

Celebrate

Black History Month

because of the actions of others, our opportunities are limitless



ABOUT NSBE BIRMINGHAM

The National Society of Black Engineers (NSBE) Birmingham Professionals Chapter is a 501(c) (3) non-profit association dedicated to the academic and professional success of African American engineering and technical students and professionals

Our mission is to increase the number of culturally responsible black engineers, who excel academically, succeed professionally and positively impact the community. **NSBE-Birmingham** fulfills the mission of NSBE by organizing, sponsoring, and attending an array of workshops, community activities, scholarship funding, mentoring, and networking events.

We facilitate the development of strong technical professionals and leaders, encourage minority students to eagerly seek out degrees in Science, Technology, Engineering and Mathematics related fields, and empower the community with the knowledge and foresight to strengthen the very foundation that enables our community as a whole to achieve greater heights.

CHAPTER OBJECTIVES:

- Stimulate and develop student interest in the various engineering disciplines.
- Encourage and advise minority youth in their pursuit of an engineering career.
- Strive to increase the number of students studying engineering at the undergraduate and graduate levels.
- Encourage members to seek advanced degrees in engineering or related fields and to obtain/maintain professional engineering registrations.
- Promote public awareness of engineering and the opportunities for blacks and other minorities in that profession.
- Function as a representative body on issues and developments that affect the careers of black engineers.

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10 Influential Black Engineers

There have been some amazing accomplishments from black men and women in the field of engineering. Here are 10 notable engineering figures in black history!



Aprille Ericsson

Aprille Ericsson is a senior deputy instrument manager for NASA's Ice, Cloud and Land Elevation Satellite program, where she works on mapping instruments

for future lunar explorations. In other words, Ericsson has one of the coolest jobs in the universe.

Like any good overachiever, Ericsson's accomplishments started way before her work with NASA. She was the first African-American woman to receive a Ph.D. in mechanical engineering from Howard University and the first American to receive her Ph.D. with an aerospace option in the program. She was also the first African-American woman to receive a Ph.D. at NASA's Goddard Space Flight Center



William Hunter Dammond

William Hunter Dammond was the first African-American graduate of the Western University of Pennsylvania (which later became the

University of Pittsburgh). Dammond graduated with honors from the university in 1893, with a degree in civil engineering [source: Barksdale-Hall].

After assorted professional adventures, Dammond moved to Michigan to work as a bridge engineer. Once there, he hit his stride, inventing an electrical signaling system for railway engineers to recognize the approach of another train and receiving a patent for it [source: U.S. Patent 747,949]. In 1906, he was issued another patent for a "safety system" for railway operation [source: U.S. Patent 823,513].



Elijah McCoy

If you're looking for an engineer that really impresses you -- look no further than Elijah McCoy, who received his first patent in 1872.

It's not just that he held 57 patents, or that he traveled to Scotland at the age of 15 for an apprenticeship and came back with a mechanical engineering degree. It's not even that he did all this as the son of runaway slaves. Or invented a lubrication device that allowed machines in motion to remain oiled. It's that the lubrication device became so important to the machinery industry that, as lore has it, inspectors would ask those running the equipment if they were using "the real McCoy." Yup, Elijah McCoy's engineering is so famous that his name is synonymous with the genuine article. Quite ironically, however, there are several "real McCoy" origin stories, so don't be too quick to label this story -- it must be said -- the real McCoy



George Biddle Kelley

In 1908, George Biddle Kelley graduated from Cornell University's College of Civil Engineering. He became the first African-American engineer registered in

the state of New York. Among other endeavors, he was employed by the New York Engineering Department, where he worked on the Barge Canal, a collection of state waterways, during the 1920s. His legacy remains through the George Biddle Kelley scholarship, which aims to mentor and provide educational funds for socioeconomically disadvantaged males in upstate New York [source: George Biddle Kelley Foundation].

The accomplished engineer dedicated to furthering education in young people has another important credit to his name: He was a founding member of the Alpha Phi Alpha fraternity, the oldest black Greek fraternal organization. According to the organization, he was also instrumental in creating the "handshake and ritual" that identifies fraternity brothers



Ursula Burns

You all know the story: Lowly intern at massively wealthy company moves up the ladder to become CEO of said company. Or perhaps you don't know the story because it

never really happens. But Ursula Burns -- CEO of Xerox -- did just that, and became the first African-American CEO of a Fortune 500 company as well.

