Arthur Nelson*—TERC Founder

The Nelson Companies and Chairman of TERC Board of Trustees and former Board Member (1965-2013)

Arthur Nelson worked as a research assistant in the Radiation Laboratory at MIT during the Second World War. He was, in fact, one of the first people to track an airplane with high-power microwave radar, a feat he accomplished standing atop a roof at MIT, beaming the radar off a plane flying overhead by moving the equipment by hand. The MIT Radiation Laboratory left Arthur with three indelible impressions: first, that difficult objectives can be accomplished given an intensity of effort; second, that the success of large technological undertakings depends upon skilled technicians and other paraprofessionals; and third, that the educational culture of MIT, whose motto is men set manus—mind and hand—is much to be admired. These impressions were still etched in Arthur’s memory twenty years later when he and six other technical educators met in 1965 at MIT as part of a month-long national conference on improving technical education. The group shared a vision of a nonprofit research center to develop high quality instructional materials for training a new population of specialized technicians. Together they founded TERC.

Current Board Members

Martin Storksdieck—Chair

Center for Research on Lifelong STEM Learning, Oregon State University

Martin Storksdieck directs Oregon State University’s campus-wide Center for Research on Lifelong STEM Learning, and holds appointment as professor in the College of Education and the School of Public Policy. The Center works to improve understanding of how all people learn STEM throughout the lifespan, in formal and informal settings. Before joining OSU in 2014, Martin directed the Board on Science Education and the Climate Change Education Roundtable at the National Academy of Sciences. At the Academies he oversaw studies on a wide range of issues related to science education and science learning, and provided evidence-based advice to decision-makers in policy, academia and educational practice. His prior research focused on how and what we learn when we do so voluntarily, and how learning is shaping, and also influenced by, our behaviors, identities and beliefs, particularly of controversial topics such as climate change or evolution. Martin researched informal science education and science communication in a variety of settings and situations, and has investigated connections between school-based and out-of-school learning in Germany and the United States. Martin has previously served as director of project development and as a senior researcher at the non-profit Institute for Learning Innovation. In the 1990s he was a science educator with a planetarium in Germany, responsible for shows and programs on global climate change; served as editor, host, and producer for a weekly environmental news broadcast; and worked as an environmental consultant specializing in local environmental management systems. Martin holds Master’s degrees in biology and public administration and a Ph.D. in education.

Nadine (Binkley) Bonda

American International College

Dr. Nadine Bonda has worked in education for over 40 years, holding positions of Superintendent, Assistant Superintendent, Principal, Mathematics Department Chair, Mathematics Teacher, and Head of a school for students with dyslexia and language processing problems. She is currently an Assistant Professor at American International College, teaching Qualitative Research and mentoring doctoral students in the Educational Leadership and Supervision Program and the Teaching and Learning Program. In addition, she has taught leadership and mathematics pedagogy at the University of British Columbia.
Dr. Bonda also works as an education consultant in the areas of leadership, teaching and learning, and curriculum and supervision. She primarily focuses on underperforming schools and school districts, consulting in the areas of evaluation and school and district accountability.

Dr. Bonda holds a PhD in Curriculum and Instruction from the University of British Columbia, a C.A.G.S. in Leadership from Boston University, an MEd in Mathematics from Boston University, and a BA in Mathematics from Regis College. Dr. Bonda is the author of several articles, and her writings appear in several books.

Marta Civil

Department of Mathematics at The University of Arizona

Marta Civil is a Professor of Mathematics Education and the Roy F. Graesser Endowed Chair in the Department of Mathematics at The University of Arizona. Her research focuses on cultural, social, and language aspects in the teaching and learning of mathematics, linking in-school and out-of-school mathematics, and parental engagement in mathematics.

She has led several NSF-funded initiatives involving children, teachers, and parents, including Girls in the SYSTEM (Sustaining Youth in Science, Technology, Engineering and Mathematics), a gender equity project aimed at engaging low-income, culturally diverse children ages 8-13 in hands-on mathematics and science explorations in informal and after-school settings; MAPPS (Math and Parent Partnerships in the Southwest), which had as a goal to promote Latina/o parental involvement in mathematics through the development of leadership teams who learned about mathematics and in turn facilitated workshops for parents within their school district; and CEMELA (Center for the Mathematics Education of Latinos/as), an interdisciplinary, multi-university consortium focused on research and practice on the connections between the teaching and learning of mathematics and the cultural, social, and linguistic contexts of Latina/o students. She teaches primarily mathematics and mathematics education courses for preservice and practicing teachers and graduate courses on research in mathematics education.

