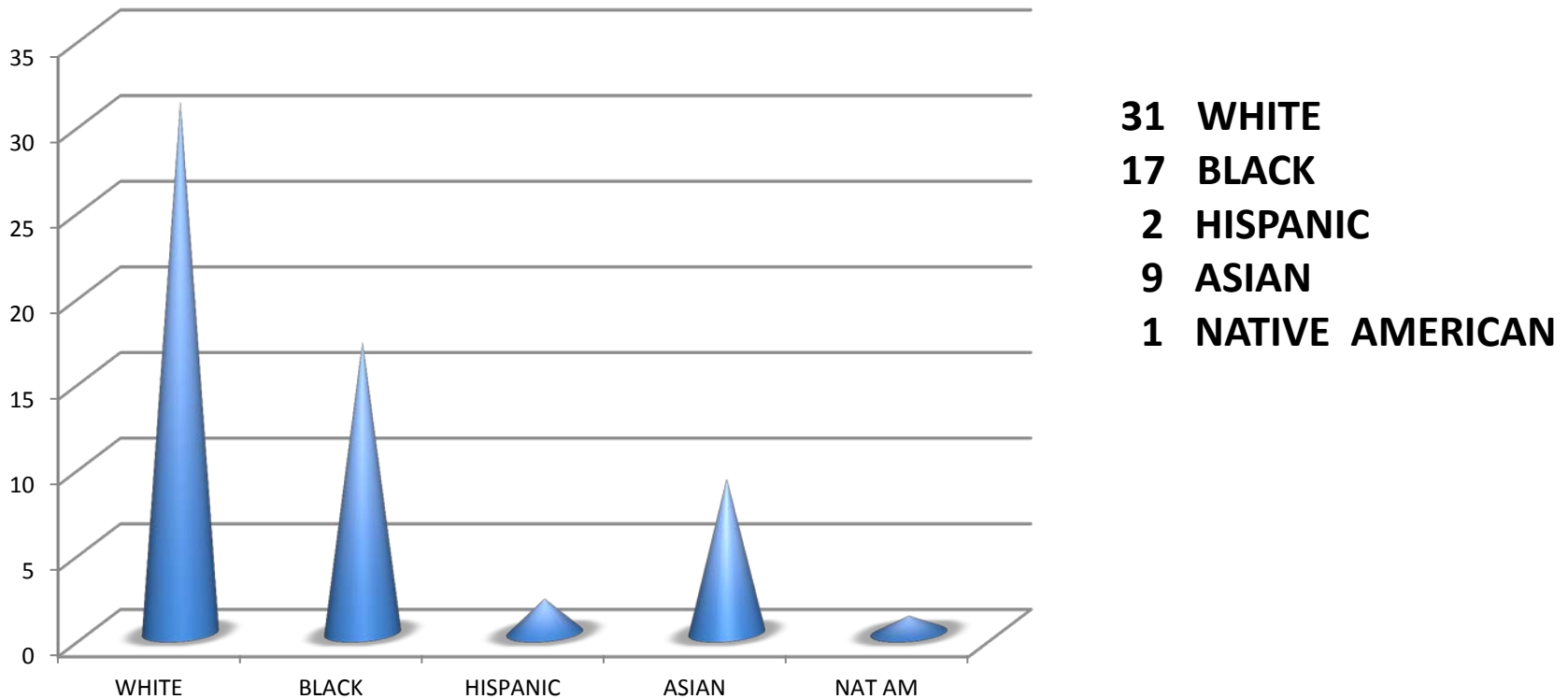
51 US CITIZEN
4 NON-US CITIZEN
5 PERMANENT RESIDENT



22 FEMALE
38 MALE

Diversity: Staffs and Faculty (D)

(Center staff/faculty + ADMI faculty participants = 60)



Conclusion

The Center has experienced significant success in minority graduate recruitment. Most notably, during Year 7, the percentage of underrepresented minority graduate students was at 30% compared to 7% in Year 2. The underrepresented minority graduate students include both Hispanic and African-American student populations.

