ANA M. FERRERAS (Bio-sketch)

Ana M. Ferreras is a Senior Program Officer at the National Academy of Sciences (NAS), where she manages the U.S. National Committees for mathematics instruction, crystallography, physics, theoretical and applied mechanics, and radio science. Dr. Ferreras earned a PhD in Industrial Engineering (IE) at the University of Central Florida (UCF). Her doctoral research focused on developing a company success index model to assess and predict organizational performance based on critical success factors such as profit, productivity, efficiency, quality, employee morale, safety and ergonomics. She also holds an MS in Engineering Management from the Florida Institute of Technology and a BS in Electrical Engineering from UCF. During her doctoral research, she assisted the IE Department at UCF in reengineering the undergraduate curriculum by developing a national model, new programs, experiential laboratories, and research centers. Prior to joining the NAS, she was a winter 2008 Christine Mirzayan Policy Graduate Fellow with the Center for Advancement of Scholarship on Engineering Education at the National Academy of Engineering. Email: aferreras@hotmail.com

ARMANDO SÁNCHEZ MARTÍNEZ (Bio-sketch)

Mexican education Consultant, with teaching experience in the superior level and Master Degrees in Education, and in Teachers' Training for all education levels. He worked from 1993 to 2004 in the Federal Public Education Ministry (SEP) in curriculum design, training programs, coordinating the national textbooks educative materials of Science for Basic Education and curricular field for the Secondary Education Reform, and participating in different international meetings. Since 2005 he has been working in Editorial Santillana and was the High School Manager for textbooks since 2008 and at present as Educative Research Manager. Chemist with studies of master's degree in Physical Chemistry (Mexico National Autonomous University), master's degree in Education (Autonomous University of Morelos), and studies of PhD (Education Institute, London University). Author of numerous articles, coauthor of books, in special the chapter "Achievement Gap in Mexico: Present and Outlook", in Clark J. V. Closing the Achievement Gap from an International Perspective, Springer Science+Business Media B.V., Dordrecht-Heidelberg-London- New York, 2014.

EARNESTINE BAKER (Bio-sketch)

Earnestine Baker is the retired Assistant to the Vice President of Institutional Advancement and serving currently as the Executive Director of the Meyerhoff Scholarship Program, Emerita at the University of Maryland, Baltimore County (UMBC). She joined UMBC in 1983 as the Coordinator of Minority Recruitment in the Office of Admissions. Between 1987 and 1992 she served as Associate Director for Scholarships at the University. In 1992, Mrs. Baker was appointed Director of the Meyerhoff Scholars Program, a nationally recognized program for talented students interested in pursuing terminal degrees in the sciences, mathematics, engineering and computer science. In July, 2009 – Science, the leading journal of scientific research, news and commentary, recognized UMBC's Meyerhoff Scholars Program as a national model demonstrating "what it takes" to help more minority students earn science degrees. The Meyerhoff Scholars Program was presented as one of the blue ribbon reports to Congress October, 2003. With a delegation of members of Minority Access, Inc. the Program was represented by Mrs. Baker at the Central University of Nationalities in Beijing, China July 2008 and May 2015 she presented the Program at The Global Symposium on Social Sciences in Bali, Indonesia. The University System Maryland (USM) Board of Regents selected

Mrs. Baker as the USM Outstanding Staff Member for service to its community in July 2008. Mrs. Baker served as the Director of the Meyerhoff Scholars Program at UMBC for ten years and was appointed the Executive Director of the Program in 2002. Mrs. Baker serves on several STEM Advisory Boards- including Brown University, Medical University of South Carolina and Washington University Initiative to Maximize Student Development (IMSD) external advisory board - and participated in the 2012 College Completion Symposium with the U.S. Secretary of Education, Arne Duncan. Since 1993, over 1200 Meyerhoff Scholars have graduated; more than 350 scholars are currently enrolled in graduate and professional schools; 215 Ph.D. s completed; 45 M.D./Ph.D.s completed; with 325 scholars currently enrolled at UMBC. Mrs. Baker has held various positions in education, including Chemistry Teacher (Alief Independent School District, Houston, TX), and Adjunct Instructor of Upward Bound Program (Millersville State University, Millersville, PA) and a Cooperative Extension Service Agent (Virginia Tech, Blacksburg, VA).

