

### **Anna Barón (Bio-Sketch)**

I am an applied biostatistician with over 30 years of experience collaborating with researchers in a number of areas including early detection of cancer, cardiology outcomes, health services research, cross-cultural psychiatry, diabetes, and HIV/AIDS prevention. My statistical expertise is in survival analysis and prediction modeling. In my role as Professor of Biostatistics and Informatics at the Colorado School of Public Health, I teach introductory and advanced biostatistics courses and mentor MS and PhD students in biostatistics, graduate students in public health, and PhD students in bioinformatics, epidemiology and clinical science. I have also mentored junior faculty in oncology, cardiology, rheumatology, endocrinology, emergency medicine, renal medicine, psychiatry, and pediatrics.

I am Latina and have been involved, since the days of my graduate school training, in minority student recruitment into the health sciences. From 1997 to 2006, as head of the Biostatistics and Informatics Section of the Department of Preventive Medicine and Biometrics in the University of Colorado School of Medicine, I committed myself to the recruitment and retention of a diverse faculty, and to the recruitment and mentoring of female and minority students in biostatistics, bioinformatics, epidemiology, and public health. From 2003 to 2011, I served on the Advisory Board of the Rice University Summer Institute of Statistics (RUSIS), co-funded by the NSF and NSA. This program had as one of its goals to recruit students from underrepresented minority groups into statistics. Finally, I am a former member of the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), an organization whose mission is to encourage Chicano/Latino and Native American students to pursue graduate education and obtain the advanced degrees necessary for science research, leadership, and teaching careers at all levels. I presented invited papers on biostatistics at annual meetings of SACNAS and also worked to recruit student participants to the graduate programs at UC Denver.

I became connected to this working group through Prof. Willie Pearson, who was also a RUSIS board member. In the spring of 2013, Willie invited me to participate in an edited book, *Advancing Women in Science – An International Perspective* (Pearson, Frehill and McNeely, Editors; Springer, 2015). I led a group of my University of Colorado colleagues toward development of a vignette on the success of women in biostatistics, generally and at our institution.

### **CAESAR R. JACKSON (Bio-Sketch)**

Dr. Caesar R. Jackson is professor of physics, having recently completed a stint as Interim Dean of the School of Graduate Studies at North Carolina Central University (NCCU). He served as program director for National Science Foundation 2009-2011 during which he was Division Director for Human Resource Development in Education and Human Resources Directorate. He joined NCCU in August, 2005 as dean, College of Arts and Sciences after he was employed at North Carolina Agricultural and Technical State University (NCA&T) for thirteen years. At NCA&T, Dr. Jackson was Interim Dean of the College of Arts and Sciences from 2002-2005; Associate Dean for Research and Graduate Programs in the College from 1998-2000; Professor of Physics and Chairperson of the Department of Physics from 1994-1998; and Assistant Professor from 1992-1994. Prior to NCA&T, Dr. Jackson was a Staff Engineer for the IBM Corporation where he was employed from 1977-1992. Dr. Jackson earned the Bachelor of Engineering Technology in Electrical Engineering from Florida Agricultural and Mechanical University in 1977, the Master of Engineering in Electrical Engineering from the University of Florida in 1980, and the Doctor of Philosophy in Physics from North Carolina State University in 1992. He has been engaged in nuclear physics research at Triangle Universities Nuclear Laboratory in Durham, NC and at Thomas Jefferson National Laboratory in Newport News, VA. He continues to be involved in scholarly activities at NCCU focusing on science education research and

on issues associated with increasing the number of minorities pursuing degrees and careers in science, technology, engineering, and mathematics.

#### **CLAUDIA WALKER (Bio-Sketch)**

Walker has been a teacher for twenty-four years, in three different Title I schools in Greensboro, North Carolina and in New Jersey. Claudia received National Board Teacher Certification in 2003, and National Board renewal in 2013. She has been trained in Singapore Math, was the grant writer and recipient for the North Carolina Singapore Math Pilot Program in 2011, and is the Singapore Math Coach for her school. Claudia received a Career Award for Science and Mathematics Teachers from the Burroughs Wellcome Fund in 2010. She also received Outstanding Science Teaching Award from the North Carolina Science Teachers Association in 2014. She has implemented and received extensive training in Engineering is Elementary, a program from the Museum of Science in Boston through a partnership with the University of North Carolina Greensboro. She works as an educator with the UBEATS: A BioMusic STEM Intervention for ESL Students in Guilford County. In 2015, she traveled to Singapore as part of a group of STEM teachers for the Center for International Understanding - Go Global NC. In February, 2014, she attended the convocation STEM Learning is Everywhere: Building Learning Systems hosted by the NRC.

