2028 NAEP Science Assessment Framework Update Steering Panel

Asterisk indicates also a member of the Development Panel; + indicates member of Panel Leadership Team

Daniel

Mr. Daniel Alcazar-Roman*
Associate Director
Lawrence Hall of Science

Daniel serves as an associate director with The Learning Design Group at the University of California, Berkeley's Lawrence Hall of Science where he works on the research and design of curriculum and assessment models for the Next Generation Science Standards (NGSS). Previously, he led science assessment efforts at the state education agency in the District of Columbia. In that role, he led the design and implementation of a new state-level large-scale assessment system based on the NGSS. As part of this effort, he also implemented science assessments for students with significant cognitive disabilities. Prior to joining the DC government, he spent 12 years as a district science supervisor supporting schools in the Houston Independent School District in Texas and Alexandria City Public Schools in Virginia. During those years he gained extensive experience in the development of curriculum tools, assessments, and professional development opportunities in support of rigorous science teaching and learning. He started his education career as a bilingual science teacher and school administrator in downtown Houston.

Daniel has been active in science education reform initiatives across multiple states, Latin America, and the Caribbean. He has served as a faculty member for the Smithsonian Science Education Center (SSEC) Leadership Development projects for over 15 years and is currently a member of the SSEC Diversity Advisory Committee. Additionally, he is a reviewer for large-scale STEM grant programs including US Department of Education's Investing in Innovation (i3) and Education Innovation and Research (EIR).

He holds a Bachelor of Science degree in Engineering from Lipscomb University and a Master's degree in Education Administration from Texas Southern University.

Aneesha

Aneesha Badrinarayan*+
Director of State Performance Assessment Initiatives
Learning Policy Institute

Aneesha Badrinarayan leads projects related to state performance assessments. For the last decade, her work has focused on supporting states, districts, and educators to develop and implement student-centered systems of assessment that support all learners.

Her passion for coherent and balanced systems of assessment stems from a commitment to high-quality teaching and learning for all and a deep interest in helping practitioners and leaders navigate their systems to achieve that vision. Prior to LPI, she was the Director for Special Initiatives at Achieve, a museum professional, and a neuroscientist. Her portfolio includes leading several multi-state teams of leaders and experts to redefine "alignment" in the era of new state standards; developing criteria for innovative large-scale and classroom assessments; providing professional learning and strategic guidance for state leaders; and conducting analyses of state, local, and expert efforts to design and implement performance assessments and systems of assessment in science.

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Badrinarayan earned a M.S. in Neuroscience at the University of Michigan, where she served as a research fellow for the National Institute of Mental Health, and a B.A. in biology from Cornell University.

Tina

Dr. Tina Cheuk*
Assistant Professor
California Polytechnic State University, San Luis Obispo

Tina Cheuk is a science teacher educator at California Polytechnic State University in San Luis Obispo. She holds a B.S. in chemistry and biochemistry from the University of Chicago, and a M.A. and Ph.D. in education policy and science education from Stanford University. Her research centers on the development of culturally and linguistically diverse learners in science learning settings. Tina has previously served as a committee member in the development of California's Science Curriculum Framework and State Literacy Plan, and the revision of California's Bilingual Authorization Program Standards. She began her career in education as a fifth-grade science teacher in the South Bronx, followed by service as a secondary science teacher as a U.S. Peace Corps volunteer in Ghana, West Africa. Her work has been published in a variety of peer-reviewed journals, including Science Education and Science, and is a co-author of the book published by Teachers College Press, *Preparing English Learners for College and Career*.

Jenny

Ms. Jenny Christian*+
STEM Director of Science and Wellness
Council of the Great City Schools District Representative
Dallas Independent School District

Jenny Christian is the STEM Director of Science & Wellness in Dallas Independent School District. Dallas ISD comprises 384 square miles and encompasses 16 cities, including Dallas. The district is the second-largest public school district in the state, and the 14th-largest district in the nation. The school district serves approximately 160,000 students in pre-kindergarten through the 12th grade, in 227 schools, employing nearly 20,000 dedicated professionals.

Raised on the border of Mexico, Jenny has served in multiple teacher and administrative roles in seven school districts, over the past 27 years. She has her master's degree in Aerospace Studies from the Odegard School of Aerospace Sciences. She has served as a Space Science Consultant at Brooks City-Base in San Antonio, and as a Flight Director for the Challenger Space Center. She has also contributed as an active panel member on STEM education advisory councils for NASA's Network of States, the Girl Scouts, and the National Urban Wellness Coalition Steering Committee.