I have worked with UMBC's Meyerhoff Scholars Program for 30 years and served as the Program's Director for ten years and was appointed Executive Director of the Program in 2002. The Meyerhoff Scholars Program is a nationally recognized initiative to increase the numbers of underrepresented minority Ph.D.s in the sciences. The Program has been highly successful by creating an environment - a community of scholars - in which high achieving students work together with one another, and also work closely with supportive research faculty and staff. In July 2009, Science, the leading journal of scientific research, news and commentary, recognized UMBC's Meyerhoff Scholars Program as a national model demonstrating "what it takes" to help more minority students earn science degrees. The Program was also presented as one of the blue ribbon reports to Congress October, 2003. I traveled with a delegation of University Members of Minority Access, Inc. representing the Program at the Central University of Nationalities in Beijing, China July 2008 and at The Global Symposium on Social Sciences in Bali, Indonesia, May 2015. The University System Maryland (USM) Board of Regents selected me as the USM Outstanding Staff Member for service to its community in July 2008. I serve on several STEM Advisory Boards and participated in the 2012 College Completion Symposium with the U.S. Secretary of Education, Arne Duncan. Since the Program's inception, I have been a strong advocate for students' success in the academic community through program/staff development, along with innovative and pragmatic approaches to problem solving. I have built strong lasting partnerships with research faculty, organized and implemented a structure for internships and summer research experiences and formed institutional relationships for UMBC with the nation's most prestigious colleges and universities. My qualifications and experiences make me well suited for my role as a member of the Symposium Planning Committee on the NIH R13 and IPERT grants and I look forward to serve.

LOURDES E. ECHEGOYEN (Bio-sketch)

Lourdes E. Echegoyen is the founding director of the Campus Office of Undergraduate Research Initiatives (COURI) at the University of Texas at El Paso (UTEP). COURI is dedicated to enriching the experience of UTEP and visiting students by facilitating their training in research, scholarly, or creative activities, enhancing their academic success and professional development, and showcasing the results of their work. Dr Echegoyen received B.S. and Ph.D. degrees in Chemistry from the University of Miami. She started her career in 1993 as a high school teacher in Miami before returning to the University of Miami in 1998 as a post-doctoral fellow and lecturer. In 2002 she joined the faculty in the Chemistry Department at Clemson University and took over the direction of their Summer Research Experiences for Undergraduates (REU) program, which she successfully ran for two cycles of continuous funding from the National Science Foundation. In January 2008, at the

request of the American Chemical Society (ACS), she took a leave of absence from Clemson to develop and manage the ACS International REU Program (also with NSF funding), which she ran until joining UTEP in fall of 2010. Since her arrival at UTEP, Dr. Echegoyen has received several awards as PI or Co-PI from the National Science Foundation (2), the National Institutes of Health (2), the Howard Hughes Medical Institute (1), and the Department of Energy (1), all of which are focused on undergraduate research training in the sciences and engineering. Recognizing the impact that undergraduate research training can have across all disciplines, Dr Echegoyen has used some of COURI's internal funds (non-federal) to successfully encourage undergraduate students from non-STEM disciplines, particularly those in the arts and the humanities, to engage in scholarly and creative activities.

In the past 3 years, a multi-million dollar project funded by the National Institutes of Health in 2015 as part of their Diversity Program Consortium has allowed Dr. Echegoyen and her team of Co-PIs to develop the BUILDing SCHOLARS Center at UTEP. The initiatives of this center are aimed at developing, implementing, evaluating, and sustaining institutional, faculty and student development programs and activities that will positively transform the training of the next generation of biomedical researchers from the US Southwest region. The vision of the center is to increase the diversity of the biomedical research workforce so that it mirrors the demographics of the U.S.