3 students have applied for graduate school at Indiana University for Fall 2012. All 3 students are underrepresented minorities (2 African-American, 1 Hispanic; 2 females, 1 male) and have each participated in the CReSIS REU program at IU.

The current KU Education Coordinator has been actively engaged in recruiting students from Haskell Indian Nations University (MSI, TCU). Outreach activities include setting up informational tables promoting REU program; visiting science based classes and providing overview for CReSIS and opportunities for undergraduate and graduate students; and visiting with new freshmen to discuss student persistence and including information about the Center.

“what works” and what has not worked @CReSIS

Works: Partnerships with MSIs and Minority Professional Organizations (MPO) **

Works: 2 or more internships **

Works: Teams of 2 or more students on research project

Works: Joint publications, conference presentations and thesis committees

Works: Outreach to minority school districts

Works: Virtual mentoring of research teams with graduate student mentoring awards

Works: Academic Year Follow-up activities

Works: Collaborations with existing minority programs at partner sites

Has not Worked: At MPO conferences, attend only for recruitment

Works: 2 or more internships **



Bryce Carmichael: BS/ECSU in CS/GIS; MS/ECU in Geography
2 Internships at KU + 1 internship at PSU + 4 AY projects at ECSU



Jerome Mitchell: BS/ECSU in CS; MS/KU in CS; PhD Candidate/IU
2 internships at KU + 4 AY projects at ECSU



Randy Justin: BS/U.New Orleans; current MS/PSU in Geosciences
2 internships at PSU



Kaiem Frink: BS/ECSU in CS; MS/ECSU in Math
2 internships at ECSU + 4 AY project at ECSU



JerNettie Burney: BS/ECSU in CS; Starts MS in CS at IU Fall 2012
2 internships at IU + 4 AY projects at ECSU

Here are a few student alumni



Amber Smith: BS/ NCCU in math , MS/NCSU in math
1 internship at ECSU, 1 internship at PSU



Michael Jefferson: BS/ECSU in CS; current MS/ECSU in Math
1 internship at KU, 1 internship at ECSU + 4 AY projects at ECSU



Rodolfo Bernal: BS/FSU in Math; MS/NCAT in Math
1 internship at KU



Robyn Evans: BS/ECSU in Math; Starts MS in CI at IU Fall'12
2 internships at IU, 4 AY projects at ECSU



Je'aime Powell: BS/ECSU in CS; MS/ECSU in Math;
2 internships at ECSU, MS thesis with IU + 4 AY projects at ECSU

Works: Partnerships with MSIs and Minority Professional Organizations (MPO) **

Minority Professional Organizations have long been committed to mentoring and nurturing the professional development of underrepresented students. They provide a rich source of expertise and commitment.

Consider Partnership with these Minority Professional Organizations

- National Association of Black Geologists and Geophysicists (NABGG)
- Advancing Hispanic/Chicano and Native Americans in Science (SACNAS)
- The Association of Computer and Information Science/Engineering Departments at Minority Institutions (ADMI)
- National Society of Black Physicists (NSBP)
- National Association of Mathematicians (NAM)
- National Society of Black Engineers (NSBE)
- National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE)
- National Alliance of Black School Educators (NABSE)
- National Technical Association, Inc. (NTA)
- National Institute of Science (NIS)

Starting the Partnership

Think Out of the Box

*Provide scholarships or awards for several students at their MSI home institution in the name of the MPO & STC. Make the awards at the annual conference.

*Present research based papers and workshops at their conference or event.

*Have the MPO to send a rep to your events or even phoneconferences.

*Make sure students apply for the REU programs. At least 4-5 per summer.

*

*

*

We will come back to this list after we hear from the MPOs on the panel.



National Institute of Science



<http://www.nationalinstituteofscience.org/>

Sister organization, Beta Kappa Chi Scientific Honor Society

Goal

To increase the number of well-trained minority scientists by providing students with information concerning academic support, research To promote scholarly activities in the sciences, including research and science education.