Herbert P. Ginsburg

Teachers College, Columbia University

Herbert P. Ginsburg holds the Jacob H. Schiff Chair at Teachers College, Columbia University, where he is Professor of Psychology and Education. For the past 30 years he has conducted research on cognitive development, particularly the development of children's mathematical thinking, both within the U.S. and in various cultures around the world. He has used the knowledge gained from research to develop several kinds of educational applications. He has created video workshops to enhance teachers' understanding of their children's learning of mathematics. He has contributed to the Silver Burdett & Ginn mathematics textbook series. He has developed tests of mathematical thinking and has explored how the "clinical interview" method for assessing children's mathematical knowledge can be used by teachers in their classrooms. Currently, he is engaged in research on young children's mathematical competence, and is developing a new mathematics curriculum for 4- and 5-year-old children.

Janice Jackson

Education Consultant in Policy, Leadership, and Organizational Change

Janice Jackson is a nationally recognized expert on leadership and organizational change in public schools and districts, equity strategies, teaching and learning, teachers’ and principals’ professional identity, and reflective judgment of principals and teachers. She was a Senior Associate at the National Equity Project and former Executive Director of the Stanford Center for Opportunity Policy in Education. She has worked in several academic positions, including Lecturer on Education at the Harvard Graduate School of Education; Senior Associate on the Wallace funded Executive Leadership Program for Educators; faculty member in the Leadership for Change Program in the Carroll School of Management at Boston College; and assistant professor at Boston College in the Lynch School of Education with a joint appointment in the Department of Teacher Board Education, Special Education, Curriculum & Instruction and the Department of Educational Administration and Higher Education. Dr. Jackson entered higher education after serving as the Deputy Superintendent for the Boston Public Schools. During the first term of the Clinton Administration she served as Deputy Assistant Secretary for Elementary and Secondary Education for the U.S. Department of Education.

Emily A. Maitin

The Nelson Companies

Emily A. Maitin is the Executive Vice President, Secretary and General Counsel for The Nelson Companies, where she oversees all legal matters pertaining to the Company’s real estate and business related activities, including acquisitions, development, financing, leasing, property management, construction and general corporate and partnership matters. Prior to joining the Company, Ms. Maitin was an associate attorney with the law firm of Sullivan & Worcester in Boston and also served as a Law Clerk for the Superior Court of Massachusetts. Ms. Maitin is a cum laude graduate of Boston University Law School, where she was a member of the Law Review, holds a Masters Degree from the University of Michigan and a Bachelor of Arts Degree from Smith College.
Ms. Maitin is on the Board of Directors of the New England Corporate Counsel Association, Inc. and served as its President from 2000-2002. She is also on the Board of Directors of the Wellesley Historical Society, Inc. and is a member of the Wellesley Historic District Commission, an alternate member of the Wellesley Historical Commission, and a member of the Wellesley Community Preservation Committee. Ms. Maitin serves as the Clerk of several nonprofit organizations, including the 128 Business Council, TERC, and the Charles River Museum of Industry and Innovation, Inc. and is a member of CREW Boston, the American Bar Association, the Massachusetts Bar Association and Association of Corporate Counsel.

Christina Olayon-Baker
Columbia Threadneedle Investments

Christina Olayon-Baker has 18 years of experience in the financial industry. She has a diverse background in product development, strategy and research.

Chi Onyebuchi
Takeda Pharmaceuticals

Chi Onyebuchi is a Director of Global Program Management at Takeda Pharmaceuticals. In this role, she actively leads the project planning efforts of the Global Product Team (GPT) in defining, implementing and driving the asset strategy and operational plan. Chi leads and manages the global, cross-functional and cross-divisional GPT through the project plan execution and holds teams to the highest standards for operational excellence in drug development and life cycle management. She currently supports multiple programs within Takeda’s Neuroscience Therapeutic Area Unit.

Chi is no stranger to project and program leadership or the pharmaceutical and Biotech industry. Prior to joining Takeda Pharmaceuticals in 2017, Chi worked in a diverse range of roles for companies including Biogen, Merck & Co., Inc., Schering Plough Corporation, the Cardiovascular Research Foundation and Memorial Sloan-Kettering Cancer Center. She has over 18 years of experience in clinical research operations and project/program management.