Lourdes is an avid hiker, has traveled around the world, and is passionate about many things, including her family, her work, science, nature, democracy, education, international cooperation through research, and dancing.

EDWARD L KRUG (Bio-sketch)

POSITION TITLE: Professor of Regenerative Medicine and Cell Biology, Associate Dean for Postdoctoral Affairs
EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*
FIELD OF STUDY
Indiana State University, Terre Haute, IN BS 12/74 Biology
Purdue University, W. Lafayette, IN MS 08/77 Biochemistry
Purdue University, W. Lafayette, IN PhD 05/83 Biochemistry
Texas Tech University, Lubbock, TX Postdoc 06/84 Cell & Develop. Biology
Medical College of Wisconsin, Milwaukee, WI Postdoc 07/87 Cell & Develop. Biology

My duties as Associate Dean for Postdoctoral Affairs in the College of Graduate Studies involve administrative oversight for over 200 postdoctoral scholars, fellows, and staff scientists. In addition, I represent MUSC at the annual National Postdoctoral Association conference (hosted by MUSC in 2013) and on the GREAT Group Postdoctorate Leaders Section (chair, 2012-13). I also teach a variety of graduate courses including cellular functions, grant writing, essential scientific practices and career development. In addition to my academic and administrative duties at MUSC, I was co-director of the MUSC-Claflin IRACDA (2007-2012) and founding director (2007-2011) of the Postdoctoral Academic Career Development Program (funded by SC INBRE) a state-wide initiative that matches postdocs at any of the three research intensive institutions in South Carolina with one of twelve undergraduate campuses, many of which are HBCU or have significant underrepresented racial composition. Both programs were very successful in helping postdocs find academic positions and enhance the development of core competency skills. I serve on the MUSC IMSD program as a member of the

Careers Committee for underrepresented graduate students. My role involves giving workshops on professional skill development, one-on-one sessions on writing fellowships and manuscripts, and assisting in their strategizing next career steps. In 2011, I was selected as a 'coach' participant in the Academy for Future Science Faculty, an NIGMS-funded Pathfinder award (Rick McGee, PI) that tests a coaching-based, sociological model for promoting diversity in the STEM fields. Recently, I was selected as a professional development coach in the NIH funded National Research Mentoring Network STAR Program which targets underrepresented postdocs and junior faculty. This program focuses on grantsmanship and strategizing for promotion and tenure, with the goal of participants acquiring their first NIH research grant. I also regularly attend SACNAS, ABRCMS, and Understanding Interventions that Broaden Participation in Research Careers conferences, and serve as an external advisory for *MinorityPostdoc.org*. I am a regular presenter of career development workshops at SACNAS and panelist at the National Postdoctoral Association annual conferences.

EILEEN R. CARLTON PARSONS (Bio-sketch)

Dr. Parsons, the chair of the UNC's School of Education Faculty Executive Council, is a full professor of science education and teaches in the Learning Sciences and Psychological Studies strand of the Ph.D. in Education.

Her work situates as myths the widely held belief that western science is a universal body of knowledge separable from context and the science educative process is detached from the lived experiences and corresponding subjectivities of those involved. She specifically examines culture and race as they relate to access and equity for African Americans in grades 6-16. With respect to culture, she has primarily investigated ways in which learning environments can become more culturally responsive in order to facilitate the science learning and engagement of African American students. Later work has illuminated race and racism in science education and forged a space for their consideration. Specifically, her research and scholarship have challenged colorblindness and post-racialism through the investigation of scientists' experiences and correspondences between historical, when racism was acknowledged, and contemporary times, when it is not. The work has deconstructed the dynamics of race and racism when Blacks are the more knowledgeable others among White peers and how race and racism inhibit advances in multicultural education. Also, her research and scholarship have critically unpacked how race and racism have been present in a colorblind "science education for all," an aim that has guided decades of U.S. science education reform and policy. Highly competitive foundation grants (e.g., Spencer Foundation, American Educational Research Association (AERA)) have supported her work. She has published widely in top journals of science education in particular and education in general and has served as guest editor, co-editor, and on the editorial boards of the top science education research journals.