To form partnerships among host institutions, local NIS Clubs, area high schools and the surrounding communities.



National Institute of Science



(NIS) is one of the oldest national scientific membership organizations to serve students and staff from Historically Black Colleges and Universities.

Established in 1943 as the National Association of Science Teachers in Negro Schools, the organization was formed to promote the professional growth of African American scientists and improve science training and research, at Historically Black Colleges and Universities.

The 2013 meeting will be hosted by the University of the District of Columbia and will be held on March 20-24, 2013 in Washington DC

President and Archivist: Dr. Ruby Broadway, Dillard University, New Orleans, LA
rbroadway@dillard.edu

Vice President: Dr. Oswald Tekyi-Mensah, Alabama State University,
Montgomery, AL 334-229-5118

Executive Secretary: Ms. Kim Fenwick, University of the District of Columbia, Washington, DC
kfenwick@udc.edu



National Association of Black Geologists and Geophysicists (NABGG)

NABGG is a nonprofit organization established by black geoscientists in 1981. The organization, with members from all over the world, informs minority students of career opportunities that exist in Geoscience, provides a networking platform for minority geoscientists to establish professional relationships that benefit students, employees, employers, and their local communities.

- **President** : Michael Carrol, [Hunt Oil](#)
- **Vice President** : Jerome Murphy, [ExxonMobil](#) _____

NABGG will diligently increase minority representation in the geosciences through partnerships with academia and by mentoring undergraduate as well as graduate students. NABGG is committed to the continuous training and development of aspiring and practicing geoscientists.

Geological Society of America Convention in Denver

<http://www.nabgg.com/> nabgg_us@hotmail.com

4212 San Felipe, Suite 420 Houston , TX 77027 USA

Phone: (713) 393-6292 Fax: (713) 393-6215

2012 Conference is Sept 5-8, 2012 in Washington, DC



National Association of Black Geologists and Geophysicists (NABGG)

- Inform students of career opportunities that exist in the field of Geosciences - Encourage them to take advantage of scholarship programs, grant, loans, etc., that are established for minority students. - Give financial support to students pursuing degrees in Geology and Geophysics. - Follow the educational careers of the scholarship recipients. - Aid minority students in the search for summer employment and aid corporate members interested in obtaining summer employees for positions that will enhance the students' background and marketability.
- Allow minority geologists and geophysicists to establish professional and inter-company relationships - Assist in the development of professional standards and practices of members within their geoscience careers and entrepreneurial pursuits.

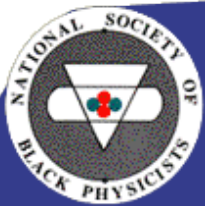


NABGG Challenges

- Increase our outreach participation in schools and colleges throughout the United States
- Increase our technical programs and mentoring
- Promoting NABGG to other geoscientists and organizations
- Increasing Scholarship Funds
- Signing up new members
- Attracting individuals, universities, companies, and organizations interested in our outreach goals and our membership as a source for employees.



- *SACNAS is a society of scientists dedicated to fostering the success of Hispanic/Chicano and Native American scientists—from college students to professionals—to attain advanced degrees, careers, and positions of leadership.*
- **2012 SACNAS NATIONAL CONFERENCE Thursday, Oct 11, 2012 – Sunday, Oct 14, 2012.**
The 2012 SACNAS National Conference "Science, Technology, and Diversity for a Healthy World" will take place in Seattle, Washington.
- Tel: 831-459-0170
- P.O. Box 8526 Santa Cruz, CA 95061-8526
- Executive Director: **Ernest Márquez, PhD** info@sacnas.org
- **Ex Officio Members:** Jose (J.D.) Garcia, PhD
- <http://sacnas.org/>



NATIONAL SOCIETY OF BLACK PHYSICISTS

NSBP

The purpose and mission of the National Society of Black Physicists is to promote the professional well-being of African American physicists within the international scientific community and within society at large. The organization seeks to develop and support efforts to increase opportunities for African Americans in physics and to **increase their numbers** and visibility of their scientific work. It also seeks to develop activities and programs that highlight and enhance the benefits of the scientific contributions that African American physicists provide for the international community. The society seeks to raise the general knowledge and appreciation of physics in the African American community.

