

A RETROSPECTIVE

November 2015



AICHE Minority Affairs Committee

*Celebrating a Quarter-Century
of Service to the Chemical
Engineering Community*

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The AIChE® Minority Affairs Committee
25th Anniversary Celebration
November 9, 2015 • Salt Lake City, Utah

“On behalf of the members of the AIChE’s Board of Directors, I would like to extend our sincerest congratulations — and most importantly, our thanks — to all the members, both past and present, of the Minority Affairs Committee, for their dedication in promoting diversity and inclusion in our profession, our workplace and within the AIChE. I am inspired by MAC’s commitment to ensuring that everyone within the chemical engineering community has an equal voice within our profession.”

— *Cheryl I. Teich*
AIChE 2015 President

“On the occasion of this 25th Anniversary celebration, AIChE takes great pride in the accomplishments of our Minority Affairs Committee, which for more than a quarter century has encouraged, inspired and helped to lead the professional development of engineers from underrepresented groups, perhaps most notably younger engineers. It is gratifying to reflect on the history of MAC’s countless achievements, and to see the numerous chemical engineers who serve in prominent roles within AIChE and our profession because of the advocacy, support and mentoring provided by our MAC leaders. Congratulations on this important milestone.”

— *June C. Wispelwey*
AIChE Executive Director

About the Minority Affairs Committee (MAC):

AIChE’s Minority Affairs Committee promotes activities that encourage the education and training of disadvantaged minorities in engineering and related disciplines; fosters the employment of minorities at all levels of skills within the engineering field; encourages minority entrepreneurship; and directs the expertise of engineers to the solution of special social and economic problems faced by such minorities. It also serves as a clearinghouse for information on programs, meetings, and contacts involving ethnic minorities where AIChE could, or might, be able to make a contribution to this societal problem area.

Pioneers of Diversity

The Pioneers of Diversity Awards were conceived to coincide with the AIChE Minority Affairs Committee's (MAC's) 25th Anniversary celebration, held during the 2015 AIChE Annual Meeting. The awards honor the career achievements and leadership contributions of chemical engineers who have shaped MAC's progress and promoted diversity within AIChE and the profession. The committee honors the experience and vision of these Pioneers of Diversity — as an acknowledgment of the progress that the Institute has made in support of diversity and inclusion, and as a way to focus light on the future ways in which MAC and AIChE can advance diversity and inclusion.

On November 9, 2015, these Pioneers of Diversity received honors at a special session held during the AIChE Annual Meeting in Salt Lake City, Utah.

Pioneers of Diversity



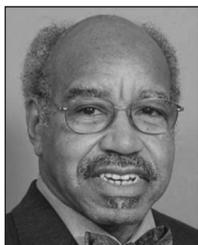
Dr. Luke E. K. Achenie

- AICHE Fellow
- Chair, MAC (2004)
- MAC Distinguished Service Award

*“Recognized for his many years of service
and dedication to the Minority Affairs Committee.”*

Luke Achenie is Professor of Chemical Engineering and Health Sciences at Virginia Polytechnic Institute, where his research focuses on multi-scale molecular modeling (using agent-based approaches), machine learning, blood-brain-barrier modeling, pharmacokinetic modeling, uncertainty analysis, process design, and math programming. He has documented his work in more than 150 publications and 12 book chapters, and is the editor of “Computer Aided Molecular Design: Theory and Practice.” He earned his BS in chemical engineering at the Massachusetts Institute of Technology, an MS in engineering science at Northwestern University, and an MS in applied mathematics and a PhD in chemical engineering at Carnegie Mellon University.

Pioneers of Diversity



Mr. Henry T. Brown

Founder recognition

- Director, AIChE (1981–1983)
- AIChE Fellow
- AIChE Foundation Board of Trustees
- AIChE Van Antwerpen Award for Service to the Institute
- MAC Distinguished Service Award
- MAC William W. Grimes Award

“Recognized for exceptional and sustaining contributions to the Minority Affairs Committee — as co-founder of the original Task Force on Minority Youth Career Guidance; as the Institute’s Minority Affairs Coordinator during three decades; and as the tireless implementer and guide to the committee and its leaders.”

Henry Brown — in collaboration with Gerald Lessells — is one of the original advocates for minority engineers in AIChE, beginning in 1968. He co-created AIChE’s first outreach initiatives for underrepresented engineers, and held the position of AIChE’s Minority Affairs Coordinator from 1983 through 2001. He remains a guide and mentor to the committee’s leaders and active participants.

After earning BS and MS degrees in chemical engineering from the University of Cincinnati and the Massachusetts Institute of Technology, respectively, Brown worked for Esso Research & Engineering Company from 1956 to 1967. After working for E. R. Squibb & Sons as a development engineer, in 1972 he joined Polaroid Corporation, where he retired as plant manager of the Integral Coatings Division in 1996. In addition to his service to AIChE, Brown was one of the founders of the New Jersey State Urban Science Education Coalition, and is a Diamond Life Member of the National Association for the Advancement of Colored People (NAACP).

Pioneers of Diversity



Dr. Lance R. Collins

- AIChE Fellow
- MAC Distinguished Service Award
- MAC William W. Grimes Award

“Recognized for his dedication to the Minority Affairs Committee, and for his pioneering role as co-founder and a sustaining leader of the Minority Faculty Forum.”

Lance R. Collins is the Joseph Silbert Dean of Engineering at Cornell University. He joined Cornell in 2002, following eleven years on the chemical engineering faculty of Pennsylvania State University, where he held a joint appointment in the Mechanical and Nuclear Engineering Department. In 2011, Collins was part of the Cornell leadership team that successfully bid to partner with New York City to build a new campus on Roosevelt Island, focused on innovation and commercialization in the tech sector. Collins’ research interests are on the application of direct numerical simulation to a broad range of turbulent processes. He earned his BSE degree at Princeton University, and his MS and PhD at the University of Pennsylvania, all in chemical engineering.

Pioneers of Diversity



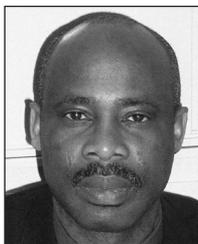
Dr. Andre Da Costa

- Treasurer, AIChE (2011–2013)
- Director, AIChE (2005–2007)
- AIChE Fellow
- AIChE Foundation Board of Trustees

“Recognized for his dedication to the success of the Minority Affairs Committee, exemplified by his involvement and personal investment in many MAC initiatives. He has also served as a role model for underrepresented AIChE members through his service among AIChE’s executive leadership.”

Andre Da Costa is Director of Process Safety at Pacific Gas and Electric Company in the San Francisco Bay area. He previously led Corning Inc.’s global chemical engineering function, and also worked for Chevron in California and Texas, most recently as an engineering manager on a capital improvement project for North America Exploration and Production. Prior to Chevron, he worked on projects in natural gas, refining, and petrochemicals at Membrane Technology and Research, Inc., and gained international experience while working for Fluor Corporation and other organizations in Australia and Africa. Da Costa is co-inventor on 14 U.S. patents and co-author of 30 journal papers. He earned his MS in chemical engineering at Mendeleev University (Moscow, Russia), and his PhD from the University of New South Wales (Australia).

Pioneers of Diversity



Dr. Emmanuel Dada

Founder recognition

- AIChE Fellow
- Chair, MAC (2000–2002)
- Past Chair, AIChE Societal Impact Operating Council
- MAC Distinguished Service Award
- MAC William W. Grimes Award

“Recognized for his exceptional contributions to the Minority Affairs Committee, most notably as the chair and champion of the MAC scholarship programs for nearly 20 years.”

Emmanuel Dada is the President of ChemProcess Technologies, LLC, where he is responsible for process intensification, innovative and emergent technologies in the areas of reactive distillation, microreactor technology, and energy efficient processes. He is also a chemical engineering faculty member at Prairie View A&M University. He previously worked for FMC in many areas of innovative technologies, becoming Associate Research Fellow in 2004. Prior to joining FMC in 1995, he gained experience working at Rohm and Haas. In addition to his leadership in MAC, Dada is a member of AIChE’s Separations Division and Process Development Division, and is active in the South Texas Local Section. He served as General Arrangements Chair for AIChE’s Centennial Annual Meeting in 2008. He earned his BS at the University of Ife, Nigeria, and his MS and PhD at Lehigh University, all in chemical engineering.

Pioneers of Diversity



Dr. L. Antonio Estévez

- AIChE Fellow
- MAC Eminent Chemical Engineer Award

“Recognized for his support of the Minority Affairs Committee, and for his role as a mentor to Hispanic chemical engineering students in AIChE and the profession.”

Antonio Estévez is Professor of Chemical Engineering at the University of Puerto Rico, Mayagüez, where his expertise focuses on reaction engineering, thermodynamics, transport phenomena, and applied mathematics. Within AIChE, he has been active in the Societal Impact Operating Council (SIOC) and the Career and Education Operating Council (CEOC), and at the University of Puerto Rico he was the long-time advisor and mentor to the AIChE student chapter. He is a past president of the Interamerican Confederation of Chemical Engineering. He earned his BS in chemical engineering at the University of Santiago, Chile, his MS in petrochemical processes at the Central University of Venezuela, and his PhD in chemical engineering at the University of California, Davis.

Pioneers of Diversity



Dr. Christine Grant

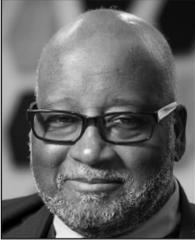
Founder recognition

- **Director, AIChE (2004–2006)**
- **AIChE Fellow**
- **Chair, MAC (2003)**
- **Past Chair, AIChE Societal Impact Operating Council**
- **MAC Distinguished Service Award**
- **MAC Eminent Chemical Engineer Award**

“Recognized for exceptional contributions to the Minority Affairs Committee and to AIChE — in particular for her pioneering coordination and funding initiatives supporting the Minority Faculty Forum, and her mentorship of minority and women engineers in the Institute and in our community.”

Christine Grant is Professor of Chemical and Biomolecular Engineering and Associate Dean of Faculty Development and Special Initiatives in the College of Engineering at North Carolina State University. In 2015, she was one of four U.S. African-American female full chemical engineering professors. Her research focuses on surface and interfacial phenomena in the areas of electronic materials, polymers, and biomedical systems. Grant’s company, CoolSci Productions LLC, coaches and empowers individuals at all academic levels. Her workshops on science, technology, engineering, and math (STEM) mentoring and academic career development for the National Science Foundation’s ADVANCE programs promote empowerment while providing diverse role models. She is also Founding Director of the Promoting Underrepresented Presence on Science and Engineering Faculties (PURPOSE) Institute. Grant has mentored hundreds of faculty, students and postdocs. She earned her BS in chemical engineering at Brown University, and her MS and PhD in chemical engineering at Georgia Institute of Technology.

Pioneers of Diversity



Dr. Michael Harris

- AIChE Fellow
- AIChE Foundation Board of Trustees
- Chair, MAC (2008)
- MAC Distinguished Service Award
- MAC William W. Grimes Award

“Recognized for his ongoing support and generous assistance to the Minority Affairs Committee, including his role as co-chair of the Eminent Engineers Forum.”