#### **MICHAEL S. GAINES (Bio-Sketch)**

Michael Gaines is Professor of Biology, Assistant Provost for Undergraduate Research and Director of Pre-health Advising and Mentoring at the University of Miami (UM). Gaines earned a B.S. degree at Tulane University and his Masters and Ph.D. degrees at Indiana University. In recent years, Gaines' research interests have focused on the evolutionary ecology of large mammals in South Africa. Gaines is director of UM's Howard Hughes Medical Institute (HHMI) Undergraduate Education Program. The major goal of the program is to increase the number of underrepresented students in research careers in science technology and engineering and mathematics (STEM) fields. He directs a National Institute of General Medical Sciences (NIGMS) Bridge to the Baccalaureate Program between UM and Miami-Dade College. Its aim is to increase the number of community college students transferring to research universities and completing baccalaureate degrees in STEM. In addition, Gaines serves as campus coordinator for the National Science Foundation (NSF) Florida-Georgia Louis Stokes Alliance for Minority Participation and the Leadership Alliance. Both programs provide research experiences for minority students in STEM fields. He also directs an NIGMS Initiative for Maximizing Student Development, which is a research training program that supports minority graduate students pursuing PhDs in STEM. Gaines teaches undergraduate courses in general biology and bioethics. He has won numerous university teaching awards. Finally, Gaines directs the Science Made Sensible (SMS) Program. With initial funding from NSF, SMS partners UM students with Miami-Dade middle and high school teachers to develop science curricula in their classrooms. SMS has been exported to South Africa where UM students are partnered with University of Pretoria students who work in classrooms with primary school teachers in Gauteng Province to excite learners about science.

### **PETER MUHLBERGER (Bio-Sketch)**

Peter Muhlberger is a Senior Analyst for the National Science Foundation's (NSF) National Center for Science and Engineering Statistics, where he is responsible for research on K-12 education and public understanding of science. Previously, he was a NSF Program Director for political science, cybersecurity, and data-intensive research. He has served on the Organisation for Economic Co-operation and Development's Global Science Forum experts group on new data social research ethics. He is a Research Fellow at the Public Policy Center at the University of Nebraska at Lincoln. Dr. Muhlberger received his Ph.D. in political science from the University of Michigan. He has published in such journals as *Political Psychology*, *Political Communication*, the *Journal of Information Technology and Politics*, and *Information Polity*. He designed and directed research on Carnegie Mellon University's Virtual Agora Project, a NSF-funded grant project investigating the political, social, and psychological effects of computer-mediated political engagement. He was also principal investigator on the Deliberative E-Rulemaking Project, a NSF-funded project applying natural language processing and multi-level deliberation to federal agency online rulemaking.

### **SANDRA HANSON (Bio-Sketch)**

Dr. Hanson's research examines the gender structure of educational and occupational systems in a comparative context. Her recent books *The American Dream in the 21st Century* (Temple University Press, 2011) and *Latinos and the American Dream* (Texas A&M University Press, 2016), edited with John White, examine the American Dream within cultural, historical, political, sociological, and religious perspectives. The recent volume on Latinos examines the American Dream in the context of the current immigrant stream. In *Swimming Against the Tide: African American Girls in Science Education* (Temple University Press, 2009), Hanson examines the experiences of African American girls in the science education system. Dr. Hanson's book *Lost Talent: Women in the Sciences* (Temple University Press, 1996) is a culmination of her research on the loss of talented young women in the science pipeline funded by the National Science Foundation.

Professor Hanson's research has been published in numerous journals including *Sociology of Education*, *Public Opinion Quarterly*, *Journal of Women and Minorities in Science and Engineering*, and *Journal of Marriage and Family Studies*. One of her recent publications in *International Journal of Science in Society* takes a cross-national look at diversity in science and asks "Science for All? The Intersection of Gender, Race, and Science."