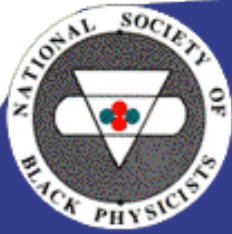
6704G Lee Highway

Arlington, VA 22205

Phone: (703) 536-4207 Fax: (703) 536-4203

<http://nsbp.org>

Conference: November 8-10, 2012 Caribe Royale Hotel, Orlando, FL &
NASA's Kennedy Space Center



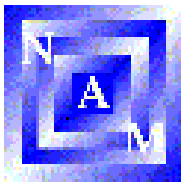
NATIONAL SOCIETY OF BLACK PHYSICISTS

NSBP

- Phone: (703) 536-4207 Fax: (703) 536-4203
- <http://www.nsbp.org>
- headquartrs@nsbp.org

- **President:** Paul Gueye, Hampton University
- Past President: Peter Delfyett University of Central Florida
- **Administrative Executive Officer** Apriel Hodari, Center for Naval Analysis Corporation

- Administrative Executive Officer Hakeem Oluseyi, Florida Institute of Technology

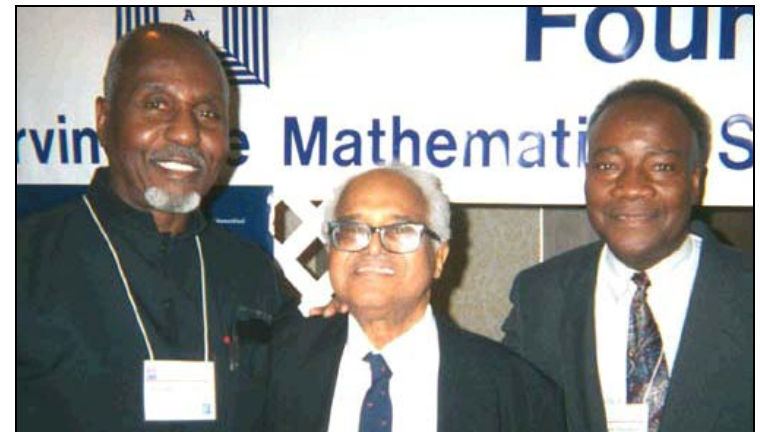


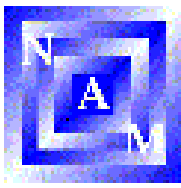
National Association of Mathematicians (NAM)

The National Association of Mathematicians (NAM), a non-profit professional organization, has always had as its main objectives, the promotion of excellence in the mathematical sciences and the promotion of the mathematical development of underrepresented American minorities. It also aims to address the issue of the serious under-representation of minorities in the workforce of mathematical scientists. The organization achieves its goals by focusing on five areas:

- Mathematics Education
- Professional/Career Development
- Scholarly Productivity
- Student Development
- Databases

Although the majority of members consist of members of under-represented groups of American minorities, a significant number of members represent a cross-section of the mathematical sciences community. Membership is open to all.





National Association of Mathematicians (NAM)

- **Nathaniel Dean, President, Texas Southern University**
Department of Mathematical Sciences NSC 129 TSU 3100 Cleburne Ave
Houston, TX 77004
(713) 348-6113 voice (713) 348-5318 fax dean_nx@tsu.edu
- **Roselyn Williams, Secretary/Treasurer**
Department of Mathematics Florida A & M University Tallahassee, FL
32307(850) 599 - 3595 (O)(850) 599 - 8480 (F)
roselyn.williams@mail.famu.edu
- **Dr. Houston, (ex-officio), Elizabeth City State University**
Mathematics and Computer Science Dept. ECSU
1704 Weeksville Rd. Elizabeth City, NC 27909
(252) 335-3461 voice (252) 335-3651 fax jlhouston@mail.ecsu.edu
- **NAM Undergraduate MATHFest XXII will be held at Morgan State University in Baltimore, MD on November 8, 9, and 10, 2012**