Mike Harris is the Associate Dean for Engagement and Undergraduate Education and the Reilly Professor of Chemical Engineering and Professor of Environmental and Ecological Engineering in the College of Engineering at Purdue University. Harris’s research is in the areas of nanomaterials, colloids and interfacial phenomena, transport phenomena, particle science and technology, microwave sensing of pharmaceutical powders, solidification of drug/excipient matrices, environmental control technology, and electrodispersion precipitation processes. Prior to joining Purdue in 2002, he was on the faculty at the University of Maryland, College Park, and a researcher at the Oak Ridge National Laboratory. He is the author of 97 publications and 11 patents. At Purdue he has supervised 22 PhD students, of whom ten have been female and three have been African American. He earned his BS at Mississippi State University, and his MS and PhD from the University of Tennessee, Knoxville — all in chemical engineering.

Pioneers of Diversity



Dr. Cato T. Laurencin

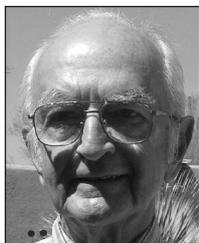
- AIChE Fellow
- National Academy of Engineering
- Institute of Medicine, National Academy of Sciences
- MAC William W. Grimes Award

“Recognized for his generous support of Minority Affairs Committee initiatives, including his role in securing significant funding for MAC’s scholarship programs.”

Cato Laurencin is a Professor of Chemical Engineering, Materials Science, and Biomedical Engineering at the University of Connecticut (UConn), where he is the Van Dusen Distinguished Professor of Orthopaedic Surgery. Laurencin is a University Professor at UConn, the 8th designated in the school’s 130 year history. His work is in biomaterials, nanotechnology, stem cells, and a new field he has pioneered: regenerative engineering. Funded by the National Institute of Health (NIH), the National Science Foundation (NSF), and the U.S. Department of Defense, he received the NIH Director’s Pioneer Award, NIH’s most prestigious research award, for his work in regenerative engineering.

Laurencin received the Presidential Faculty Fellow Award from President Bill Clinton and the Presidential Award for Excellence in Science, Engineering and Math Mentoring from President Barack Obama. He is a member of both the National Academy of Engineering and the National Academy of Medicine. Internationally, he is a Fellow of both the African Academy of Sciences and the World Academy of Sciences. He earned his BSE degree in chemical engineering from Princeton University, his PhD in biochemical engineering/biotechnology from the Massachusetts Institute of Technology, and his MD, *Magna Cum Laude* from Harvard Medical School.

Pioneers of Diversity



Mr. Gerald Lessells

Founder recognition

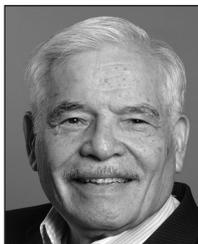
- Director, AIChE (1973–1975)
- AIChE Fellow
- AIChE Award for Service to Society
- AIChE Van Antwerpen Award for Service to the Institute
- MAC William W. Grimes Award

“Recognized for exceptional contributions to the Minority Affairs Committee — as a pioneering driver and advocate for diversity within AIChE; as co-founder of the original Task Force on Minority Youth Career Guidance; and as the Institute’s first Minority Affairs Coordinator.”

In 1968, **Gerry Lessells** initiated AIChE’s effort to raise the profile of minority engineers in the Institute and the chemical engineering profession. His early leadership of AIChE’s Career Guidance Subcommittee for Disadvantaged Youth, and his service as *ad hoc* Minority Affairs Coordinator for the Institute, opened doors to a more diverse AIChE membership, and set the foundation for the formal launch of MAC in 1990.

Lessells’s career in the chemical process industries included many years as Technical Director for the Printing Ink Division of J. M. Huber Corporation. He was a licensed Professional Engineer in Ohio, and has published 27 articles and seven U.S. patents. After retiring to Tucson, Arizona, Lessells did volunteer work in the Department of Chemical and Environmental Engineering at the University of Arizona, and he is currently a volunteer tutor in math and chemistry at Pima Community College. For many years he was active in community organizations dedicated to equal opportunities for minorities in education, housing, and employment, and he is a life member of the National Association for the Advancement of Colored People (NAACP). He has been a member of AIChE for more than 60 years, serving as an officer in the Central Illinois and New Jersey local sections, and as an AIChE director. He earned his BS in chemical engineering practice from the Massachusetts Institute of Technology in 1950.

Pioneers of Diversity



Dr. Thomas Marrero

- AIChE Fellow
- Past Chair, AIChE Societal Impact Operating Council
- MAC Distinguished Service Award
- MAC Eminent Chemical Engineer Award

“Recognized for his dedication and personal commitment to the Minority Affairs Committee, and for his role as a mentor to Hispanic chemical engineering students in AIChE and the profession.”

Thomas Marrero is an emeritus professor in the Department of Chemical Engineering at the University of Missouri, Columbia, where he retired in 2015. His research has focused on sustainability in chemical manufacturing, the use of acetylene for fuel, and mass transport in environmental applications. Prior to joining the University of Missouri faculty in 1979, Marrero gained 15 years of industrial experience working in the nuclear division of Martin-Marietta Corporation, in the research division at W. R. Grace, in the nuclear division of General Electric, and at Babcock & Wilcox. In addition to his many activities within AIChE, he is a past president of the Interamerican Conference of Chemical Engineers. Marrero earned his BS from the Polytechnic Institute of Brooklyn, an MS from Villanova University, and a PhD from the University of Maryland-College Park, all in chemical engineering.

Pioneers of Diversity



Dr. Thomas O. Mensah

- Director, AIChE (1988–1990)
- AIChE Fellow
- AIChE Foundation Board of Trustees
- MAC William W. Grimes Award

“Recognized for his service and dedication to the Minority Affairs Committee — from his early advocacy for the committee to his ongoing strategic leadership, as well as his recent founding and chairmanship of the Eminent Engineers Forum.”

Thomas Mensah is the President and CEO of Georgia Aerospace, a manufacturer of nanocomposites for defense applications, including unmanned area vehicles and missile systems. He is one of the four inventors of fiber optics technologies in the U.S., with seven Pioneering Inventions in a six-year time frame. His patents in the 1980s reduced fiber optics costs to the same level as copper cables. Mensah’s leadership roles in AIChE span 30 years. He is also an Associate Fellow of the American Institute of Aeronautics and Astronautics, and was recently inducted as a Fellow of the National Academy of Inventors. He is the author of three books: “Fiber Optics Engineering” (1987), “Superconductor Engineering” (1992), and “The Right Stuff Comes in Black, Too” — an autobiography (2013). He is the Editor in Chief of the forthcoming AIChE/Wiley book “Frontiers of Nanotechnology.” He holds a PhD in chemical engineering from Montpelier University, and a Certificate in Modeling of Chemical Processes from the Massachusetts Institute of Technology.

Pioneers of Diversity



Dr. Timothy O. Odi

- AICHE Fellow
- Chair, MAC (2013)
- Past Chair, AICHE Societal Impact Operating Council
- MAC Distinguished Service Award

“Recognized for his long-time and consistent leadership and for his personal commitment to the Minority Affairs Committee.”

Timothy O. Odi is an Engineering Fellow at Chevron Phillips Chemical Company. He has more than 25 years of diversified chemical engineering experience in research and development, process engineering, modeling, and optimization with two global chemical/petrochemical companies, as well as three years of university teaching experience. His current work involves modeling and process engineering support of olefin and polyolefin manufacturing technologies. He gained early experience at Phillips Petroleum and Dow Chemical. He has four patents and many publications to his credit. Odi received his BS in chemical engineering, with first class honors, from the University of Lagos, Nigeria, and an MS and PhD in chemical engineering from Northwestern University. He is a registered Professional Engineer in Louisiana, and a Fellow of AICHE and the Nigerian Society of Chemical Engineering.

Pioneers of Diversity



Dr. Irvin W. Osborne-Lee

Founder recognition

- Director, AIChE (1994–1996)
- AIChE Fellow
- Founding Chair of MAC (1990–1993; 2011)
- AIChE Award for Service to Society
- MAC Distinguished Service Award
- MAC Eminent Chemical Engineer Award

“Recognized for his exceptional contributions to the Minority Affairs Committee — marked by more than a quarter-century of continuous guidance and personal commitment to the committee — and highlighted by his service and leadership as the committee’s first chairman. He was also the initiator and catalyst for the committee’s K–12 outreach initiatives.”

Irvin Osborne-Lee is Professor and Head of the Department of Chemical Engineering at Prairie View A&M University, where he is also Associate Director of The Center for Environmentally Beneficial Catalysis. He has been Principal Investigator on numerous projects with such sponsors as the National Science Foundation and the U. S. Department of Energy. He currently leads a project to provide training on nuclear forensic analysis for minority-serving institutions, in partnership with Texas A&M University and Los Alamos National Laboratory, and funded by the U.S. Department of Homeland Security. Prior to joining Prairie View in 1998, he was a member of the development staff and Group Leader at Oak Ridge National Laboratory. Osborne-Lee is a life member of AIChE, where he has served as Director of the Fuels and Petrochemicals Division, as a member of the Societal Impact Operating Council and the Career and Education Operating Council, and on the Board of Directors. He earned his BS, MS, and PhD degrees in chemical engineering at The University of Texas at Austin.

Pioneers of Diversity



Dr. Soni Olufemi Oyekan

- Director, AIChE (1999–2001)
- AIChE Fellow
- Chair, MAC (1998–1999)
- AIChE Foundation Board of Trustees
- MAC Distinguished Service Award
- MAC William W. Grimes Award

“Recognized for his many years of generous support to Minority Affairs Committee initiatives, including his pioneering coordination and securing of funds for the MAC scholarship program.”

Soni Oyekan is the President and Owner of Prafis Energy Solutions and an expert in oil and gas, and oil refining. He has provided technical and process technology management to more than 30 refineries internationally, including 20 refineries of Sunoco, BP/Amoco and Marathon Petroleum between 1986 and 2012. He also managed precious metals catalyst systems for Sunoco and Amoco. His early career included R&D work at Exxon, Engelhard, and DuPont, which resulted in two U.S. and eight foreign patents before 1985. He received his third U.S. patent for a catalytic reforming process in 2014. His inventions for catalytic naphtha reforming are used globally to enhance the production of transportation fuels. He received the 2009 Percy Julian Award from the National Organization for Black Chemists and Chemical Engineers (NOBCCChE) in recognition of his contributions to oil refining. He earned his BS in engineering and applied sciences at Yale University, and his MS and PhD in chemical engineering from Carnegie Mellon University.

Pioneers of Diversity



Dr. Tonya L. Peebles

- Chair, MAC (2006)
- MAC Distinguished Service Award

“Recognized for her service to the Minority Affairs Committee, in particular for her dedication and contributions to the committee’s K–12 outreach initiatives.”

Tonya Peebles is Professor of Chemical and Biomedical Engineering at the University of Iowa, where she is also the College of Engineering’s first Associate Dean for Diversity and Outreach. In this role, she is tasked with ensuring that populations underrepresented in engineering fields are aware of career possibilities offered through an engineering education. At the University of Iowa, Peebles performs research in the Center for Biocatalysis and Bioprocessing, the Nanoscience and Nanotechnology Institute, and the Center for Environmentally Beneficial Catalysts. She has mentored more than 50 undergraduate students working in her research labs. She is also Director of the University of Iowa’s Ethnic Inclusion Effort for Iowa Engineering (eI²). She earned a BS at North Carolina State University and a PhD at Johns Hopkins University, both in chemical engineering, and did post-doctoral work at California Institute of Technology.