She received her MS degree in Science Education and PhD in Curriculum and Instruction from Cornell University, Ithaca NY. She is a member of the AERA, the American Association of the Advancement of Science (AAAS), and is an elected board member of the National Association for Research in Science Teaching (NARST).

IVORY A. TOLDSON (Bio-sketch)

Dr. Ivory A. Toldson is the president and CEO of the QEM Network, professor of counseling psychology at Howard University and editor-in-chief of The Journal of Negro Education. Previously, Dr. Toldson was appointed by President Barack Obama to devise national strategies to sustain and expand federal support to HBCUs as the executive director of the White House Initiative on Historically Black Colleges and Universities (WHIHBCUs). He also served as senior research analyst for the Congressional Black Caucus Foundation and contributing education editor for The Root, where he debunked some of the most pervasive myths about African-Americans in his Show Me the Numbers column.

Scholarship and Advocacy

Dr. Toldson was dubbed a leader "who could conceivably navigate the path to the White House" by the *Washington Post*, one of "30 leaders in the fight for Black men," by *Newsweek Magazine*, and the "Problem Solver" by *Diverse: Issues In Higher Education*. Dr. Toldson, according to former U.S. Secretary Arne Duncan, is "a prolific young scholar and myth buster." According to NPR, Dr. Toldson has "a desire to shed new light on old issues." A sought after speaker, Dr. Toldson has been featured on MSNBC, C-SPAN2 Books, NPR News, POTUS on XM Satellite Radio, and numerous national and local radio stations. In print, his research has been featured in *The Washington Post*, *CNN.com, The New York Times*, *The Root*, *The National Journal*, *Essence Magazine*, *BET.com*, *The Grio*, and *Ebony Magazine*.

Dr. Toldson was named in the 2013 and 2014 *The Root 100*, an annual ranking of the most influential African-American leaders. His body of research was featured in *The Foundation Center* report, *Building a Beloved Community*, for his role in shaping sponsored programs for Black male achievement. Dr. Toldson was awarded the: *Equity Champion Award* from the New York City Department of Education; *Outstanding Alumni Award* from Penn State Black Alumni Association; *Top 25 Forensic Psychology Professors*, ForensicsColleges.com; and *The Emerging Scholar* designation from the Diverse Magazine.

Dr. Toldson was promoted to full professor while on leave from Howard University to serve President Obama's administration. He spent 3.5 years at Southern University and A&M College (SU), in Baton Rouge, LA, and more than a decade at Howard University in Washington, DC. At SU, Dr. Toldson was named young researcher of the year after successfully competing for the prestigious W.E.B. DuBois Fellowship from the U.S. Department of Justice. Dr. Toldson continued a high level of research productivity at Howard University, evidence by publishing 4 books, and more than 65 scholarly publications including articles in peer-refereed journals, book chapters, and policy reports. Dr. Toldson became the Editor-in-Chief of *The Journal of Negro Education* (established 1932) in 2008, where he lead an effort to modernize The Journal, moving it to an online platform for peer reviews and subscriptions, while keeping it independently owned and run by Howard University. His efforts attracted many new international subscribers.