In 1997, Dr. Hanson received a Fulbright award at the Jagiellonian University in Krakow Poland. Her second Fulbright award included an exchange with Leipzig University in 2012. In 2018 Dr. Hanson will partake in a third Fulbright exchange (at Jagiellonian University) which will involve an assessment of progress for girls in science in the last two decades in Poland and elsewhere.

In May, 2015 Dr. Hanson participated in an NSF sponsored international collaboration with a geographer in Berlin in order to work on mapping women's access to science cross-nationally.

She is Sigma Xi Distinguished Lecturer for 2015-2017.

### **VIJAY REDDY (Biosketch)**

Dr Vijay Reddy is the Executive Director of the Education and Skills Development research programme at the Human Sciences Research Council in South Africa. The research programme works in the area of Education (primary, secondary and tertiary education with a focus on access, quality, relevance and equity); Skills Development (focus on planning the post-school education and training sector and impact of skilling for the labour market) and Science, technology, and society (focus on a multi-disciplinary, problem-oriented research at the interface of human capabilities and the innovation system).

Vijay holds a PhD in science education from the University of KwaZulu-Natal. The title of her dissertation is Life Histories of Black South African scientists in South Africa. She was awarded a Fulbright Scholarship and completed her Masters degree in the US.

Before joining the HSRC in 2002, Dr Reddy worked as a school science and mathematics teacher, in non-governmental organisations on science teacher development. She taught chemistry at university and was subsequently responsible for a graduate education programme.

Vijay has extensive experience in social scientific research, especially in science and mathematics education, conducting large-scale surveys, life history research and research contributing to setting up a skills planning mechanism.

She coordinated the South African component of the Trends in International Mathematics and Science Study 2003, 2011 and 2015 and has published extensively on TIMSS. Her recent publication is entitled Making Global Research Locally Meaningful and this best reflects her stance related to international achievement studies.

She has also led a massive multi-year research project to support building the Skills Planning Mechanism and led the writing of the Skills Supply and Demand Report (Vijay Reddy, Haroon Borat, Marcus Powell, Mariette Visser and Fabian Arends). The purpose of the report is to provide a holistic understanding of the current supply and demand for skills in South Africa. The analytical approach we used represents a radical departure from manpower forecasting and tries to understand the complexities and intricacies around how supply and demand interact in the South African society and economy and then draw implications for reform.

Vijay has undertaken research projects for organisations such as the National Research Foundation (NRF); the United Nations Educational, Scientific and Cultural Organization (UNESCO), Department of Science and Technology (DST), National Advisory Commission on Innovation.

### **AVA DAWN INNERARITY ROSALES (Biosketch)**

Currently the executive director of science and SECME program director for Miami-Dade County Public Schools (M-DCPS), she is a veteran educator with 29 years of extensive experience in curriculum development and science teaching and learning. Throughout the past 22 years, she has moved between coordinating and directing the local SECME program at school-site and District levels. SECME is a premier national precollege STEM (science, technology, engineering, and mathematics) alliance that brings K-12, industry, government and colleges/universities together to continue the STEM pipeline K-12 through postsecondary to career. Building on the work of her predecessors, and through her collaborations with Institutions of Higher Education, Industry and other District departments, she continues to leverage financial and in-kind support to sustain district-wide models

of excellence in science education and STEM initiatives. As the co-author of the 21st Century Community Learning Centers Grant "SECME Stars," the Department was awarded \$875,000. The proposal has been used as a model for three consecutive cohorts of schools from 2004 to present, impacting 12 low performing, low socio-economic elementary schools. She has presented at several science and technology focused national and international conferences; of particular note are her presentations on the effects of SECME on student attitudes and achievement in mathematics and science at the American Evaluation Association Conference, the American Educational Research Association (AERA) meeting and the National Association for Research in Science Teaching (NARST) Annual Conference. Her professional accolades include grant awards, Francisco R. Walker Teacher of the Year Region V finalist, M-DCPS SECME Teacher of the Year and Shaik Jeelani Selfless Service to SECME National Award. Dr. Rosales' educational path began with pre-medical studies. She holds a Bachelor of Science degree from the University of Southern California, a Master of Science from Nova Southeastern University, and a Doctor of Philosophy from Curtin University. Her husband is Venezuelan; she was born in the West Indies to a dietician and a civil engineer, and is a product of both the British and American educational systems.