Pioneers of Diversity



Dr. Victor G. J. Rodgers

- Past Chair, MAC (1994–1997)
- MAC Distinguished Service Award

“Recognized for his contributions to the Minority Affairs Committee, in particular for his critical leadership in the committee’s first decade.”

Victor Rodgers is the Jacques S. Yeager, Sr., Professor of Bioengineering at the University of California, Riverside. His research team, The B2K Group (Biotransport and Bioreaction Kinetics), applies fundamental principles of transport phenomena, reaction engineering kinetics and thermodynamics to applications in biomedical engineering and bioseparations. His projects include investigating the potential role of redox species in the mitochondria of cells, mathematical mass transfer analysis of dissolved gases and nutrients in bioreactors, experimental analysis of genetically-modified beta cells for a bioartificial pancreas, modeling prediction of drug delivery vehicles, and development of transplantable devices. Rodgers is a Fellow of the American Association for the Advancement of Science and the American Institute for Medical and Biological Engineering. In 2010, he was named Distinguished Engineering Educator of the Year by The Engineers’ Council. He earned his BS and MS in chemical engineering at the University of Dayton and the University of Pittsburgh, respectively, and his DSc in chemical engineering, with a biomedical engineering certificate, at Washington University, St. Louis.

Pioneers of Diversity



Mr. Otis A. Shelton

Founder recognition

- President, AIChE (2014)
- Secretary, AIChE (2004–2006)
- Director, AIChE (2000–2002)
- AIChE Fellow
- AIChE Foundation Board of Trustees
- MAC Eminent Chemical Engineer Award

“Recognized for his exceptional contributions, including formulating strategies to keep the Minority Affairs Committee strong, and helping to implement programs that position MAC as an important asset of AIChE. As an executive officer of AIChE, and as AIChE’s first African-American President, Otis Shelton is a role model for the MAC community.”

Otis Shelton’s AIChE leadership spans the breadth of Institute activities. His leadership as a Board Director (2000–2002) and Secretary (2004–2006) was instrumental in helping to guide the Institute during a challenging period. He served as AIChE President in 2014, and continues his service on numerous AIChE committees. He is also a member of the AIChE Foundation Board of Trustees, where he is a member of the steering committee for the MAC Endowment Fund.

Shelton received his BS and MS degrees in chemical engineering from the University of Houston. In 1967, he began a lengthy tenure at Union Carbide Corporation, with assignments in manufacturing and management. At Union Carbide’s New York City headquarters, he served as a business analyst for the silicones/urethanes intermediates business before transferring to the company’s headquarters in Danbury, Connecticut, as Manager of Financial Analysis. In 1986, he helped lead the development and implementation of a corporate Health, Safety and Environmental Audit program that provided in-depth assessments of Union Carbide’s worldwide manufacturing facilities. In 1992, Shelton joined Praxair, where he led the Safety and Environmental Assessment Program for the company’s facilities worldwide. He directed the program until his retirement in 2012.

Pioneers of Diversity



Dr. Arnold F. Stancell

- AIChE Fellow
- AIChE Award in Chemical Engineering Practice
- Board Member, National Academy of Engineering
- Governing Board, National Research Council

“Recognized for his accomplishments in the profession and for securing significant financial support for the Minority Affairs Committee’s scholarship programs.”

Arnold Stancell is a retired vice president at Mobil Oil, and Emeritus Professor at the Georgia Institute of Technology. After receiving his BS in chemical engineering at City College of New York, Stancell became the first African American to earn a PhD in chemical engineering at the Massachusetts Institute of Technology. Beginning in 1962, Stancell researched chemical and plastics products for Mobil Oil. After taking leave to teach at MIT in 1970, he returned to Mobil Oil where he became Vice President of Mobil Plastics in 1976. In 1982, he was named vice president of Mobil Europe Marketing and Refining, and in 1989 he became Mobil’s Vice President of Oil and Natural Gas Exploration and Production, with projects worldwide. Stancell also initiated, negotiated and launched Mobil’s liquefied natural gas production joint venture with Qatar. After retiring from Mobil in 1993, he joined the faculty at George Tech, retiring as Professor Emeritus in 2004. After the 2010 BP oil spill, Stancell advised the U.S. Dept. of the Interior. In 2011, he was appointed by President Barack Obama to the National Science Board.

Pioneers of Diversity



Dr. James Wei

Founder recognition

- President, AIChE (1988)
- Director, AIChE (1970–1972)
- AIChE Fellow
- AIChE Foundation Board of Trustees
- National Academy of Engineering
- American Academy of Arts and Sciences
- AIChE Founders Award
- AIChE William H. Walker Award for Contributions to Chemical Engineering Literature
- AIChE Professional Progress Award
- MAC William W. Grimes Award

“Recognized for exceptional contributions to the Minority Affairs Committee and the Institute.

His advocacy provided for the establishment of the Minority Affairs Committee, and drove AIChE’s efforts to advance inclusiveness in the Institute and the chemical engineering profession.”

James Wei is Professor Emeritus at Princeton University. He began his career as a research chemical engineer for Mobil Oil Research in 1955, and advanced to Manager of Long-Range Analysis in 1969. From 1971 to 1977, he was the Allan P. Colburn Professor of Chemical Engineering at the University of Delaware. He joined the Massachusetts Institute of Technology in 1977 where he served as Head of Chemical Engineering until 1988, and was the Warren K. Lewis Professor from 1977–1991. Between 1991 and 2002, he was Dean of Engineering and Applied Science at Princeton, where from 1991–2010 he was also Pomeroy and Betty Perry Smith Professor of Chemical Engineering. His research interests include shape selective separation with zeolites and nanoporous materials, as well as molecular structure-property relations, especially those relation to product engineering. He has published more than 130 research papers on chemical kinetics, catalysis, reaction engineering, and cancer chemotherapy, and is the author of many books, including “Product Engineering” (Oxford University Press, 2007), and “Great Inventions that Changed the World” (Wiley, 2012). Wei earned his Bachelor’s degree in chemical engineering at Georgia Institute of Technology (1952), MS and ScD in chemical engineering from Massachusetts Institute of Technology (1954, 1955), and a degree in advanced management from Harvard Business School (1969).

A Witness to the Beginning

James Wei

In the fall of 1949, I was traveling from China to Georgia Tech as a freshman, and arrived at the Atlanta train station. I found four toilet doors marked: “White Male,” “White Female,” “Colored Male,” and “Colored Female”. Going into the wrong door would risk rebuke and punishment. I thought, clearly I am not female, but am I white or colored? Georgia Tech was at that time all male and almost all white, so if Georgia Tech admitted me, I might pass for white. But on the other hand, I am of the yellow race, and that is a color. It is no-no for a man to enter a women’s toilet, but what is wrong with a yellow person in a colored toilet? Maybe it would be safer to wait until I get to Georgia Tech, and can ask someone who knows.

I had heard the expression that “This guy does not have a Chinaman’s chance,” which means that he has no chance at all. After I graduated from Georgia Tech and MIT, I was unable to go home to Shanghai, and counted myself lucky to get a job at Mobil Oil. I was just trying to stay out of trouble, and not interested in fighting injustice. As a minority immigrant, I had very little expectations in life, and wanted only to make a decent living for my growing family. How does one get ahead when the cards are stacked against you? But I had a number of remarkable mentors who opened

doors and rearranged the ceiling for me, and told me “you can do it.” Martin Luther King declared “I have a dream,” America began to improve, and it also became more acceptable to give a Chinaman a chance.

I was elected a member of AIChE’s Council in 1970 – 1972, and participated in the Establishment, and in making things better. AIChE’s then secretary Franklin Van Antwerpen sent me to Europe to negotiate for AIChE in organizing an International Congress. I became Head of the Chemical Engineering Department at MIT in 1978. I was getting used to pretending that I was as good as anyone else. Now I had the position and connections to change things and situations, and decided I should become a mentor and to help others who had been held back.

In the 1960s, Gerry Lessells was the godfather who organized the minority affairs organization in the AIChE, to encourage bright boys and girls to study chemical engineering, and to take their places in professional lives and in society. But nothing can be done without money; how much is enough, and how do you find funds to support minority affairs programs? The usual suspect would include liberal corporations, wealthy donors, the general membership, and the AIChE.

When I was elected AIChE Vice

President in 1987, minority affairs received a mixed reaction from the Council members and leadership. Some thought that it was about time to support minorities in finding a place in the sun; the more-conservative AIChE leaders and other members thought that things were good enough the way they were, and that we must not spend general AIChE funds for minority affairs.

Henry Brown and his group began to investigate what other engineering societies did. Donations from corporations were critical, but the “voluntary dues check-off” was the big idea that was used effectively by other engineering organizations to fund such programs. In this scheme, a member who is indifferent to minority affairs can ignore it, but a member who believes in minority affairs can check-off a box in the annual dues form and contribute an extra sum of money. Henry made a great presentation to the Council and asked for support. I asked Henry how much do you need, and he said \$30,000 would be a nice sum. So, Council voted to give minority affairs \$1,000, and to approve the voluntary dues check-off, which turned out to be the winning idea.

I became President in 1988, the year that Council approved the formation of the Minority Affairs Committee. Life was pretty lonely for the MAC at the beginning. Henry Brown told me that I was the first President of the AIChE to

attend a meeting of the NOBCCHE (National Organization of Black Chemists and Chemical Engineers), and to show support. Soon, a relay team of outstanding leaders came in to lead the MAC, and good things happened. The MAC has grown and is accepted as mainstream AIChE, and who can doubt the growing contributions of minorities to the field of chemical engineering?

It was a great surprise in 2010 when I received the William W. Grimes Award of the Minority Affairs Committee. The Citation reads: In recognition of his outstanding achievements as a distinguished role model for under-represented minorities in chemical engineering through mentoring, contributions to the community and for his excellent scientific contributions to the advancement of chemical engineering.”

I am happy to have had a small role at the beginning of MAC. Happy 25th Birthday to the Minority Affairs Committee!

—James Wei
March 2015

Increased Participation of Minorities in AIChE: A History

Henry T. Brown

An excerpt from "The AIChE Centennial Book"

Edited by Haeja Han, 2008; revisions, October 2015

The AIChE Minority Affairs Committee, formed in 1990, had its origins from the efforts of a small group of individuals dating back to 1968, with the formation of the "Task Force on Minority Youth Career Guidance." Gerry Lessells, who was working for Mobil Chemical Company and a member of AIChE's New Jersey Local Section, spearheaded this effort after his initial proposal to AIChE Council in 1966. After lobbying with F. J. Van Antwerpen, Secretary of the Institute, and Prof. Wayne R. Kube of the University of North Dakota, who was the Chairman of AIChE's National Career Guidance Committee, Lessells received the approval to head this task force "as a member-at-large of the Career Guidance Committee with responsibilities of directing the Task Force." The first meeting was attended by Henry Brown (Squibb, New Brunswick, New Jersey), Arthur Hartford (duPont), Clayton Hill (duPont), and Tom Towkowitz (duPont). At a second meeting held on April 4, 1968, which was, coincidentally, the day of the assassination of Dr. Martin Luther King, Jr., the group, joined by Bob Ahlert (Rutgers University), Bob Holmes (Esso), and Arnold Stancell (Mobil), reviewed and edited a proposed position statement that had been drafted earlier. It was presented to and accepted by AIChE Council at its Tampa meeting on May 18, 1968.

"Since AIChE already has a strong career guidance role, the Institute fully endorses the concept of local section programs to encourage underprivileged and disadvantaged minority group youth towards professional and technical careers in science and engineering. No longer should extensive human resources go untapped because of artificial barriers or poor communications—particularly at a time when there is an increasing national need for scientific talents.