Chi holds a Bachelor of Arts degree in Political Science from Binghamton University, a Master of Public Health degree from New York University and is currently completing a PhD in Epidemiology at Walden University.

Diane L. Souvaine
Tufts University

Dr. Diane L. Souvaine is a Professor of Computer Science and Adjunct Professor of Mathematics at Tufts University. She served as Vice Provost for Research from 2012-2016 then senior advisor to the provost at Tufts University until August 2017, drawing on institutional knowledge and experience to initiate, develop and/or refine strategic projects that enhanced the mission and goals of Tufts. She chaired the Department of Computer Science from 2002-2009.

Prior to Tufts, Dr. Souvaine was a member of the Rutgers University faculty for 12 years. During her tenure at Rutgers, she served in the Directorate of NSF’s Science and Technology Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), a groundbreaking academic/industry collaboration of Princeton, Rutgers, Bell Labs and Bellcore. DIMACS is tasked with both the theoretical development of mathematics and computer science and their practical applications.

Dr. Souvaine received her Ph.D. in computer science from Princeton University from which she also received her M.S. E. in electrical engineering and computer science and M.A. in computer science. She earned an M.A.L.S. in mathematical sciences from Dartmouth College and graduated with distinction from Harvard University, earning an A.B. c.l. in English and American language and literature, with a second concentration in mathematics. Dr. Souvaine’s research contributions range from solving challenging problems in computational geometry to practical application across disciplines. In addition to her scientific and policy contributions, Dr. Souvaine is dedicated to increasing diversity and advancing women and underrepresented groups in mathematics, science, and engineering and works to enhance pre-college education in mathematics and computational thinking. Dr. Souvaine was appointed in 2008 to the National Science Board, a 24-member body that governs the National Science Foundation and advises the United States government about science policy. In 2014 she was reappointed. She was elected vice chair on May 6, 2016 and chair on May 3, 2018.

Rosann Tung

Rosann Tung was Director of Policy, Research, and Evaluation at New York University’s Metro Center until March 2019. Guided by the frameworks of critical race theory and the opportunity gap, she led team conducting anti-racist and feminist research to inform district level reform and community organizing, and to empower students, families, and communities historically marginalized by systemic inequalities.
Previously, Rosann was founding Director of Research and Policy at Annenberg Institute for School Reform at Brown University and founding Director of Research and Evaluation at the Center for Collaborative Education (CCE) in Boston. In those roles, she led studies to inform district policy, autonomous small school reform, English learner education, patterns of enrollment and outcomes in Boston Public Schools, and community organizing for education justice. She was lead author of *Promising Practices, Unfinished Business* and a chapter in *Forbidden Language: English Learners and Restrictive Language Policies*, edited by Patricia Gandara. Prior to her tenure at CCE, Tung conducted evaluations of federally funded systemic science and math reform efforts at Lesley University’s Program Evaluation and Research Group. She has served on the Massachusetts Committee on the Proficiency Gap and the board of the Mission Hill School in Boston, MA. She currently serves on the boards of Fri ends of Chinatown Library in Boston and Boston Big Picture School. She earned a BA from Cornell University and a PhD in Biological & Biomedical Sciences from Harvard University.

**Jo Anne Vasquez**

Senior STEM Consultant, Arizona State University Office of EVP for Knowledge Enterprise Development

Dr. Vasquez has been a classroom teacher, district science specialist for Mesa Public Schools, professor of science education at Arizona State University, and director of professional development and outreach ASU’s Center for Research on Education in Science, Mathematics, Engineering and Technology (CRESMET). She joined the Helios Education Foundation in 2008 and in 2015 transitioned into a STEM Education Consulting role. She is now the Senior STEM Education Consultant for ASU’s International Development and Knowledge Enterprise Development and The Mary Lou Fulton Teachers College’s Center for Advanced Global Education.

A recognized leader in Science and STEM Education, Dr. Vasquez is the Past President of the National Science Teachers Association, and the National Science Education Leadership Association, she was a Presidential Appointee to the National Science Board, the governing board of the National Science Foundation, becoming the first and only K-12 educator to ever hold a seat on this prestigious board. Her distinguished service and extraordinary contributions to the advancement of science education at the local, state and national levels has won her numerous awards: the 2014 National Science Education Leadership Award for Outstanding Leadership in Science Education, 2013 National Science Board Public Service Award, and the 2006 “Robert H. Carlton Award” for Leadership in Science Education, NSTA highest award. She has also received, the “Distinguished Service to Science Education Award” the “Search for Excellence in Elementary Science Education and Supervision Award” the 2007 New York Academy of Science’s “Willard Jacobson Award” for major contribution to the field of science education and was the 2004 NALEO (National Association of Latino Elected and Appointed Officials) honoree for her contributions to improving education. A graduate of Northern Arizona University, Jo Anne holds a Bachelor’s of Science in Biology, a Masters in Early Childhood Education and a PhD in Curriculum and Instruction.