#### **KENNETH S. TOLSON (Biosketch)**

Hon. Kenneth S. Tolson 7503 12th St., NW, Washington, DC 20012 email: ktolsonopp1@gmail.com  
Phone: (301) 802-1661 Page 1 of 5 Professional Summary Executive technology management visionary leader offering distinguished diversified career in creating business impact, strategic technology direction for short- and long-range tactical planning with both public and private organizations. Proven performance & results-driven multi-dimensional business executive with 25+ yrs experience including P&L management. Over 15+ yrs senior-level experience in disruptive technologies, big data predicative analytics, cloud computing, cyber security, and health care IT services. Demonstrated sound discernment and judgment to identify analyze and lead organizations to operational excellence. Outstanding track record for developing, designing, and/or delivering high-quality, high-impact programs to effectively achieve economic stability. Experience leading significant program growth with strong outcome measures, benchmarks, and team management components, with a demonstrated track record of strong analytic background and the ability to leverage qualitative and quantitative information to develop high-impact program strategies. Outstanding project management skills; ability to work efficiently and effectively in a deadline-driven environment, overseeing multiple work streams simultaneously. Exceptional strategic thinking ability, proven self starter, anticipates problems, creates new innovative solutions and the ability to lead cross-organizational working groups facing very complex technology and process challenges. Results-oriented, decisive leader, with proven success in identifying growth opportunities, penetrating targeted markets and initiating strong business, government, and community alliances. Experience cultivating and managing a highperforming team while meeting ambitious goals. Core competencies in: • Strategic Visioning, Analysis & Planning, Partnership Alliance • Big Data Predictive Analytics Integration • Capture & Proposal Development • Cloud Computing Solutions • Human Capital, CM, WF Leadership • Innovative Technology Ventures • Portfolio Management • Budget Finance: Capital & Operating • Active DHS/DOD Top Secret Clearance

### **KAREN GU (Bio-Sketch)**

Karen Gu is a first-year undergraduate student at the Georgia Institute of Technology studying History, Technology, and Society and Biochemistry. Before attending college, she developed an interest in educating people about science as the president of Science National Honor Society at her high school. She helped re-instate the annual Science Odyssey Night which aimed to generate interest in science in the local community through interactive demonstrations and presentations led by other high school students. Her interest continues through participation in the Junior STEM club at Georgia Tech. Her research interests focus on data-driven strategies to retain more underrepresented minorities and women in STEM.

### **LIZA CARIAGA-LO (Bio-Sketch)**

Dr. Liza Cariaga-Lo is Vice President for Academic Development, Diversity and Inclusion and a faculty member in the Education Department at Brown University. From 2007-2012, Dr. Cariaga-Lo was Assistant Provost for Faculty Development and Diversity at Harvard University. She was previously Assistant Dean at the Yale Graduate School of Arts & Sciences and the Director of the Office for Diversity and Equal Opportunity, as well as a faculty member at Yale Medical School. She received her doctoral training in Education and Developmental Psychology from Harvard University. Besides teaching courses related to developmental psychology, minority health and health disparities, Dr. Cariaga-Lo has also taught Asian American Studies and African American Studies courses and consults widely on cultural diversity and higher education issues. She is currently a member of the National Institutes of Health (NIH) NAGMS Council and has served as Chair of the NIH--NIGMS Minority Programs Review Committee and continues to work closely with other federal agencies and foundations on broad diversity initiatives to develop and support young scholars from diverse backgrounds. She has been the Director and Principal Investigator on a number of programs to prepare students for PhD training and to consider careers in the professoriate, including the Yale Postbaccalaureate Research Education Program and the Summer Research Opportunities at Harvard Program. Her areas of research include education program evaluation, minority student development, ethnic minority health care, and public policy affecting children and families. She was the recipient of the Chang-Lin Tien Leadership in Education Award from the Asian Pacific Fund in 2014. She is currently completing work on a book about the identity development of Asian Americans.