In addition, we as members of AIChE are sorely conscious of the deepening racial division within our country, and of the enormous effort that must be expended to alleviate the continuing polarization of the American community. We realize that positive steps must be taken to solve the problems of our urban slums, and we would like to contribute to the long-term solution.

Hence, AIChE has designated a Task Force on Minority Youth Career Guidance. This task force has the specific job of defining and establishing methods and techniques that can be implemented by the local sections, to extend the opportunity for a scientific or engineering career to every citizen in our nation, regardless of race or creed—or his status of birth."

It should be noted that in 1968, AIChE was the first engineering society to adopt a program addressing

this need. The American Chemical Society (ACS) Project SEED was organized the same year, and there was a great deal of collaboration between the founding members of these groups during this period.

From its formation until 1972, the work of the Task Force was a major contributor to the work of AIChE's Career Guidance Committee. Operating under the title of "Career Guidance to Disadvantaged Youth," it produced a manual called "Guidelines for Putting a Program of Career Guidance for Disadvantaged and Underprivileged Youth into Action," an audio-visual presentation for AIChE local sections, and held several programming sessions at National AIChE meetings. It was not, however, very successful at getting local sections to adopt programs for this purpose.

The highs and lows of the Task Force's performance from 1971 to 1976 were marked by the loss of minority representation on the committee. Individuals lacked the support and sponsorship by their respective companies for the national committee. On the other hand, a number of these engineers remained involved with minority pre-engineering programs sponsored by other groups and by universities.

In 1976, during his last year as a Director of the Institute, Lessells proposed that the Institute establish a voluntary post of Minority Affairs Coordinator to handle any questions relating to minorities and the Institute, in addition to those on career guidance. Council approved the position and Lessells handled the duties of the Coordinator by fielding questions on

the subject and acting as AIChE liaison to several more active groups until the position was relinquished to Henry Brown, in 1983.

The Institute's annual funding for these programs was \$750–\$1,000, which supported one ACS Project SEED student. During the summer, the coordinator would interact with this student who worked out of the New Jersey Institute of Technology. As the AIChE liaison to Chemical Industries for Minorities in Engineering (ChIME) and to the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCCHE), the coordinator attended regular meetings of these organizations. His advice and suggestions often influenced not only the direction of the various programs, but also the funding to support these pre-engineering projects. Meeting expenses (travel and registration fees) were provided by the J. M. Huber or Polaroid companies, the respective employers of these Minority Affairs Coordinators.

In 1987, after a presentation to AIChE Council on the merits of doing more and something different, Council agreed to provide \$30,000 annually to support and fund several minority engineering programs. Council also approved a voluntary dues check-off for the minority affairs initiative as a means of encouraging all AIChE members to financially support this effort.

To coordinate these activities, AIChE President James Wei suggested the formation of an AIChE Minority Affairs Committee that would be similar in its structure to other Institute

committees. For the first time in the history of working on minority issues in the Institute, three fully-company-supported African-American industrial members — Eugene Alsandor (Shell), Irvin Osbourne-Lee (Oak Ridge National Laboratories), and Henry Brown (Polaroid) — were available for the committee. When the committee structure was approved in 1989, Irvin Osbourne-Lee was the first Chair selected in 1990, but the trio (named above) was the driving force that contributed to making the committee an integral and influential part of the AIChE structure.

In 1983, at the time of AIChE's 75th Anniversary celebration, this was not the case. This national career guidance initiative was deemed a failure because of the lack of follow-up by local sections. In all probability, however, it was the result of a lack of resources at the National level. The following 1983 document explains this reality:

“In December, 1967, Gerry Lessells was named chairman of a national task force on minority youth career guidance. In May 1968, the task force asked Council to make minority youth career guidance a permanent activity of AIChE. It recommended that the society adopt a position statement supporting minority career guidance efforts, put together a package of materials on minority career guidance, and aggressively seek industrial support in the form of scholarship aid and summer jobs for disadvantaged youth. Council accepted these recommendations and asked the task force to develop an implementation program.

The program, adopted in September 1968, put the burden of implementation on local sections since they were best equipped to approach local industry, establish ties with local minority groups and work through ghetto schools. It also placed considerable emphasis on involving minority technical personnel in the effort. The new program was publicized in CEP and promoted by presidential letter and Council liaison.

During the next few months, the Task Force for Disadvantaged and Underprivileged Youth, now a permanent subcommittee of the Career Guidance Committee, held sessions at two AIChE meetings. National AIChE headquarters, in the meantime, sent minority career guidance packets to 61 local sections. Despite these efforts, the results were disappointing.”

Today's Minority Affairs Committee (MAC) is dedicated to increasing the successful participation of underrepresented groups in chemical engineering. The committee objectives include:

- to promote the well-being of AIChE by increasing the representation of disadvantaged and underrepresented minorities in chemical engineering
- to stimulate an early interest among students in scientific careers and those subjects vital to a career in engineering
- to provide a forum for the exchange of information and ideas among individuals (practicing engineers, educators, and students) engaged in all phases of minority affairs
- to instill an interest in AIChE among engineers who represent a

disadvantaged and underrepresented minority group

- to coordinate AIChE's activities with other societies active in minority affairs
- to provide leadership, assistance and expertise as appropriate to the Institute, and industrial, educational and governmental entities in all areas as relates to minority affairs.

Working with all levels in the academic pipeline from K–12 to faculty, MAC is committed to supporting students through scholarships and mentoring programs. These activities have been well supported by the membership with the contributions from the dues check-off described earlier. These funds have averaged about \$30,000 each year. In recent years there has been some limited success in the solicitation for corporate contributions, but the effort is continuing.

The funds for the initiative have been used in a variety of different ways. There have been pre-engineering programs supported by AIChE and managed by other groups, notably ChIME, NOBCChE, ACS Project SEED, New Jersey Institute of Technology, and City College of New York. A welcoming party and awards presentation are feature activities at the Annual Meetings of the Institute. In addition to the announcement of student scholarships, honorees are presented for the committee's MAC Distinguish Service Award and the William Grimes Award. While the session is opened to all meeting attendees, it has become a place for networking by minority students, faculty, and industrial representatives. Also note-

worthy has been the Urban Outreach (guidance and mentoring) programs conducted by the MAC members for minority students at local inner city schools in places where AIChE meetings are held. They have brought very favorable publicity for the Institute in cities where these outreach programs have been presented.

Currently, the committee's main thrust has been that of providing scholarship awards and mentoring for minority students in chemical engineering to aid in the retention of students. Since 1994, the Minority Affairs Committee has developed and sustained a scholarship program for high school (incoming freshman) and college students seeking the chemical engineering baccalaureate degree. As of 2015, a total of 391 scholarships had been awarded to African-American, Hispanic, and Native-American students who have excellent academic records and who have identified financial needs. This effort has been led continuously by Emmanuel Dada. Funding of these scholarships has relied on the previously mentioned voluntary annual contributions by AIChE members, and have been supplemented by some private and corporate donations.

In 2015, the AIChE Foundation announced the launch of a new MAC Endowment fundraising campaign, which aims to raise some \$300,000 to enhance and provide perpetuity for the the MAC scholarship program.

The Minority Faculty Forum (MFF) became a subcommittee of MAC in November 1995. It grew out of a regular dinner meeting held by

a group of minority faculty during AIChE Annual Meetings in the early 1990s. These informal gatherings created a sense of community amongst a group that traditionally had not been well represented in chemical engineering academic circles. With Lance Collins as its first chair (1995–2004), the forum set specific goals to:

- provide guidance and support for minority faculty at all ranks
- mentor minority graduate students or professionals in industry who aspire to an academic career, and
- develop a network for scientific, social and political discussion.

Committee members have been quite active in supporting and mentoring colleagues, minority graduate students, and faculty members. In conjunction with the NSF, several workshops and a MFF Symposium, “Making It,” were held as a means of providing help for the participants in this area.

At the time of this reporting (April 2008), statistics tabulated by the National Science Foundation’s (NSF) Division of Science Resources indicated that underrepresented minorities made up 15% of graduating chemical engineers in the mid-2000s (African-American 6.7%, Hispanic 6.5%, and Native-American 1.8%). These percentages had not changed much since the late-1990s, but there had been a noticeable increase in those percentages over the previous 15 years.

More recently, a 2013 report from the NSF’s Center for Science and Engineering Statistics shows that the percentage of engineering bachelors degrees earned by underrepresented

minorities remained flat from 1996–2010, at about 13%.

Despite the recent leveling off in enrollment numbers among some minority engineers, it has been encouraging to find greater participation and a larger presence of minority members in the affairs of the Institute. Minority members serve as chairs and participants of the Operating Councils and technical committees. Since 1981, when Henry Brown was elected the first African-American member of AIChE Council (now the Board of Directors), many minority candidates have been elected to the Board. In 2014, Otis Sheldon served as Institute president, the first African-American to hold that office. In addition, there have been many African-American Fellows of the Institute since the election of William Grimes in 1982.

To make the profession as friendly to minorities as it has been for women, the efforts on minority affairs must continue. Support of MAC by the Institute and its members is crucial if we are to obtain improvements in the statistics that are more than just incremental in nature as they have been for the last ten years.

Interview: Gerald Lessells

(Excerpts from an August 2015 interview conducted by Gordon Ellis, AIChE Communications)

GE — *Gerry Lessells is a past director of AIChE and a pioneer of AIChE's inclusiveness initiatives. He's one of the Founder honorees to be recognized at the Minority Affairs Committee's 25th Anniversary Celebration — held at AIChE's Annual Meeting in Salt Lake City, Utah, on November 9, 2015. To begin, when did you first become active in AIChE?*

LESSELLS — I joined the Institute in January 1951. Jim Troyan, who was Engineering Director at Mathiesen Chemical Company in Niagara Falls, New York, where I worked, was Chairman of AIChE's Western New York Local Section, and he gave me an absolutely *imperative* pep talk about joining AIChE. I'm sure that Jim was the catalyst that led to my becoming a member of the Institute leadership. I owe him a lot. I served as an officer in the Central Illinois Section in the mid-1960s as well, and in the New Jersey Section in the late 1960s and early 1970s. And I served on national committees from the late 1960s thru the 1970s, including my time as a director, from 1973 to 1975.

GE — *How would you characterize the state of minority involvement in the engineering profession when you were becoming active in AIChE?*

LESSELLS — I had never run across a black chemical engineer until I met one in 1965, when I worked at Mobil. To my knowledge he was not active in AIChE. Then I met Henry Brown at a New Year's Eve party in 1967 in Metuchen, New Jersey, where we both lived. My late wife and I were the only whites among perhaps 20-odd people. It made me appreciate a little how black people may feel in a sea of white people. However, a most important difference was that I experienced no hostility.... In any case, Henry had been very active in the fight for civil rights, and I was very fortunate in being able to recruit him for our AIChE activity.

GE — *Tell us about that. What factors motivated you to approach AIChE's leadership about the need to make the Institute more diverse and inclusive?*

LESSELLS — I considered chemical engineering to be a lily-white (a term then used) and almost-exclusively male profession — and I knew we were missing a lot of talent among minorities and women. In my 15 years in industry, up until 1965, I had met one black chemical engineer, as mentioned earlier, and one female chemical engineer, Kathleen Black, who was in my 1950 MIT chemical engineering class of 142 graduates.