Burns joined Xerox fresh out of Columbia University, where she received her master's degree in mechanical engineering. She soon was working closely with one of the division presidents and was given a title of president in 2007. In 2009, she was named CEO -- nearly 30 years after the world's most successful summer internship



Howard Grant

Howard Grant is a terrific example of an engineer who systematically built a stellar reputation through his groundbreaking career and myriad of professional activities.

Born in 1925, Grant became the first black graduate of the University of California Berkeley College of Engineering -- and that was just his first first. He went on to become the first black engineer for the city and county of San Francisco, where he addressed water engineering issues, and the first recorded black member of the American Society of Civil Engineers (that's three "firsts" if you're counting). He was also the man behind the Northern California Council of Black Professional Engineers, an organization that helps introduce the engineering field to black youth

(Continued on next page)

Chapter Announcements



Please welcome new member



Ashley Parker
Industrial Engineer Manager,
F.S. Fehrer Automotive

10 Influential Black Engineers (Cont'd)



Walt Braithwaite

Walt Braithwaite received a degree in engineering in 1966 and joined up with Boeing the same year. Just as commercial flying was taking off, Braithwaite began flying up the ladder,

leading and developing some of the most important aircraft and systems.

Braithwaite's team developed computer-aided design/computer-aided manufacturing (CAD/CAM) systems for Boeing, which led the way for airplanes and, eventually, many other products designed entirely through software. Braithwaite became the highest-ranking black executive at Boeing when he was named president of Boeing Africa in 2000.

Hugh G. Robinson

Hugh G. Robinson became a high-ranking general as an engineer in the Army. He graduated in 1954 from West Point and went on to receive his master's degree in civil engineering from the Massachusetts Institute of Technology (MIT). In Vietnam, he commanded a combat engineering battalion and was the executive officer of an Engineer Group.

After his Vietnam tour, Johnson headed for the Pentagon as a deputy chief of staff, becoming the first black soldier to serve as a military aide to a president, under Lyndon Johnson in 1965. In 1978, he was promoted to brigadier general -- the first African-American to serve as a general officer in the Corps of Engineers. Robinson also received an Air Medal, a Bronze Star, the Legion of Merit and an Army Commendation Medal for his service in Vietnam



Wanda Austin

Dr. Wanda Austin, armed with a doctorate in systems engineering from the University of Southern California, has been instrumental not only in shaping the U.S. aerospace industry, but also in ensuring national

security within the space community. Even President Obama thought she was important enough to put her on a board to review and plan future space missions.

Austin became a senior vice president of the Aerospace Corporation, an independent research and development center serving national space programs, in 2001. She eventually led a group responsible for supporting the intelligence and security community in space systems and ground stations [source: NASA]. In 2008, Austin vaulted from VP to president and CEO of the corporation. In 2009, she landed a position on President Obama's Review of Human Spaceflight Plans Committee, who have come together to advise the government on the future of space missions.



Otis Frank Boykin

Otis Frank Boykin was an African-American engineer and inventor from Texas. He worked in Illinois Institute of Technology and Fisk University.

In his lifetime, Otis invented more than 25 electronic components. His first invention was variable resistor, which could be used on radio, televisions and computers. Among his notable inventions was an improved type of variable resistor, which can be used on guided missile and other military equipments. Otis Boykin also contributed significantly in the medical field by inventing a pacemaker controller, which can deliver steady electrical impulse to keep heartbeat regular.

volunteer opportunities

Birmingham City Schools is looking for volunteers to help teach robotics in some of their classrooms. The training is an easy one-day process, and the kits are easy to assemble.

The program feels it is important to try to find as many people as possible from STEM-related careers (specifically, engineers) because they will be better explain the way the Lego kits work, and how the principles the kits teach apply to life outside the classroom.

Questions should be directed to Ian Shippey at ipshipp52@gmail.com or by phone at (256) 783-6645.