JOHNATHAN M. HOLIFIELD (Bio-sketch)

Johnathan Holifield is co-founder of ScaleUp Partners, the nation's leading consultancy blending economic inclusion and competitiveness – which *Black Enterprise Magazine* hailed a "convention-bending model." The firm has provided services to a select group of economic development and education organizations and institutions, local and state governments and national membership associations. Johnathan speaks extensively throughout the U.S. and is author of the upcoming book, *The Future Economy and Inclusive Competitiveness®: How Demographic Trends and Innovation Can Create Economic Prosperity for All Americans.*

Prior to ScaleUp Partners, he was founding Vice President of Inclusive Competitiveness at NorTech, where he won support for regional innovation development strategy shifts to address opportunities

for underserved communities and authored the Ohio Department of Higher Education statewide report on Inclusive Competitiveness. Earlier in his career, Johnathan gained considerable experience in regional and innovation-based economic development with the Cincinnati USA Chamber of Commerce, as its founding Vice President of New Economy Enterprise, and CincyTech, where he was founding Executive Director.

Johnathan's contributions include, leading the formation of a market-leading regional innovation leadership organization, attracting support from Fortune 500 CEOs, university presidents and elected officials; raising over $40 million, leveraged to create networks of more than $250 million of early-stage risk capital, significantly increasing investment options for entrepreneurs; creating Ohio's first information technology public school, which became a U.S. Department of Education National Blue Ribbon School; and securing a $5 million appropriation to implement the state's first STEM education and entrepreneurship program.

He has served on diverse governing and advisory boards, including Bio/Start Bio/Medical Start-Up Center, Greater Cincinnati Venture Association, The University of Oklahoma's Economic Development Institute, The Greater Cincinnati Foundation, Council of Regional Economic Policy Advisors (Cleveland, OH) and West Virginia University Alumni Association. Johnathan is a member of Sigma Pi Phi Fraternity, Tau Boulé and Omega Psi Phi Fraternity, Inc. and a former NFL player with the Cincinnati Bengals.

Holding a bachelor's degree from West Virginia University, where he was elected football team captain, and a M.Ed. and J.D. from University of Cincinnati, he also earned an economic development certificate from The University of Oklahoma's Economic Development Institute.

Find Johnathan on LinkedIn at TheTrimTabber and the website: http://www.scaleuppartners.com/. Contact him at johnathanholifield@yahoo.com.

LARRY D. YORE (Bio-sketch)

Larry D. Yore is a University of Victoria Distinguished Professor Emeritus, retiring in June 2011 after 41 years but continues to work on research and writing projects. He was educated at the University of Minnesota (BS–1964, MA–1968, PhD–1973) and taught elementary and secondary science in the Eden Prairie, MN Public Schools and at University High School (U of MN). In over five decades of teaching and research, Larry has been engaged in developing provincial science curricula, national science frameworks, and national K-12 assessment projects in North America. He has served on or is currently a member of the editorial boards or review panels of most of the science education research journals. Larry served as associate editor and founding member (2001) for mentoring non-English speaking researchers and special issues of *International Journal of Science and Mathematics Education*, a SSCI listed journal until 2015. He received the 2005 Association for Science Teachers Education's Science Teacher Educator of the Year Award, the 2012 National Association for Research in Science Teaching's Distinguished Contributions through Research Award, a 2013 Outstanding Achievement Award from the University of Minnesota, and a 2016 Distinguished Editor Award from the Ministry of Science and Technology, Taiwan.

MEDEVA GHEE (Bio-sketch)

Dr. Medeva Ghee is the Executive Director of the Leadership Alliance and a faculty member in the Department of Behavioral and Social Sciences at Brown University. As Director of the Leadership Alliance, she is responsible for leading the 36-member consortium dedicated to increasing the participation of underrepresented students in competitive graduate and doctoral training programs and ultimately developing leaders and role models in academia, the public and private sectors. She is the Director and Principal Investigator on a number of programs to prepare students for Ph.D. training and to consider careers in the professoriate and broader research workforce. Dr. Ghee