Jo Anne has authored and co-authored several Science and STEM Education Books. She has served on, and provided leadership for, many prestigious Boards for example: Vice-Chair of the National Science Board’s Commission on 21st Century STEM Education, Chair of the Elementary Science Teaching and Assessment Standards for the National Board of Professional Teaching Standards, Executive Board Member for the National Academy of Science’s Center for Science, Mathematics and Engineering Education, committee chair and program reviewer for National Science Foundation, and board member for: NASA’s Classroom of the Future, National Resource Center’s LASER Project, PBS’s Sciencelnd, Sally Ride’s Science Academy, WestEd, National Academy of Science Leadership Mentoring Program and in 2015 was appointed to the Board of Trusties for TERC.

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**Honorary Board Members**

**H. Bruce Boal**

Boaleeco

In gratitude for his vision and leadership, we honor H. Bruce Boal, who served on the board from 1965 to 2012. As Treasurer of TERC, and a board member since the organization's founding, he was vital to the growth of TERC into a nationally-recognized organization in mathematics and science education research.

After graduation from Harvard College and the Harvard Business School, Bruce Boal was commissioned in the U.S. Navy as a Supply Corps officer. In the 1960s, he joined Arthur Nelson in growing an electronics company that capitalized on the sudden interest in scientific, foreign language, and technical education. Mr. Boal was the President of Boaleeco Inc., a family-owned company active in meeting the needs of educators in developing countries for curriculum materials and related laboratory equipment.

**George E. Hein**

Lesley University
George E. Hein, Professor Emeritus at Lesley University's Graduate School of Arts and Social Sciences, has decades of experience as a curriculum developer, science educator, and director of national programs to facilitate systemic school change as well as extensive experience in museum education and visitor studies research. Early in his career, he was an academic research chemist. In 1976 he founded the Program Evaluation Research Group (PERG) at Lesley University, which began by evaluating educational work of 25 museums and arts organizations in the Boston area and has become a major, national group studying education reform efforts. At Lesley, Dr. Hein developed and directed the university’s first Ph.D. program. Most recently, Dr. Hein was a Museum Guest Scholar at the Getty Research Institute (2011) and held a Fellowship in Museum Practice at the Smithsonian Center for Education and Museum Studies (2009-2010). From 2006-2007, he was President of TERC. He has been a Visiting Faculty member in the Museum Studies Program at Fu-Jen University (2008); a Visiting Professor in the Faculty of Education at the University of Technology Sydney (2000); an Osher Fellow at The Exploratorium in San Francisco (1999); a Howard Hughes Medical Institute Visiting Scholar at the California Institute of Technology (1998); a Visiting Faculty member in the Museum Studies Program at the University of Leicester (1996); a Fulbright Research Fellow at King's College, London (1990); and a Research Associate at the Museum of Science, Boston. He serves on the advisory boards for several science museum exhibition development teams. He is the author of *Progressive Museum Practice: John Dewey and Democracy* (Left Coast Press, 2012), which was selected by Choice Magazine as an Outstanding Academic Title for 2013. Other publications include *Active Assessment for Active Science* (Heinemann, 1994) with Sabra Price, and *Learning in the Museum* (Routledge, 1998) as well as numerous papers on science education, museum education, and visitor studies.

**Former TERC Board Members**

Chris Dede  
Hubert M. Dyasi  
Susan F. Friel  
C. Bernard Fulp  
Louis Gomez  
Paul Goren  
Carole M. Berotte Joseph  
Jonathan A. King  
Allen Z. Kluchman*  
Larry Leverett  
Robert Miller  
Pendred E. Noyce  
Walter Palmer*  
Robert S. Peterkin  
Richard R. Ruopp*  
Barbara C. Sampson  
Lawrence Scadden  
Robert F. Tinker*  
Edward B. Van Dusen*  
Emily Wade  
Alice Wilder  

*Deceased