MORE NSBE SITES

NSBE National

<http://www.nsbe.org>

NSBE Region 3

<http://www.nsbe.org/Regions/Region3/default.aspx>

NSBE Montgomery

<http://www.nsbe-mae.org>

NSBE of North Alabama

<http://www.nsbe-northalabamaae.com>

Updates on FEA Events



Auburn University Campus Tour February 26

Future Engineers of America (FEA) will be hosting a campus tour to Auburn University on February 26th 2016.

Auburn Engineering's annual open house gives students a chance to learn about the campus, programs and the incredible opportunities Auburn's Samuel Ginn College of Engineering offers.

Students will have the opportunity to chat one-on-one with students and faculty, experience interactive exhibits, and visit classes and labs, including the new Shelby Center for Engineering Technology. They can also tour the beautiful Auburn campus, and learn about admissions, scholarships, financial aid and residence life.

To register for the event go to please complete a permission slip and return it to the PCI Chairs

LUNCH WILL BE PROVIDED to FEA students traveling with NSBE Birmingham!

Students interested in attending Auburn University are encouraged to seriously consider making the trip.



Save the Date The Next Meeting is February 21st

The next FEA meeting is scheduled for February 21, 2015. The agenda will include a presentation [Nuclear Engineering](#)

FEA meetings are held at the Alabama Corporate Headquarters. Located at:

600 North 18th Street
Birmingham, AL 35203

Those interested in volunteering as FEA advisors should contact the PCI co-chairs at pci@nsbebham.org

Scholarship Opportunities

NSBE Birmingham

NSBE Birmingham is awarding scholarships to qualified high school seniors who plan to enroll in an Engineering program in the upcoming summer or fall term.

Students can apply directly to NSBE's online application (www.nsbebham.org)

Following the application review process, students invited to interview should be prepared to bring the following:

- Resume
- Two (2) personal reference forms
- A copy of ACT and/or SAT score(s)
- Sealed high school transcript

Future Engineers of America (FEA) is led by PCI co-chairs Julian Grant and Kreana Pye



Julian Grant



Kreana Pye

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www.nsbebham.org

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Save the Date

What: iCan Girls Engineering Conference

Where: Alabama Power Corporate Headquarters

When: Saturday, March 5, 2016

Time: 9 a.m. – 3 p.m.

If you are interested in helping in the planning stages or as an “event-day-only” volunteer, contact Johana Dumeng-Roman at jdumegr@southernco.com or 257-4863 or Jessica Smoke at jsmoke@southernco.com or 257-4255.



2015-2016: NSBE Birmingham Planned Events



Sign Up!



NSBE Birmingham will host its next General Body Meeting on **February 8, 2016** at

Pappadeaux Seafood Kitchen
3500 Grandview Pkwy
Cahaba Heights, AL 35243

The speaker for the night will be
Judge Shera Grant



To sign up please accept the calendar entry or contact Jermaine Clements at programs@nsbebbham.org

NSBE Birmingham is excited about the upcoming programs and events that will be offered this year!

Mark your calendars for planned activities.

February

- General Body Meeting (Feb 8)
- Future Engineers of America (Feb 21)
Alabama Power HQ

March

- Future Engineers of America (March 13)
Alabama Power HQ
- Scholarship Application Review Process

April

- Future Engineers of America (Apr 13)
Alabama Power HQ
- Scholarship Interviews

May

- Future Engineers of America (May 1)
Alabama Power HQ
- 35th Annual Scholarship Banquet (May 7)
McWane Science Center

June

- NSBE Birmingham Executive Board
Nominations & Elections

July

- NSBE Birmingham Family Fun Day
(TBD)

To volunteer to help organize these events please contact the Programs & Membership Chair, **Jermaine Clements**, at programs@nsbebbham.org



Jermaine Clements

Visit us at

www.nsbebbham.org



<http://www.linkedin.com/groups/NSBE-Birmingham-Professional>

SAVE THE DATE



The 35th Annual NSBE Scholarship Banquet will be held on May 7th. This year's Speaker is **Dr. Kelley Castlin-Gacutan** Superintendent of Birmingham City Schools.

Give Us Your Feedback!

What can we do to improve your membership experience?

Please send comments and suggestions to our

Programs/Membership Chair at membership@nsbebham.org

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Birmingham Professionals**

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