### **EDWARD MARSHALL (Bio-Sketch)**

Edward began to develop his expertise in providing post-secondary access while serving 4 years as an Academic Monitor in the Athletics Department of Auburn University, and 7 years as a Program Coordinator with the Educational Opportunity Fund at Atlantic Cape Community College. While at Atlantic Cape, he implemented a retention initiative for African-American and Latino Males focused on team building, leadership, and the enhancement of self-esteem. Edward also became very active on the Executive Board of the New Jersey Educational Opportunity Fund Professional Association while at Atlantic Cape, serving 5 years as Chair of the statewide Counselors Training Institute. From 2004 to 2009, Edward served as Coordinator of Recruitment and Special Programs for Biomedical Graduate Studies (BGS) at the University of Pennsylvania's School of Medicine, focusing on the enhancement of research skills amongst undergraduate and post-baccalaureate students, as well as recruitment and retention of under-represented doctoral students. While with BGS, Edward also

represented Penn for the Leadership Alliance, a national consortium of more than 30 leading research and teaching colleges, universities, and private industry. Currently, Edward directs the Upward Bound Math Science Program at The University of Pennsylvania, working to strengthening the academic and personal foundations of urban high school students, in order enhance their potential for success in postsecondary STEM curricula. Edward serves as an external evaluator for STEM related initiatives of major United States funding agencies, including the National Science Foundation and the National Institutes of Health. He received his BA in Biology from The Richard Stockton College of New Jersey, and a Masters in Chemical and Life Sciences from the University of Maryland, College Park.

### **OMARI SCOTT SIMMONS (Bio-Sketch)**

Omari Scott Simmons is a Professor of Law & Director of the Business Law Program at Wake Forest University School of Law. He is a recognized expert on college access as well as corporate governance. Professor Simmons is the author of numerous publications and frequently lectures on these topics to academic and nonacademic audiences across the country. He is a member of the American Law Institute.

Professor Simmons is the co-founder and Executive Director of the Simmons Memorial Foundation (SMF) ([www.smfnonprofit.org](http://www.smfnonprofit.org)), a grassroots nonprofit organization that promotes higher education access for vulnerable students in North Carolina and Delaware. Over the past two decades, Professor Simmons, on a volunteer basis, has helped hundreds of talented students attain their higher education goals through his nonprofit organization.

Before entering academia, Professor Simmons practiced law in Washington, DC. He received his undergraduate education at Wake Forest University; his Juris Doctorate from the University of Pennsylvania Law School; and a Master of Laws from the University of Cambridge. At the University of Pennsylvania, he received the Thouron Award and the Fontaine Fellowship. Professor Simmons has received multiple honors in recognition of his efforts promoting higher education opportunity including: the 2016 *Winston-Salem Chronicle* Community Service Award; the 2015 MERIT Hall of Fame Award; the 2004 Dr. Sadie T.M. Alexander Distinguished Graduate Award for Outstanding Service from the University of Pennsylvania Law School, Black Law Students Association; and the 2002 MBNA Foundation's Best Practices in Education Award.

### **CONNIE L. MCNEELY (Bio-Sketch)**

Connie L. McNeely, George Mason University Connie L. McNeely, Ph.D., is a sociologist and Professor of Public Policy at George Mason University, where she is also the Co-Director of the Center for Science and Technology Policy. Her teaching and research address various aspects of science, technology, and innovation, healthcare, organizational behavior, public policy, governance, social theory, and culture. Dr. McNeely currently directs major projects on big data analytics, on scientific networks, and on migration and diversity in the science and technology workforce. Emphasizing comparative and historical perspectives, her work also has engaged questions on international development and organization and on issues related to race, ethnicity, nation, and gender. She has conducted research on education and socio-legal relations and has ongoing projects investigating digital and knowledge divides and examining institutional and cultural dynamics in matters of globalization and polity participation. Dr. McNeely has numerous publications and is active in several

professional associations, serves as a reviewer and evaluator in a variety of programs and venues, and sits on several national and international advisory boards and committees. She also is Associate Director in the Fellowships Office at the National Academy of Sciences in the Policy and Global Affairs Division. Dr. McNeely earned the B.A. (A.B.) in Sociology from the University of Pennsylvania and the M.A. (A.M.) and Ph.D. in Sociology from Stanford University.