GE — *How did you make inroads with the AIChE leadership?*

LESSELLS — In July 1968, when I had been struggling with launching a minority-oriented career guidance program in the New Jersey Section, I got an unexpected lift. My family was taking a raft trip in Utah and Colorado when we met another chemical engineer — J. Frank Valle-Riestra — and his family. Frank informed me that the Northern California Local Section had a similar program. This encouraged me to increase my efforts with AIChE National. Later that year, Henry Brown and I approached some of the leadership with our idea to start a task force. One name I'll mention is Hugh Guthrie. He was AIChE Vice-President at the time, and he offered enormous encouragement to our task force. Tom Tomkowitz, another Council member, was also a key person. Once Hugh and Tom understood what we wanted to do, they were instrumental in getting the Council to establish the Career Guidance Subcommittee for Disadvantaged Youth, the first AIChE National attempt to address underrepresentation of minorities in the Institute. And Tom, especially, was very helpful in working with the subcommittee on methods and goals in order to achieve our ends.

Our objectives centered on developing aids for local AIChE sections to establish career guidance activities in schools with significant numbers of minority-group students. The emphasis was on encouraging such youngsters to pursue the broader goal of a science or engineering education and career — not the narrow one of chemical engineering, alone. The key AIChE people I worked with during those early years were Henry Brown and Bob Ahlert (who was on the chemical engineering faculty at Rutgers University), members of our task force, and Tom Tomkowitz, our Council Liaison.

GE — Do you recall some of the specific outreach activities and successes of the early task force? What were some of the challenges you encountered?

LESSELLS — The task force presented quite a few symposia and panel discussions at AIChE national meetings. And I do remember that those presentations stirred up a great deal of interest in what we were trying to do — or, more correctly, what we were suggesting the local sections do. However, follow-up was difficult. All of us on the task force were volunteers, and the demands of the jobs we were getting paid for by our employers had to come first. So, as I remember it, the task force, which had leveled out in its activities, was not very effective in reaching its goals. When I served on Council, I was able to get established the post of Minority Affairs Coordinator, which I held as a volunteer until the early 1980s, but that was a minimal effort on my part until I turned the post over to Henry Brown, shortly before my retirement from industry. The creation of MAC, of course, was not my doing — it was Henry Brown's and Jimmy Wei's — although I like to think it was an outgrowth of what I had catalyzed over ten years before.

GE — *Were there noteworthy development in minority outreach during your term on the AIChE Council in the mid 1970s?*

LESSELLS — Sad to say that I have to answer “No.” Establishing the Minority Affairs Coordinator position made it easy for members of AIChE to direct outsiders to a single source within the Institute to answer questions oriented towards Institute minority activities, but I wouldn’t consider this particularly noteworthy. In perfect hindsight, I think I had become a victim of “burn-out.” I can well remember that in the early work, for example, a great deal of time was spent in finding a title for the task force. There still seemed to be a reluctance to agree that AIChE should be singling out minorities for “special treatment.” It was finally agreed to use the term “disadvantaged” minorities. I remember thinking at the time — with my engineering type, logical mind — that virtually all minorities were disadvantaged, so the term was redundant. However, it broke a logjam in thinking, so the name was perfectly acceptable in order to move ahead.

GE — *Overall, what accomplishments of the early diversity task forces were most encouraging to you?*

LESSELLS — There is no question in my mind that the great single accomplishment was in changing the mindset of AIChE leadership to see that we had an obligation to do what I was suggesting. I knew the profession would benefit by tapping a larger pool of talent, but society in general would benefit from this, too. And, of course, so would the black community. And, not to sound too grandiose, I believed our country would also benefit; opening opportunities to those previously denied them would reduce social/racial unrest, if only in a small way.

GE — *Wrapping up, what progress have you witnessed — either in AIChE or in the profession — in creating a more inclusive Institute?*

LESSELLS — I recently viewed the MAC web site. I was overwhelmed seeing what was being done to create a more inclusive community. I knew something of this in 2001, when the Minority Affairs Committee kindly granted me the William Grimes Award. While at the Reno Annual Meeting receiving the award that year, Henry Brown said he wanted me to attend a MAC meeting. I did, and I was literally amazed at the breadth and scope of MAC’s activities, and, especially gratifying to me, the great number of black and female faces I was seeing! Again, I had nothing to do with this directly, except to plant some seeds, which Henry Brown, Jimmy Wei, and obviously a host of others had turned — to pursue my analogy further — into a horticultural masterpiece.

Testimonials: Origins and Leadership

Note: The testimonials on the following pages are edited excerpts from interviews conducted between April and October 2015. Complete interview transcripts, along with video extracts from some of the interviews, can be found in the Minority Affairs Committee's online archive: www.aiche.org/mac.

Henry T. Brown:

“**A**t the first AIChE meeting I went to, I saw one black face, for a whole week at a meeting in Los Angeles. It was when I looked in the mirror. That was the black face. I gave a paper there on minorities in engineering.

Getting the Institute sensitive to minorities in those days was not an easy job. In 1968, when Gerry Lessells and I began to talk about making AIChE more inclusive, the attitude among some was, we're a technical society, we shouldn't get involved with anything of this nature. So, the first thing was to convince AIChE Council that we should.

We gave a presentation about minority affairs at a Council meeting. For the next year, we worked to put together guidelines for local sections to get involved with minority outreach. The idea was, local sections were the place to get the work done. We called the program 'Career Guidance for Disadvantaged Students,' and AIChE would be the first engineering society to get involved with that type of effort. And Gerry was definitely *the* moving force behind that.

So, we sent the guidelines out to local sections. And very little happened. The only things that did happen were the K–12 outreach efforts that we did through the AIChE meetings. We became really the most active part of the Career Guidance Committee in the early 1970s. But we didn't get support from the local sections.

Looking back, the one thing we had not looked for was someone in each local section who was sympathetic toward what we were doing. And, one thing that was very true is that there were very few black chem engineers around. So, in those local sections, there weren't very many people who were sympathetic — who were white, like Gerry Lessells. The model would have worked, but it needed for local sections to pick it up and run with it. So, there was not much progress.”

James Wei:

“**I**n 1949, when I arrived from China to attend Georgia Tech, it was an all-male school, and nearly all white. And they hadn't quite figured out where I fit in — whether I was white or colored. So, for me, as a semi-refugee, the challenge was to *not* challenge any of the things that went on. Just try to fit in.

After I received my doctorate at MIT in 1955, I was told by the U.S. State

Department that I was not allowed to leave America, because the Korean War was on, and they figured that, if I know engineering, I might be helpful to an enemy country. So, I found a job so I could put food on the table, and the job I found was with the Mobil Oil Company in Paulsboro, New Jersey. And the distinct thing that I remember is that, in the whole research lab that I was in, there was only one other Chinese man, who had been there for 15 years. And I asked him, what is it like working here? He said, ‘well, you will never get anywhere here. You don’t have a Chinaman’s chance’ — which I took to mean, don’t be too ambitious. So that set my expectation very low. I figured, don’t expect anything to come my way.

I got interested in AIChE in 1962, when I was beginning to publish my research and go to AIChE meetings. But I also got involved in talking about things that were beyond technical. There were a lot of injustices that I felt I really ought to get involved addressing. For instance, I saw that a black chemical engineer was not treated the same as a white chemical engineer. And, speaking for myself, I very much think that everyone should be treated the same.

I met Henry Brown and Gerry Lessells at these meetings in the 1960s. And Gerry talked about the need to start a task force. And at the same time, in the background, there was Martin Luther King and the march in Selma, AL — and I was very much encouraged by all that was going on. So, I got involved. This was quite a surprise to me because, not so much earlier, I wasn’t planning to do any such thing. I was just going to fit in.”

Otis Shelton:

“**A** lot of factors make it challenging for young minority students to become engineers. One factor is financial. For example, my parents were not able to afford to send me through college. But, because I had excellent grades in high school, I was able to get into a work-study program, and, with this, obtained financial resources to help cover the expenses of college.

There were also cultural barriers. Segregation was still common practice. In my first job, I was one of the first black engineers in the plant. Working with operators in a manufacturing operation, it is very important to gain their confidence and work closely together to meet the goals. So, I had to learn to work with operators, and the operators had to learn to work with me. We both learned. That interpersonal collaboration is a key part of being a chemical engineer and getting things done.”

Henry T. Brown:

“About 1977, Gerry Lessells approached Council about coming up with an AIChE minority affairs position where he would be the liaison with the Institute for various outreach activities. He held that job until about 1983, when he turned it over to me.

We would interface with different groups. One of the primary groups was ChIME — Chemical Industries for Minorities in Engineering. They found money to supporting programs like those we described in our guidelines. As AIChE representatives, we’d recommend how to allocate the money. The only thing AIChE had at the time was a scholarship through ACS’s Project SEED for \$750.

I put together a presentation to Council that pointed out how AIChE had been the first engineering society doing minority outreach, but we’d lost our lead to other groups because we weren’t investing anything as an organization. I’d surveyed all the engineering societies and looked at the best that each did, and one of the things the civil engineers had done was a dues check-off, and so I included that idea as a thing that AIChE could do.

Jimmy Wei, who was AIChE vice president at the time, was at that presentation. He became president in 1988, and he took the idea of the dues check-off into his presidency. He was the one who recommended forming a Minority Affairs Committee, and I got the job of forming the committee.”

James Wei:

“Being a member of Council was an opening for me to see what a person in a leadership position could do. I was elected president of AIChE for 1988. And I have a copy of Executive Committee meeting notes dated April 9, 1988. It says:

The presiding person at this meeting is President Wei. And he reported that he had a discussion with Henry Brown, AIChE Minority Affairs Coordinator. And he urged Henry to establish a formal Minority Affairs Committee that should include past presidents and Council members, so as to make this effort more effective.

This was intended to move the efforts from a fringe activity to a mainstream activity of AIChE, and therefore worthy of consideration as a high priority. And a couple years later, MAC was formally adopted by Council.”

Henry T. Brown:

“We sent a letter to all the people I knew to meet at the Annual Meeting. But — as you know, I’m recognized at these meetings as the man in the beret and bow tie — I also started to approach any person of color at a meeting. I’d go up and introduce myself, hand out a sheet about the Minority Affairs Committee, and say, “here’s the committee, here’s the meeting time.” And they’d come to the meeting. Then, it became a matter of getting people involved. Two of those early volunteers were Irvin Osborne-Lee and Eugene ‘Gene’ Alsandor.

And so, I would say that the idea for the committee was Jimmy Wei’s. Gerry Lessells had the idea of recruiting me. And I was the implementer — getting people together and giving them assignments.”

Gerry Lessells:

“My recollections about collaborating with Henry Brown are many, but one in particular has a humorous side. Henry, Bob Ahlert and I held monthly meetings of the career guidance task force in New Jersey. Bob and I turned in expense reports for these meetings, the meal costs being covered by our employers as legitimate professional-society expenses. Henry’s supervisor — a chemical engineer — denied this was a legitimate business expense, since the work was socially oriented. When I heard about this, I remembered that, when I worked for Mathiesen Chemical in the 1950s, Mathiesen had merged with Olin Industries, and the company had then acquired Squibb, Henry’s employer. At Mathiesen in Niagara Falls, I knew the personnel manager, Bob Thompson, who subsequently became corporate personnel head at the parent companies of Squibb. I phoned Bob Thompson, he remembered me, and I explained about this episode at Squibb, and that it sounded like my friend’s supervisor had not been made aware of their corporation’s strong Equal Opportunity Policy. Bob was ready to bawl people out, when I explained I’d like this to be corrected as a corporate policy directive in such a way that no one could know anything about what happened. Bob complied, and this is how Henry Brown was legitimately able to recover expenses for his “social” AIChE activities!”