previously worked with the Clinton HIV/AIDS Initiative as a Laboratory Systems Specialist. In this capacity, she provided technical assistance and strategic advice on the development of laboratory plans and systems to support national HIV/AIDS prevention, care and treatment programs in the Initiative's partner countries in Sub-Saharan Africa. Informed by these experiences, she developed a course on multidisciplinary approaches to support HIV/AIDS care and treatment programs in Sub-Saharan Africa that is offered to Brown undergraduates and Master's degree students. A graduate of North Carolina State University with a bachelor's degree in zoology, she earned her M.S. and Ph.D. in microbiology from New York University School of Medicine. Her postdoctoral research was conducted with a team of CNRS researchers in Paris, France, where she employed biochemical and gene therapy technologies to investigate the impact of protein aggregation in Parkinson's disease. At Brown, Dr. Ghee is actively engaged in mentoring and has served as a faculty advisor for Brown undergraduate independent thesis projects and mentor for graduate students. She was honored by the Samuel M. Nabrit Black Graduate Student Association with the Ruth J. Simmons Award for Leadership.

PETER L. ROMINE (Bio-sketch)

Dr. Peter L. Romine has been the Chairman/Coordinator of the Electrical Engineering program at Navajo Technical University (NTU) since August 2014. As coordinator, he has been responsible for creating the curriculum, developing the laboratories, creation and development of the ABET assessment and continuous improvement process for the EE program, and grant work vital to the sustained funding of the program.

Previously, Dr. Romine taught and served at Alabama A&M University (AAMU) as Professor of Electrical Engineering Technology, until his retirement. While at AAMU, Dr. Romine served as chairman of his department, and PI and CO-PI on many research projects with NASA MSFC, AL-DOT, and NSF in the areas of Manufacturing Automation/Control, FrictionStir Welding Development, Smart and Embedded sensors, and curriculum development.

Dr. Romine received his PhD, in Computer Engineering and MS in Electrical Engineering from the University of Alabama Huntsville. He received the BS in Electrical Engineering from the University of Alabama Tuscaloosa.

SHARON LYNCH (Bio-sketch)

Sharon Lynch, PhD, is a professor in the Graduate School of Education and Human Development at the George Washington University. She is science educator and researcher who studies policy-relevant STEM education problems and practices. She is interested in understanding the social, cultural and economic forces shaping prospects for students underrepresented in STEM fields, and in finding educational solutions that improve STEM opportunity structures, at the individual, classroom, school, and policy levels. Her book *Equity and Science Education Reform* (2000) contributed to an understanding of these issues, and has been updated in subsequent publications and research projects that sought to understand the scale-up and sustainability of educational innovations.

Lynch is Principal Investigator on the NSF-funded study, *Opportunity Structures for Preparation and Inspiration (OSPrI*) that studies "exemplar" STEM high schools in 7 states. She is co-PI on a large-scale companion project, *iSTEM* (Barbara Means of SRI International is the PI) that is conducting longitudinal research on the effectiveness of inclusive STEM high schools in three states (NC, OH and TX). This work advances ideas about individual students and opportunity in the contest of socio-emotional factors, the school and the community.

Lynch served as Program Director in NSF's Directorate for Education and Human Resources from 2008-2010. She was President of the National Association for Research on Science Teaching (NARST) in 2012-13. She serves on a variety of advisory boards and committees on STEM education. She also seeks to disseminate the work to broader education audiences through the OSPrI website, media, and popular publications such as *Ed Leadership, Kappan,* and *US News and World Report.*

Sharon has taught high school biology, chemistry, and environmental science, as well as variety graduate level courses in science education and doctoral courses in curriculum and instruction and research methods.