National Organization for the Professional Advancement of Black Chemists and Chemical Engineers



- # **Dr. Bobby Wilson, Executive Board Chair** Texas Southern University
chair@nobicche.org
- # **Dr. John Harkless, Vice President** Howard University (202) 806-6891
vicepresident@nobicche.org
- # **Dr. Victor McCrary, President** Johns Hopkins University Applied Physics Laboratory (240) 228-1763
president@nobicche.org
- # **Conference will be held in Washington, DC Sept . 25-28, 2012**

NOBCChE is committed to the discovery, transmittal, and application of knowledge in the fields of science and engineering. The mission of NOBCChE therefore is to build an eminent community of scientists and engineers by increasing the number of minorities in these fields. NOBCChE will achieve its mission through diverse programs designed to foster professional development and encourage students to pursue careers in science and technical fields.

To this end, NOBCChE establishes educational partnerships with school districts, municipalities, businesses, industries, other institutions and organizations in the public and private sectors.

NOBCChE National Office P.O. Box 77040 Washington, DC 20013
1-800-776-1419 Fax 202-667-1705 <http://www.nobicche.org>



Next conference: Nov. 14-18, 2012 In Nashville, TX
<http://www.nabse.org/conference/Conference12.html>

<http://www.nabse.org/>

- **The National Alliance of Black School Educators (NABSE)** is the nation's premiere non-profit organization devoted to furthering the academic success for the nation's children - particularly children of African descent. Now in its 38th year, NABSE boasts an outreach to more than 10,000 preeminent educators including teachers, administrators, superintendents as well as corporate and institutional members. Founded in 1970, NABSE is dedicated to improving both the educational experiences and accomplishments of African American youth through the development and use of instructional and motivational methods that increase levels of inspiration, attendance and overall achievement.
- **National Alliance of Black School Educators 310 Pennsylvania Avenue SE Washington, DC 20003** Telephone: 202-608-6310 / 800-221-2654 FAX: 202-608-6319E-mail: info@nabse.org



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- ***Deborah Hunter-Harvill, Ed.D. Superintendent Westwood Heights email: debharvil@aol.com***
- **Higher Education**
- ***Michael D. Scott, Sr. Gary Community Schools Corporation Board Member email: mscott@m-sconsultants.com Anthony A. Fears, Ph.D. Adjunct Professor Coppin State University, Baltimore and The University of Phoenix, Maryland email: Anthonya.fears@yahoo.com***
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**President: Ms. Sherry Gibson, Baton Rouge Community College, Baton Rouge, LA
(225) 216-8226 gibsons@mybr.cc**

**Vice President and Archivist: Dr. Ruby Broadway, Dillard University, New Orleans LA (504)
283-8822 rbroadway@dillard.edu**

**Executive Secretary: Dr. Elaine Eatman, Hampton University, Hampton, VA
(757) 727-5267 elaine.eatman@hamptonu.edu**

2013 meeting will be hosted by the University of the District of Columbia and will be held on March 20-24, 2013 in Washington DC.



National Technical Association

Nurturing Scientists, Engineers, Technologists & Educators since 1925



National Technical Association, Inc.

The National Technical Association (NTA) is dedicated to:

- Encouraging minority youth and women to choose careers in science and technology;
- Creating access and opportunity to science/technology careers through academic preparation and awareness;
- Building networks for practitioners and educators in fields of science and technology; and
- Recognizing, honoring, and preserving the legacy of minority pioneers in technological fields.