Irvin Osborne-Lee:

“In 1985, I went to work at Oak Ridge National Lab. My boss, Bill Rodgers, was very active in AIChE, and he wanted to recruit me into the Fuels and Petrochemicals Division. So, I started attending the AIChE meetings. That’s when I met Henry Brown, who was chair of the *ad hoc* committee on minority affairs. And part of his style was to recruit. I was going up an escalator at the meeting and he started talking to me. He convinced me to come to a Minority Affairs Committee meeting. And I got really interested.

At the time, Henry Brown and his predecessor Gerry Lessells had received support from what was then called Council (now the Board of Directors), to support programs related to minority affairs. One example was the ChIME program (Chemical Industries for Minorities in Engineering), which got middle-school to high-school-age youngsters interested in technical disciplines. Council recognized the benefit of supporting groups that were doing good things, and understandably they wanted AIChE to be the one doing the good things. So, they deemed it appropriate to establish a national committee for minority affairs. And I became the first chair of MAC in 1990. From there, we began to establish our own programs.”

Victor G. J. Rodgers:

“When I first entered engineering, the number of minorities in the field was abysmally small. Even in undergraduate training, we had less than 10 minority students on our campus. I recall that, in all of chemical engineering, there were only about 12 African-American chemical engineering professors in the country. The year I graduated, I believe only three African Americans in the country obtained a doctorate in chemical engineering.

Henry Brown found me in the crowd to recruit me to MAC back in 1990 or 1991. At that time, there were only countably many African Americans attending the AIChE conference, so finding each other was relatively easy.”

Christine Grant:

“My first professional conference, as graduate student, was the National Organization of Black Chemists and Chemical Engineers (NOBCCHE). There, I would meet people who were chemical engineers — Henry Brown was one of them — and they talked about AIChE and the Minority Affairs Committee.

So, Henry Brown — the man with the bow tie — brought me in to MAC. He had a way of finding all the minority engineers who were at the AIChE conference, and he'd say, 'Hi, my name is Henry Brown. There's a Minority Affairs Committee meeting. You need to be there!' So, I said to myself, this man looks like he's in charge and cares about my professional development. So, I said, okay, I'll go. And at that meeting I saw some people I knew from the NOBCChE community. Then it started to feel like home."

Irvin Osborne-Lee:

“An early challenge was getting volunteers to make commitments and to be a part of the team. And one of the biggest achievements during those first years when I was chair was to establish a working succession plan. Now, I look at the Minority Affairs Committee and we have some stability.

Today, in a sense, I'm as involved as I ever have been in MAC. I still want to make sure that things are getting done — even if I don't have to be the one doing everything. There are so many great people in MAC. You know, any roomful of chemical engineers is an awesome amount of potential.”

Otis Shelton:

“After a few years helping to rejuvenate AIChE's Fairfield County (Connecticut) Local Section, I got the opportunity to attend national AIChE meetings, and to participate in some of the initiatives — such as looking at AIChE's organization structure and the strategic plan process. I was involved, in a very minor way, with the creation of the operating councils in the late 1990s. And from there, I participated in the Societal Impact Operating Council (SIOC), and then on to Board director and secretary, and then president.

It was through my involvement with SIOC that I started participating in the Minority Affairs Committee. I soon came to view MAC as a home-within-the-home of AIChE, because they were addressing some of the same issues that I faced, first as a young engineering student, and then as a professional. MAC was the place where we could always get together and talk, and discuss problems we face in our profession and how to address them. The committee is critically important, in my opinion, for both young minority engineers as well as practicing professional engineers. And so, staying close to MAC has been important to me personally, as well as to ensure that AIChE's leadership vision for MAC is being realized.”

Thomas Mensah:

“Prior to MAC, the involvement of minorities in AIChE was very intermittent. There were few role models in the Institute for minority engineers. So, at the beginning, the strategy was to have minority members assume leadership roles within the Institute, beginning with the chairing of technical sessions, and then gradually moving to chair divisions and committees.

This strategy has been effective. MAC has helped raise new leaders for AIChE, who have impacted the Institute through the executive level, as well as in the operating councils, the committees, and the AIChE Foundation. Not all similar societies have been as successful at including minorities on their Boards. AIChE has avoided such a schism by supporting the growth of MAC.”

Mary Kathryn Lee (2014 Chair, MAC):

“I believe that chemical engineering is who you are, not just what you do. My parents taught me to care about issues of diversity and inclusion, and showed me, by example, that individual effort counts. My father was a Freedom Rider and trained Freedom Riders in his church in Tennessee. Even though he died young, my mother continued with activism. My mother was a guidance counselor at Bennett College, one of two remaining U.S. colleges for African-American women. I remember her phoning parents of students arrested during the Greensboro sit-ins. So, education and activism have always been tied together for me.

When I work with MAC on projects for undergraduate education, faculty, and entrepreneurs, I am supporting MAC’s mission to encourage and support the next generation. That is also why the MAC@25 archive project is so important to me.

This group of MAC Pioneer honorees, by their lives and actions, support the goals that I was taught were important.”

Testimonials: Outreach

Irvin Osborne-Lee:

“Each year, MAC members came together at the AIChE Annual and Spring meetings. All these relevant role models would gather around the table in a conference room. But the needs were out there, beyond the walls. So, we started putting teams together and spending a morning in a local classroom. We’d make the arrangements ahead of time, bring the materials, and do hands-on science activities with the students — as an interest generator — to get students confident with the idea that they can do science. Those visits only cost about a hundred dollars every time we did one, but even those small steps were worthwhile and had a lot of impact.

And that’s one of the things MAC has always wanted to do — to look down the road and see how we can encourage the production of future engineers, with a more diverse portfolio, for AIChE.

But K–12 was only a small piece of what we envisioned the whole pipeline to be. After K–12, there’s college, then there’s just out of college, and then there’s beyond. And, we asked ourselves, what can we do to impact the different stages of the pipeline? So, in 1994 we created the scholarship program. One set of scholarships was for students who were already in university engineering, and the other set was for incoming freshmen who were interested in engineering. And those scholarships continue today.

For the later stages in the pipeline, we started the awards program for professionals and those working within the Institute. For example, the MAC Distinguished Service Award allows us to thank MAC volunteers who do things worthy of recognition. As a volunteer organization, we can’t begin to pay our volunteers what they’re worth.

There’s also the William W. Grimes Award, named after the first African-American AIChE Fellow. That award can be given to a chemical engineer who may or may not be a member of the Institute. It spotlights someone who serves as an excellent role model. One example is Mae Jemison, the first African-American woman astronaut, who’s a chemical engineer.”

Otis Shelton:

“I’ve had the opportunity of participating in the outreach efforts at some of our Annual and Spring meetings, and I’ve seen the faces of the young high school students, watching minority engineers. I can see and feel the value we add by encouraging students to become engineers — you can tell that some of them had never even thought about that possibility.”

Zenaida Gephardt (Past Chair, Societal Impact Operating Council):

“I think that everything we do, and every pound of everything we make, has a societal impact, and that engineers have a special obligation to the community in terms of safety and quality of life. So, it was natural for me to want to participate in AIChE’s Societal Impact Operating Council (SIOC).

There is a great deal of value in all of the SIOC’s initiatives. This, of course, includes the projects of the SIOC committees — Women’s Initiatives (WIC), Minority Affairs (MAC), K–12, and the Global Societal Initiatives Committee. These groups have all worked together to advance the impact of AIChE on societal issues. Whether it is the MAC@25 anniversary events, the Women’s Workplace Retention and Re-entry initiative (W2R2), K–12 outreach, or AIChE-sponsored Engineers Without Borders projects, you can count on the people of SIOC and its committees to make it work.”

Tonya Peeples:

“The active engagement of MAC members in outreach to the community made an impression that has shaped my career. I gained invaluable experience that quickened my commitment to welcoming diverse participants into the science, technology, engineering and mathematics communities. I enjoyed the collaboration between industry and academic professionals within MAC in reaching out to local schools.”

Arnold Stancell:

“The thing that interested me in chemical engineering, or technology, was being able to make things work — to know how things are made, and that you can go into a laboratory and make new things. That was so exciting. And I think that kind of excitement is what is important — for someone to become a chemical engineer or an engineer in another discipline. They have to have a passion for it. And, a lot of the early MAC people — Jimmy Wei, Henry Brown, Gerry Lessells — they all had that. And so, to go out and say to a kid, ‘you may want to be a chemical engineer’ — that’s fine. But then you have to tell them all the things they can do. Knowing that you can develop new products, new materials, and then to bring them to fruition — such as I was fortunate to do working for a large company — it really is exciting.”

Timothy Odi:

“The K-12 program and MAC scholarships, without a doubt, are the most impactful programs that I have witnessed in MAC and AIChE. I would like to see AIChE increase the minority scholarship fund to enable each recipient to receive annual scholarships of more than \$1,000 per year, the current award. With the increase, MAC might reduce the number of recipients but award a more impactful scholarship. The extra funds can be raised from industrial partners and institutions affiliated with AIChE.”

Testimonials: Scholarships and Mentorship

Emmanuel Dada:

“The MAC scholarships started in 1994, and I have been chair since 1998. When I started, to my surprised, the number of scholarships MAC was giving was very small. And I wondered, what impact so few scholarships would make? Then we said, let’s go out and look for funding so we could expand the number of scholarships that we awarded. And, from a few scholarships we went up to 10. From 10 we went to 20 per year.

Much of the funding has come from the dues check-off. When people pay their annual AIChE dues, they volunteer to pay an additional amount of money to support MAC’s activities.

The current scholarships are \$1,000 — and initially, I thought that a \$1,000 scholarship was a small amount. But the money goes directly to the student. So, the student can use the money for things that the regular student aid package doesn’t cover. I hear from the students that the \$1,000 helps them a lot — and that’s what motivates me. We feel we can help students to do well.

And not only are we giving them scholarships, we have a mentoring program in which we assign a mentor to each of the recipients. These mentors are AIChE professional members and they give professional advice to the students. The majority of the mentor volunteers are from MAC or members of AIChE’s Societal Impact Operating Council (SIOC).”

Andre Da Costa:

“MAC’s scholarship program has been very successful, and I highly commend its leader, Emmanuel Dada. MAC’s other awards programs have also had a significant impact on enhancing the visibility of the contributions of underrepresented minority engineers.”

Otis Shelton:

“A lot of minority engineering students don’t have the financial capability of going to a university, even if they have an excellent educational background. Providing scholarships to deserving students is a very important role for MAC.

I’ve participated by evaluating some of the scholarship candidates and also making contributions. Today, I’m on the steering committee for a new AIChE Foundation initiative called the MAC Endowment Fund. We’re trying to raise funds to ensure that we have perpetuity for the scholarships in the future. MAC scholarships have been primarily financed by the Foundation, and in the past through voluntary contributions when members pay their AIChE dues. The scholarship coverage varies from year to year. So, we’d like to put in place an endowment fund that will provide these scholarships on an annual basis. We’re aiming to raise some \$300,000 between 2015 and 2018, to endow this MAC scholarship fund to provide 15 scholarships each year.