ALFRED M. MAYS (Bio-sketch)

Alfred M. Mays is the program officer for Science Education and Diversity at Burroughs Wellcome Fund and overseas the competitive grant programming for K-12 math and science teachers, informal STEM enrichment programming as well as increasing diversity and underrepresented support in Science within graduate and postdoctoral programming. Prior to Alfred assuming this role, he served as an independent consultant with a service delivery that included strategic planning, project incubation, design and implementation of a number initiatives within education agencies and organizations. He has served as the Assistant Director of the Collaborative Project, a 21st Century Program supported by the NC General Assembly. In this role, Alfred was primarily responsible for the development and management of information resources. Alfred also served as staff advisor (Project Manager) to North Carolina's eLearning Commission and provided consultation to a number of special committees and focus groups. Other efforts include implementation of youth leadership and empowerment activities and the build out of STEM career awareness. Prior to joining the Collaborative Project, Alfred served public education as the Director of Information Resources Affairs and Director of Special Projects at the University of North Carolina – in the Office of the President. During this tenure, Alfred was responsible for the coordination of a number of special initiatives and collaborative efforts within the Division of Information Resources and served as a central liaison for the 16 campus system and various state agencies. Alfred's other work experience includes service as a regional director for the North Carolina Model Teacher Education Consortium (UNC-General Administration) and State Program Director within the North Carolina State Department of Public Instruction. He has been recognized for his contributions with many organizational successes to include Government Wide Best Practices for Information Resources.

MELISSA RIHM THIBAULT (Bio-sketch)

Dr. Melissa Rihm Thibault is the Vice Chancellor for Distance Education and Extended Programs at the North Carolina School of Science and Mathematics, leading efforts in online learning, delivery of instruction using interactive video conferencing, teacher professional development, and student enrichment programs, including the statewide Summer Ventures in Math and Science pre-college research experience program. In her role at NCSSM, Melissa leverages the contributions of faculty and staff, develops partnerships with other education service providers, and works to realize the School's potential in leading North Carolina in the development of STEM curriculum and instruction. Under her leadership the school has developed a partnership model and received support from the legislature, foundations and corporate philanthropists, to provide students and schools in rural and low wealth districts with access to rigorous and unique STEM courses taught by world-class faculty. In addition to leading distance education for NCSSM, Melissa serves on the advisory board for the North Carolina Virtual Public School and has led efforts to create collaborations across K-12, community college, and university partners that would yield online content to be freely shared with any student in the state and beyond. She has an undergraduate degree in Economics from Colby College, a Masters in Library Science from the University of South Florida and a doctorate in Public Administration from NC State University.

LOVELL EDWIN O. AGWARAMGBO (Bio-sketch)

Personal Statement Lovell Edwin O. Agwaramgbo is a tenured and endowed professor of chemistry. He currently serves as the interim Chair of the School of Science, Technology, Engineering, and Mathematics comprising of Biology, Chemistry, Computer Science, Mathematics, and Physics) since 2012. He served as the chairman of the Chemistry Department from 2005-2012 and Coordinator of the NSF-HBCUUP Environmental Toxicology Laboratory at Dillard University in New Orleans, Louisiana. He is interested in (1) Advancing civic engagement through community collaboration and enhancing research and awareness on the environmental consequences of climate change on our food, water, and soil safety (2) developing a multidisciplinary advanced teaching and research program at the undergraduate level that strongly integrates investigations of (1) Environmental Fate and Transport of Chemical pollutants and their Phytoremediation (2) Contaminant migrations, bioavailability, and remediation (3) Uptake and transport, and biomagnification of chemical contaminants by organisms (4) Application of computational Modeling in silicon directed reactions in regio and stereospecific reactions with respect to epoxides and surfactants and computational chemistry of soilchemical interactions. Dr. Agwaramgbo received his BS in Chemistry from Virginia Union University in Richmond VA, his MS and Ph.D. in Organic Chemistry from Howard University in Washington D.C. in the United States. Although an organic chemist by academic training, but as visiting research scientist at the U.S. Army Corps of Engineers Engineer Research and Development Center (USACE ERDC), Vicksburg, Mississippi, he worked on the phytoremediation projects dealing with plant uptake, transport, accumulation, and transformation of explosives in Soils & Plants. After Hurricane Katrina he received grants from Mitsubishi Corporation and Gulf Coast for Community renewal and Ecological Health to study soil and food safety in the affected areas.