#### **WILLIAM H. SCHMIDT (Bio-Sketch)**

William H. Schmidt is a University Distinguished Professor of statistics and education at Michigan State University. He serves as director of the Education Policy Center and holds faculty appointments in Statistics and Education. Previously he served as National Research Coordinator and Executive Director of the US National Center which oversaw participation of the United States in the IEA sponsored Third International Mathematics and Science Study (TIMSS). He has published in numerous journals including the *Journal of the American Statistical Association*, *Journal of Educational Statistics*, *EEPA*, *Science*, *Educational Researcher* and the *Journal of Educational Measurement*. He has co-authored ten books including **Why Schools Matter, Teacher Education Matters, and Inequality for All**. His current writing and research concerns issues of academic content in K-12 schooling including the Common Core State Standards for Mathematics, assessment theory and the effects of curriculum on academic achievement. He is also concerned with educational policy related to mathematics, science and testing in general. Dr. Schmidt received the 1998 Willard Jacobson Lectureship from The New York Academy of Sciences and is a member of the National Academy of Education. In 2009 he was elected in the first group of Fellows in the American Educational Research Association. Dr. Schmidt served on the Steering Committee for Review of the Evaluation Data on the Effectiveness of NSF-Supported Mathematics Curriculum Materials. He received his A.B. in mathematics from Concordia College in River Forrest, IL and his Ph.D. from the University of Chicago in psychometrics and applied statistics. He was also awarded an honorary doctorate degree from Concordia University in 1997.

#### **SIBRINA N. COLLINS, (Bio-Sketch)**

Dr. Sibrina N. Collins is an inorganic chemist and STEM administrator. She began her college career at Highland Park Community College (Highland Park, Michigan), where she earned an associate of science degree in 1990. Dr. Collins later earned a B.A. in chemistry (cum laude) in 1994 from Wayne State University (Detroit, Michigan).

She earned her M.S. (1996) and Ph.D. (2000) both in the field of inorganic chemistry, from The Ohio State University under the direction of Professor Bruce Bursten. As a graduate student at OSU, she received significant training as a photochemist, where she used light to study chemical reactions and photochemically reactive molecules. She later completed a postdoctoral appointment at Louisiana State University (Baton Rouge, Louisiana) with Professor Isiah Warner, where she focused on heart disease research.

Between 2003 and 2006, Dr. Collins was an assistant professor of chemistry at Claflin University, an HBCU (Historically Black Colleges and Universities) in Orangeburg, South Carolina. Her research efforts at Claflin University focused on the crystal-engineering of metal-organic frameworks (MOFs), which have many potential applications as electronic materials. Dr. Collins has also worked as a writer and editor for the American Association for the Advancement of Science (AAAS) in Washington,

DC. From May 2006 to May 2008, she served as the Director of Graduate Diversity Recruiting for the University of Washington (Seattle, WA). In this role, she focused on building effective partnerships between STEM (Science, Technology, Engineering, Mathematics) faculty at minority-serving institutions (MSIs) and the University of Washington.

Dr. Collins served as a faculty member in the Department of Chemistry at The College of Wooster (Wooster, OH) from 2008-2014. At Wooster, her research focused on developing a detailed understanding of the molecular structures, electronic structures, photophysics and reactivity of a selection of late transition metal complexes and exploit this understanding to design effective anticancer agents. The transition metal complexes contained ruthenium (Ru), rhenium (Re), gold (Au) and copper (Cu) metal centers. Dr. Collins has mentored 17 undergraduate chemistry students and published peer-reviewed articles in high-impact journals such as *Inorganic Chemistry*, *Acta Crystallographia*, *Journal of Chemical Education*, and *the Bulletin for the History of Chemistry*.

Dr. Collins most recently served as the Director of Education at The Charles H. Wright Museum of African American History, which is the leading cultural institution focused on the African American experience. In this new role, she focused on the science education and social studies programming for the Wright Museum. Dr. Collins is now the Executive Director of The Marburger STEM Center (MSC), housed on the campus of Lawrence Technological University. The Marburger STEM Center is the intellectual home of campus-wide STEM initiatives at LTU, which promotes inclusiveness, excellence, creativity and innovation.