I think engineering provides a unique ladder for minorities to climb up from a lower economic level to a higher economic level. And financial scholarships provide support to help them move up that ladder. If you didn’t have the financial support, it would be very difficult for many to climb the ladder and become chemical engineers. To me this is very important. And I encourage all my friends — minorities, all chemical engineers — to please help us in this endowment. It’s an investment that you’ll never regret.”

Soni Oyekan:

“More than just for the Institute, I’d like to see us doing a lot for society and the economy of the U.S. We know that diversification in the industrial sectors has led to extensive creativity and increased productivity. So, we can work to ensure that all available talents are given equal opportunities to succeed. AIChE can do a lot, and one way is to continue its financial support for the Minority Affairs Committee scholarship program. One year, I was able to get my company to contribute \$4,000. I wish we could have many more \$4,000 donations for the scholarship programs, to be able to impact many, many more students, who could then grow to be lifelong members of AIChE.”

Christine Grant:

“I believe that anything having to do with diversifying the profession has to be everyone’s responsibility. Everyone has to embrace it. It can’t just be minorities helping, inspiring, coaching and mentoring other minorities. There’s just not enough of us to do the mentoring; and there is a richness that will come from professional mentoring across cultures, genders, and backgrounds overall.

In my role as Associate Dean of Faculty Advancement in a college of engineering, I’ve led a number of initiatives for minority and women faculty development. I’m also starting to believe that senior minorities should mentor white males. You know, it doesn’t just have to be us mentoring us. We have insights to offer the profession that can help folks who don’t look like us. I think that having that paradigm shift in terms of how we should be thinking about who is doing the advocating, and who-is-mentoring-who, is really important.”

Testimonials: Minority Faculty Forum

Lance Collins:

“One unique thing about AIChE is that it has an Annual Meeting that virtually every chemical engineering professor attends. Other disciplines are more fractured, so subdisciplines will gather in different locations, and it’s rare for them to collectively be together. AIChE, I think, has a great strength in that it has that annual gathering for everybody — which is very powerful.

It was at those Annual Meetings that I became involved with MAC, and eventually I saw a need. In MAC, we had a group of rising academics who were kicking their careers off at roughly the same time I was — Gilda Barabino, Christine Grant, Levi Thompson, Luke Achenie, among them. We were all going through the tenure process at the same time, and to me that was a signal that this group of people should organize.

So, in 1995, Gilda Barabino and I started what we called the Minority Faculty Forum. We felt that, in order to create an environment in which faculty were going to be drawn into academia, we needed a support structure that would do two things. The first would be to support those that had started an academic career — to help them succeed with tenure and ultimate promotions, and even for them to think about administrative careers, so that they would be in a position to mentor future academics. And second — and equally important — was to encourage graduate students, those that might had started in an industrial career but that were interested in academia, to bring them into the fold and to groom them.

Academia is a very specialized career path. You need the skills to navigate a fairly complex set of conditions that one finds in an academic setting. So, our thinking was, the Minority Faculty Forum was a place in which we would provide the kind of nurturing and mentoring that goes on broadly for any person that’s considering an academic career, but we would focus on those that are less well represented — and who, perhaps, throughout history, had been somewhat neglected in that process.”

Christine Grant:

“In AIChE, there are industrial folks and academic folks. And while there are similarities between those audiences, there are some unique differences and opportunities.

Chemical engineering academics typically go to AIChE’s fall Annual Meeting. For AIChE, all the academics are there every year. I found that, in other engineering organizations, there are mini conference and sectional conferences, but

engineering faculty don't have that one professional home that they come home to every year at the AIChE Annual Meeting.

So, our community of minority faculty scholars grew, and we would see each other at each year's Annual Meeting. After the main welcome reception on Sunday evening, I would get the minority (primarily African American) faculty together for a group dinner to talk about how things were going in our careers. Our group started getting so big that we figured, well, maybe we should start a group within the Minority Affairs Committee. So, out of those 'survival' dinners, the Minority Faculty Forum was formed.

That was in 1995, and a few years later I led an effort to get a proposal funded at the National Science Foundation, with my colleagues at the Minority Faculty Forum (led by Lance Collins), and MAC had a large workshop for minority engineering faculty sponsored by NSF. That was our first big activity. And that activity has since been a model for some of the more recent AIChE sessions to support minority faculty development."

Tonya Peeples:

“Another special way that MAC has contributed to the community has been the investment of more-experienced minority faculty who were further along the academic ladder. These AIChE MAC members expressed their leadership by helping junior and aspiring faculty advance in their academic careers. MAC leaders in the Minority Faculty Forum were instrumental in writing grants to engage federal agencies in workshops for faculty of color. The impact has been broader than the chemical engineering faculty community. These efforts provide models for minority groups in other professional societies.”

Testimonials: Reflections and Accomplishments

Luke Achenie:

“The greater participation of African Americans and Hispanics in MAC is simply gratifying. I would like to see greater participation of Native Americans in MAC as we move forward. MAC can help this effort by renewed outreach efforts and partnership with organizations such as SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science).

One way an organization shows appreciation for its members is through recognition of top performers, based on certain metrics. When members of diverse groups are getting disproportionately less recognition, perhaps that would be time to revise the metrics to make them consistent with 21st century thinking. I think MAC can help in this effort.”

Zenaida Gephardt:

“When I started as a young female chemical engineering student, I was one of four women in a class of 43. We had a professor who said “Let’s let the girls show their stuff” in response to our involvement in a weekend activity to attract high school girls to engineering. Our male student colleagues did not, in general, think we should be there. However, there were also encouraging and nurturing professors. I remember one in particular who encouraged me when I changed majors from chemistry to chemical engineering. Sometimes all it takes is one person to believe in you and give you a hand.

I am very grateful for the work that MAC and WIC have done in the Institute. As a Latina woman, I owe a special debt to the people who made it easier for me to be myself in this profession by breaking down barriers of discrimination. Inclusion allows people to be themselves, and this encourages and nurtures achievement. It is important to recognize the achievements and contributions of the MAC Pioneers. However, there is still work to do and some of our colleagues are still underserved. I am proud to work with those who have laid the foundation for diversity and inclusion in the Institute and I celebrate their achievements.”

Andre Da Costa:

“MAC’s biggest legacy is to the next generation of underrepresented minority engineers and scientists. Indeed, MAC is contributing to the pipeline of STEM professionals who have the potential to make seminal contributions to address the grand societal challenges: energy, water, food, health, and climate change.

Given the diverse nature of our profession and the global role of the Institute, it is imperative to further strengthen AIChE’s leadership across all levels and entities by increasing minority participation.”

Emmanuel Dada:

“MAC has made a lot of strides in bringing underrepresented minorities into the mainstream of AIChE — in which we are now visible, and in which we now have members of underrepresented minorities elected as directors of AIChE. We have had underrepresented minority members chair all three operating councils at one time or another. And also — very important — even in bad economic times, the contributions of AIChE members to MAC programs have been sustained. Even during the financial downturn in the 2000s, the amount of money members put in their dues check-off for MAC stayed very constant; approximately \$25,000 every year. This means the community recognizes and continues supporting MAC activities. So, we are very happy that the AIChE community sees value in the programs to support underrepresented minorities and MAC.”

Cato Laurencin:

“MAC has had an incredible legacy of service to the Institute — creating a wonderful community for Black and Brown members of AIChE, and promoting the best traditions of excellence in science. It also has encouraged individuals to work broadly across AIChE. That is why, in part, I think there are so many MAC members in positions of leadership throughout the Institute.”

Thomas Mensah:

“Another proud achievement is MAC’s Eminent Engineers Forum — chaired by Tom Mensah and Emmanuel Dada — which expanded AIChE’s reach to include some non-AIChE members who are in high professional positions. For example, the Forum brought in two U.S. chemical engineering astronauts, Dr. Bobby Satcher (MIT) and Dr. Mae Jemison (Cornell University), to speak at AIChE Annual Meetings, as well as former U.S. EPA Administrator (now VP at Apple) Lisa Jackson.”

Soni Oyekan:

“I am heartened by the developments that have taken place in the past 35 years. I’m very impressed by the fact that women have played a major role in all aspects of our Institute, which we did not have before. I’m very impressed with the fact that minority-members are recognized within the Institute — Asian-American and African-Americans. We’d like to see more of this take place. These have been really fantastic developments.

They also call to mind the fact that AIChE is truly a global Institute that caters to the interests of all. We have now had several female presidents, and one African-American president, and we’ve had Asian-American presidents of the Institute. All of this bodes well for the future of the Institute, and suggests that we are in line with the changes that are occurring globally — that we are interfacing with different cultures. And I think that AIChE stands as one of those global organizations.”

Tonya Peeples:

“The most rewarding aspect of my AIChE and MAC involvement was the building of a professional and collegial community, which aided my academic advancement and my sense of contribution to the societal impact of the profession. I learned about leadership, collaboration, and encouragement from the models of committed MAC members, as well as from other chemical engineering colleagues in AIChE.”

Gilda Barabino

(Dean, Grove School of Engineering, City College of New York):

“I started attending MAC’s meetings and receptions when I first began to attend AIChE meetings in the early 1990s, and I found MAC to be a great way to connect with other minorities and become more engaged in AIChE. I am most proud of co-founding the Minority Faculty Forum for minority AIChE faculty members. The Minority Faculty Forum remains active and the support from MAC has been critical to its success.”

Victor G. J. Rodgers:

“MAC has helped AIChE in general become aware of the importance of inclusion in the chemical engineering discipline. Chemical engineering, as well as all of engineering, needs to continue to focus on establishing a demographically correct workforce for our society. Often this comes with making younger people of diverse cultures and genders aware of the tremendous opportunities in our field.”

Arnold Stancell:

“I think the change in the culture has been gradual. Folks see the contributions that can be made by so many different segments of the population, and it feeds on itself. There’s a receptivity for diversity. But my view on that is that it shouldn’t be diversity for diversity’s sake. It should be diversity because we are widening the talent pool. To me, that’s always been the emphasis.

It’s a question of ‘how have you contributed.’ Folks see what you can do. And, of course, today we have African Americans, Hispanics, and women in very key leadership positions. So, it’s happening.

But, you also want to have everybody have a chance at the jobs according to their ability. So, to the extent there were barriers to that chance, I think the work that’s been done by AIChE and the Minority Affairs Committee has helped by raising awareness of the talent that we have available.”

Testimonials: Prospects

Luke Achenie:

“MAC has come a long way, and the path has not been easy. The current notoriety it is receiving has been overdue. Before diversity was ‘hip,’ MAC was preaching this novel idea.

MAC spawned the Minority Faculty Forum that played a very significant role in the professional progress of mid-career and more senior faculty. The role of MAC in providing scholarships to deserving undergraduates, and providing travel grants to young academics, are of particular note. Not to be missed is the fact that MAC has developed ways to recognize its members (William Grimes Award, MAC Eminent Engineer Award, MAC Distinguished Service Award, etc.). Lastly, the K–12 outreach efforts that were developed as part of the AIChE meetings are simply fantastic, and have been shown to be impactful in the development of the pipeline of the new generation of chemical engineers.”

Henry T. Brown:

“Although black chemical engineers are still underutilized in terms of numbers, I’m happy to see the many who have been involved, and who have worked within the structure of AIChE. I think, if you look at proportions of how many black engineers there are and how many have worked in Council and in other AIChE groups, we’ve done a great job. This was not the case when I came in.