NTA has pioneered a new paradigm for professional associations operating in a proactive business mode and working closely with industry and government leaders

<http://www.ntaonline.org>

1200 G Street, N.W., Suite 800, Washington D.C. 20005

Phone: (202) 575 - 4NTA



NTA has been The Minority Technical Voice - since 1925

- President - Allan C. Harris
- Immediate Past President - Hattie Carwell
- **Challenges**
 - Training – presentations
 - Sponsorships – science/technology/robotics camps, other technical journals, tickets to functions, etc....
 - Registration/Travel funds – support for students to attend conference, meetings
 - Pipeline or follow -up activities for scholarship students

84th Annual National Technical Association Conference *September 19 - 21, 2012*
Morgan State University Student Center



National Technical Association

- In today's economy, it's important to have friends! Whether they're called partnerships or alliances, it's all about identifying people and organizations who can work together to reach a goal faster, smarter and "cheaper."
- NTA recognizes its long-standing relationships with governmental agencies and corporations, and is looking to expand its interactions with other not-for-profit entities in its quest to achieve its mission.
- Their partners share in the success of their national and local programs, and they continue to provide avenues to reach African-American technical professionals and students.
- For more information about partnering with the NTA, contact: Hattie Carwell (510) 735 – 5057. She will tailor a package specific to your organization's needs and goals.

<http://www.ntaonline.org>



- **Rebecca Caldwell , President,** Winston Salem State University (336) 750-2493
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- **Andrea Lawrence, Board Member & CReSIS Representative,** Spelman College
350 Spelman Lane Atlanta, GA 30314
(404) 223-7616 voice (404) 215-7923 fax lawrence@spelman.edu



What is ADMI? The Association of Computer/Information Sciences and Engineering Departments at Minority Institutions (ADMI) was founded in August 1989. It was established as a national organization dedicated to exploring and providing remedies to the educational issues in computer/information science and computer engineering that confront minority institutions of higher education.

Annual Symposium Each year, the Association of Computer and Information Science/Engineering Departments at Minority Institutions (ADMI) hosts a symposium devoted to computing issues relevant to minority students, education and institutions.

Collaborations

An important facet of the symposium is the opportunity to explore collaborations between major research institutions, industry and minority institutions. Students present papers and explore graduate school options.



Challenges

- Sponsorship for student and mentor travel to conferences
- Identifying speakers and resources for conferences and school visitations
- Co-hosting of annual conferences in conjunction with other national conferences
- Guidance to students for pipeline programs
- Scholarship support
- Increased visibility within the professional community



ADMI & CReSIS



- Dr. Andrea Lawrence is the ADMI Co-PI for the CReSIS subcontract.
- The CReSIS subcontract to ADMI supports:
 1. Involvement of MSI faculty members in CReSIS related regional workshops. The Science Cloud Workshop will be held July 30-August 3, 2012 at Indiana University.
 2. Support for students to present research and for CReSIS related sessions during the ADMI annual conference. Will be held in Washington, D.C. with Howard University and the University of the District of Columbia as hosts. April 12-14, 2012.
 3. Support for student participation in summer research training activities. The program was held May 29 - July 20, 2012.



The Symposium on Computing at Minority Institutions
April 12 - 14, 2012, Howard University, Washington, DC

Personalized Computing: From the Apps to the Clouds

42 students have been approved for travel support to present research posters and papers. CReSIS workshop for students will be led by Darryl Monteau, KU Education Coordinator.





cloud computing workshop



CReSIS related regional workshops

- Ten faculty from 7 institutions participated
- 70% of participants were African American
- 40% were women,
- 30% were Asian.

Institutions represented included:

Hampton University
Mississippi Valley State University
Norfolk State University
Jackson State University
Auburn University
Elizabeth City State University



Starting the Partnership

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*Present research based papers and workshops at their conference or event.

*Have the MPO to send a rep to your events or even phone conferences.

*Make sure students apply for the REU programs. At least 4-5 per summer.

*Support student attendance and presentations at the MPO conference.

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We need to add other ideas for partnering, which immediately come to mind.

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