After the BP Deep Water Horizon oil spill, he was funded to examine the impact of the oil on some biological organisms from non-point source lakes and tributaries. The Louisiana Board of Regents provided me with the funds in 2005 and 2007 to purchase instruments and enhance the training of students in environmental research. In 2008, the City of New Orleans Environmental Affairs office provided a seed grant for a pilot sunflower remediation project on blighted lots. In 2008, the Mitsubishi Corporation Foundation for the Americas provided me with a grant to establish an Environmental Youth Program at Area High Schools and to conduct quarterly series of Environmental workshops for Local Residents on heavy metal contaminants and their implications on gardening. In 2009, GCF again funded me to conduct Community Environmental Education and research Project in Advancing Community Collaborations, Outreach, and Enhancing Research & Awareness on Environmental Soil, Water, & Food Safety. His academic career includes academic and summer interludes at Federal University of Technology Owerri, Imo State, (visiting Professor 2013, Sabbatical Leave position, 2015-2016; and summer research faculty at the Army Environmental Research & Development Center in Vicksburg, MS (Phytoremediation, 2002-2004); Computational Center for Molecular Structure and Interactions (CCMSI) at Jackson State University in Jackson, MS (Silicon directed reactions, 2002- 2006), and Lawrence Livermore National Laboratory in Livermore, California (Chemical Modification of Porous Silicon Wafer Surfaces as Environmental Biosensors, 2001). Dr. Agwaramgbo hopes to advance civic engagement (a community collaboration) that seeks out solutions and readiness to mitigate the adverse environmental consequences of Climate Change (Global Warming) on our food, water, and soil safety. Thus, on a community level, Dr. Agwaramgbo works with several local groups and non-profit organizations in New Orleans whose goal is to provide the people direct access to environmental testing, remediation, education, & research (“Science Directly Serving People.”), and community outreach through the Youth Environmental Program and Environmental Issues Forum. He is a partner in the New Orleans Sun Flower Project whose aim is to detoxify and beautify the polluted soils in the New Orleans neighborhoods. He is also the founder of Ramgbo Innovative Research Concepts that has served as a consultant to the Algebra Project and Jackson Public School Summer Environmental Programs.

BARBARA BOAKYE (Bio-sketch)

Howard University Educational Leadership and Policy Studies Doctoral Graduate Assistant
Certified Principal K-12
Certified Educator (Life Science)

Barbara Boakye is a twelve-year veteran of the public school system. Raised in Ghana from an early age, Barbara started and matured in her career with Cedar Hill Independent School District. Using her expertise in Spanish, she began teaching Spanish I but quickly moved into teaching biology, which she taught for eight years. Upon receiving her master's degree in Science Education, she was promoted to school administration and worked in both the school district and at Cedar Valley College- holding the title of Dean of Instruction. While working with Cedar Hill, Barbara received many opportunities to present at conferences. Working with the Bill and Melinda Gates Foundation, Barbara trained and introduced the *Literacy Design Collaborative* and the *Early College Model* across the state of Texas. Not only did she conduct state and national conferences, but was also responsible for district professional development in Cedar Hill ISD, Dallas ISD, Desoto ISD, Lancaster ISD, and much more. Currently, Barbara is working on her doctoral degree in Educational Leadership and Policy Studies at Howard University. Barbara Boakye's goal is to promote instructional leadership through the lens of college and career readiness, and also through Science, Technology, Engineering, and Math (STEM) education.

LUCY GROVES (Bio-Sketch)

Lucy Groves is a Georgia Tech Dean's Scholar, and a recipient of an inaugural freshman research grant for her documentary film "Conjuring: The Secretive Art of Supernatural Healing in North Georgia." She is pursuing a Bachelor's degree in History, Technology, and Society with a minor in the History of Medicine, and a Master's in Public Policy. Ms. Groves is a presenter at this year's Georgia Tech Annual Research Conference. Her goals include working at the intersection of public policy, technology, and women's issues.