Now, MAC will need to survive on ideas that are pertinent to what’s going on today. There’s a whole different set of problems that are going to be with us until we solve our problem here in America that deals with race, and we’re not there yet. We’re glad about some of the progress, but when we watch what’s going on — with people denying that race is a problem — we’re a long way from it. We’ve seen it, and it’s just much more subtle now. So, I think there are areas that the committee will need to work on to address whatever’s needed in the future.”

Lance Collins:

“Looking at the current state of minorities in engineering, I think there’s really fantastic news, and then there’s some reasons for concern.

The good news is, if you look at the numbers, there’s been a slow — sometimes frustratingly slow — but steady rise in the representation of minorities in universities over the last 30 or so years. The disconcerting thing is that some of the numbers have gone flat, and in particular the number that I’m concerned about is the percentage of bachelors degrees. So, you have a pipeline — and if there’s a break or a change in the flow in one section, it’s ultimately going to impact the higher sections as well. So this is a concern.

It’s also true of women in engineering. There’s been a flattening of that long, slow rise that was going on — and I don’t know what that signals.

As a modeler, and an engineer, it makes me wonder about different segments of the population. We in MAC might have been slowly drawing into the pipeline the people who are used to being “the maverick” — the first to do things, the ones that will never be deterred from their goals. But at some point, in order for things to settle into a more natural state, you’ve got to be attractive to the broad population and not just a small segment of that population. And I kind of worry that what we’ve done over the last 30 years is essentially address the issues related to that group — that maverick group that’s willing to walk through fire — but we haven’t yet created an inclusive enough environment for the broader population, as there is for the white population.

So, I think there’s reason to be proud of the achievements that have been made. I don’t want to dismiss that. We’ve made fantastic strides. That said, when you put that aside, you realize there’s still work to be done.”

Cato Laurencin:

“I think that MAC’s role is crucial in promoting racial and ethnic diversity in AIChE. We know that without this diversity there is no excellence in science. Thus MAC’s presence and role will help determine AIChE’s future leadership in the world of science.

As the importance of racial and ethnic diversity is further realized and appreciated as a major determinant of the future of this profession and our great nation, the importance and influence of MAC will only increase in the next decade.”

Isaac Gamwo, MAC Chair, 2015:

“MAC has impacted AIChE and the chemical engineering profession in several ways — through the creation of the scholarship program; the implementation of the MAC Eminent Engineers Forum, which has attracted highly-regarded, role model minority chemical engineers to AIChE; and through the Minority Faculty Forum, in which minorities in academia have benefited from interacting with other chemical engineer faculty.

In the future, AIChE, through MAC, should reach out to more minority institutions — historically black colleges and universities (HBCUs), as well as Hispanic universities — to attract the fastest-growing population in the chemical engineering profession. This can be done by progressively creating MAC local sections near each HBCU, Hispanic universities, and other institutions where minorities are represented. The AIChE should also reach out to minority sister organizations such as the National Organization for Black Chemists and Chemical Engineers (NOBCChE), Hispanic professional engineering societies, and other minority engineering organizations.”

Mary Kathryn Lee:

“I would like MAC to follow our underrepresented minority community through the early stages of their careers, to gain insight into the environment in which they work. From there, perhaps, we can see if AIChE can help retain trained engineers in the profession, to create and work in a more inclusive environment.

I would like to see AIChE reach out to chemical engineers who have gone on to other professions. Two of the African-American chemical engineers I graduated with became medical doctors, but their roots are still in chemical engineering. I think our impact is larger than we imagine.

I would like us to take a look at our efforts within AIChE’s technical programming divisions, to see how we are doing in inviting and accepting papers from underrepresented minority researchers. Is there a way we can mentor or encourage submissions from this community? Is there a way for MAC to partner with technical divisions to support Annual Meeting attendance through travel grants? I believe that this could start by MAC’s sponsorship of sessions of undergraduate research, or through MAC’s support of travel for undergraduate or Master’s-level presenters.”

Thomas Mensah:

“MAC has helped to bring AIChE great role models for black and Hispanic engineers — even having AIChE’s first African-American President, Otis Shelton, as MAC celebrates 25 years. For MAC to continue this pipeline of strong minority leaders, I would like to see the committee recruit more new leaders for MAC, as well as expand those leaders to serve in technical divisions and the other committees.”

Irvin Osborne-Lee:

“Looking to MAC in the future — ultimately we’d like to see us exceed our need for existence. Basically, work ourselves out of a job. Clearly there’s a lot of distance to cover, because diversity is still a huge goal of the Institute. We’re not really where we want to be yet. Then again, diversity can be a changing picture. One of the things that MAC focused on initially, that we don’t have to anymore, is women’s issues. AIChE now has a Women’s Initiatives Committee (WIC) that has grown out of the same playing field MAC was operating in. WIC is handling that part of the AIChE strategic plan very well, I think. But there can be other issues, too. So, I think MAC has to continue to develop creative, impactful programs that address needs as they come up.

Another important part of that pipeline is young professionals. Fortunately, AIChE now has a robust young professionals program. I think there’s a lot that MAC can do in conjunction with that particular group, to help increase diversity right there at the start of membership.”

Yusuf Adewuyi (MAC Chair, 2005):

“To date, MAC activities have yielded great dividends, judging by the increased numbers of renowned chemical engineering professionals who benefitted greatly from MAC’s various developmental activities as undergraduate and graduate students. My vision for MAC is to see an organization dedicated to the development of the entire pipeline, from K–12 outreach and recruitment activities to undergraduate mentoring and scholarship awards, job placement, and minority faculty development.”

L. Antonio Estévez:

“**W**hat would AIChE be today without the contributions and involvement of MAC? A question to reflect on.”

Tonya Peebles:

“**A**IChE should continue to reach across industrial and academic settings and address barriers to access and advancement for professionals of color. There are still implicit and institutionalized practices that limit opportunities for education and career advancement that we must work to eliminate. Developing inclusive engineering alliances for mentoring, networking and sponsorship would greatly benefit the community.”

Emmanuel Dada:

“**I** volunteer not for any personal gain, but to see that underrepresented minorities in chemical engineering advance. That we are visible. And that we are being recognized and being respected. So that when you look at minorities, you will see that they are contributing effectively to the progress of AIChE and chemical engineering. That really makes me happy — to see that we are contributing and that we are being recognized. That’s all I want.”

James Wei:

“**M**AC’s biggest contribution is to make it so that African Americans are treated as they should be — exactly the same as everybody else. MAC started out mainly concentrating on black chemical engineers. And they have done a very good job at getting started. It’s not finished, but it’s started. And now it’s time to broaden to other minorities — Hispanics, Native Americans, and other people who have been on the fringe, to make sure they are all getting respect and getting represented.

And when this is done to such an extent, one of these days, we can have a big party to celebrate, and shut the MAC down — because we won’t need it anymore. That would be success.”

Minority Affairs Committee Awards

Distinguished Service Award

Recognizes an AIChE member for sustained service and outstanding achievements that advance the goals of the Minority Affairs Committee. Among these goals is reducing the underrepresentation of minorities in the Institute, the chemical engineering profession, and engineering as a whole.

2014 – Timothy Odi	2005 – Tonya Peebles	2000 – Soni Oyekan
2011 – Lealon Martin	2005 – Robert Ofoli	1999 – Emmanuel Dada
2009 – Michael Harris	2004 – Lance Collins	1999 – Victor Rodgers
2008 – Thomas Marrero	2003 – Luke Achenie	1998 – Richard Traeger
2007 – Gilda Barabino	2002 – Kelly Bryant	1996 – Henry Brown
2006 – Yusuf Adewuyi	2001 – Christine Grant	1995 – Irvin Osborne-Lee

William W. Grimes Award for Excellence in Chemical Engineering

The Minority Affairs Committee presents this award in honor of William W. Grimes, the first African-American Fellow of AIChE. The award recognizes a chemical engineer's outstanding achievements as a distinguished role model for minorities.

2014 – Lance Collins	2008 – Soni Oyekan	2002 – Cato Laurencin
2012 – Emmanuel Dada	2006 – Thomas Mensah	2001 – Gerald Lessells
2010 – James Wei	2005 – Michael Harris	2000 – J. Patrick
2009 – Paula Hammond	2004 – Henry Brown	1995 – Lilia Abron

Eminent Chemical Engineer Award

Presented to an outstanding chemical engineer at the AIChE Annual Meeting, during the committee's Eminent Engineers Forum session.

2014 – Robert L. Satcher	2012 – Antonio Garcia	2010 – Gilda Barabino
2014 – Rosemarie Wesson	2012 – Paula Hammond	2010 – Derrick Rollins
2014 – B. Ogunnaike	2011 – Otis Shelton	2009 – Christine Grant
2013 – Levi Thompson	2011 – L. Antonio Estévez	2009 – Thomas Marrero
2013 – Yusuf Adewuyi	2011 – Jocelyn Harrison	2009 – Victor Atiemo-Obeng
2012 – Irvin Osborne-Lee	2010 – Lisa Jackson	

Minority Affairs Committee Officers

	1989	1990	1991	1992	1993	1994
Chair	H. Brown	I. Osborne-Lee	I. Osborne-Lee	I. Osborne-Lee	I. Osborne-Lee	V. Rodgers
Secretary		M. Aluko	M. Aluko	W. Bolden		B. Younger
Treasurer		H. Brown	H. Brown	H. Brown	H. Brown	E. Alsandor
1st V. Chair			A. Clarke	V. Rodgers	V. Rodgers	W. Bolden
2nd V. Chair			V. Rodgers			J. Mobley

	1995	1996	1997	1998	1999	2000
Chair	V. Rodgers	V. Rodgers	V. Rodgers	S. Oyekan	S. Oyekan/ E. Alsandor	E. Alsandor/ E. Dada
Secretary				T. Garcia	T. Garcia	K. Bryant
Treasurer	E. Alsandor	E. Alsandor	E. Alsandor	I. Osborne-Lee	I. Osborne-Lee	I. Osborne-Lee
1st V. Chair					E. Dada	C. Grant
2nd V. Chair			V. Rodgers		C. Grant	L. Achenie

	2001	2002	2003	2004	2005	2006
Chair	E. Dada	E. Dada	C. Grant	L. Achenie	Y. Adewuyi	T. Peebles
Chair-Elect			L. Achenie	Y. Adewuyi	D. Suleiman	D. Suleiman
Secretary	K. Bryant	K. Bryant	D. Suleiman	D. Suleiman	R. Dotson	R. Dotson
Treasurer	I. Osborne-Lee	I. Osborne-Lee	E. Dada	E. Dada	T. Odi	T. Odi
1st V. Chair	C. Grant	C. Grant				
2nd V. Chair	L. Achenie	L. Achenie				

	2007	2008	2009	2010	2011	2012
Chair	D. Suleiman	M. Harris	L. Martins	R. Dotson	I. Osborne-Lee	D. Rollins
Chair-Elect	M. Harris	L. Martin	R. Dotson	I. Osborne-Lee	D. Rollins	T. Odi
Secretary	K. Roberts	K. Roberts	K. Roberts	K. Roberts	M. K. Lee	M. K. Lee
Treasurer	S. Odunyebo	S. Odunyebo	T. Terry	T. Terry	T. Terry	T. Terry

	2013	2014	2015
Chair	T. Odi	M. K. Lee	I. Gamwo
Chair-Elect	M. K. Lee	I. Gamwo	M. K. Lee
Secretary	D. Hunter	D. Hunter	D. Hunter
Treasurer	G. Ajiboye	G. Ajiboye	M. Gencoglu

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