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Lakeitra

Mrs. Lakeitra Davis-Carter*
2nd Grade Teacher
Wilkinson County Elementary School

Lakeitra Davis-Carter is currently a second-grade teacher at Wilkinson County Elementary School in Woodville, Mississippi. I've been teaching for 19 years. I have had the pleasure to teach science to 4th and 5th graders last year. For several years I've tutored various middle school students in preparation for science exams from grades ranged 6th-8th grade. I am a certified 4-H volunteer. I am also teaching computer science and STEM to my second graders this year. We all love it.

Rick

Prof. Richard Duschl*
Executive Director of the Caruth Institute for Engineering Education
Southern Methodist University

Richard Duschl has been President of NARST –International Association for Science Education Research; served as Director, Division for Research on Learning, NSF; and chaired the NRC research synthesis report *Taking Science to School: Learning and Teaching Science in Grades K-8* (National Academies Press, 2007). In 2021, Richard was elected to the National Academy of Education. In 2014 he was awarded the NARST Distinguished Career in Research Award. And in 2010, he was elected as AERA Fellow. He was the editor of Science Education for 12 years, and was editor of the Teachers College Press book series "Ways of Knowing in Science". In addition, Richard's involvement in informal science education includes being Co-PI of the NSF Center for Informal Learning and Schools, serving on the advisory boards of the NJ Liberty Science Center and the Cumberland Science Center, Nashville, TN and as curator for science exhibits at the Children's Museum of Houston.

Jenn

Ms. Jennifer Greever*
TCAP Development Coordinator for Science
Tennessee Department of Education

Jennifer Greever is the TCAP Development Coordinator for Science at the Tennessee Department of Education. She holds a B.S. in Environmental Science and a M.S.Ed. in K-8 Science Education. She is also a National Board Certified Teacher in Adolescent Science. Prior to her role at TDOE, Jennifer served for ten years as the Elementary Science Content Lead for Hamilton County Schools. Prior to that she spent a decade in the classroom as a 7th and 8th grade science teacher. While she has held many roles over the years, her favorite role continues to be that of "mom" to her 8-year-old son. When she is not working, Jennifer prefers to spend her time outdoors. She is also an avid trail runner and triathlete.

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Debra

Dr. Debra Hall
K-5 Science Consultant
North Carolina Department of Public Instruction

Debra Hall is an elementary science consultant at the North Carolina Department of Public Instruction in Raleigh, North Carolina. She provides professional development and technical assistance to district leaders and educators related to curriculum development including the alignment of standards, assessment, and instruction. Prior to joining NCDPI, Debra worked as a classroom teacher and science specialist in K-5 schools. During this time, she was recognized as *Teacher of the Year*, obtained *National Board Certification*, and was awarded a *Kenan Fellowship for Teacher Leadership* from North Carolina State University. Debra holds a Ph.D. in Curriculum and Instruction, specializing in STEM education. Environmental and global education are passions that she has cultivated throughout her work and educational experience. She has also contributed to *National Science Teaching Association* publications as well as peer-reviewed academic journals.

Michael

Mr. Michael Heinz*
Science Coordinator
New Jersey Department of Education

Michael Heinz is the Science Coordinator at the New Jersey Department of Education. In that role he synthesizes education research and provide guidance to the State Board of Education and senior leadership related to STEM education policy and the creation of statewide initiatives. He also provides professional development services, technical assistance resources, and supplemental resources related to STEM curriculum development, instruction, and assessment throughout the state of New Jersey. Michael earned his B.S. in Secondary Education from Penn State University and a M.S. in Curriculum and Instruction from Texas A&M University – Corpus Christi. Michael's teaching career spanned K-12 in both informal and formal settings. He is the current president of the Council of State Science Supervisors. When not neck deep in a *Framework* world, he is relearning how to sail.

Kelley

Mrs. Kelley Hodges
Elementary School Teacher, Adjunct Professor of Science Education
Patronis Elementary School, Panama City, FL

Kelley Hodges is a Science Intervention Teacher at Patronis Elementary School and an Adjunct Professor of Science Education at Florida State University-Panama City. She lives in Panama City Beach, Florida, and is in her 20th year of teaching. Her career in education includes teaching college, high school, middle school, and elementary school science and mathematics. Her current role at Patronis Elementary School includes hands-on inquiry-based science instruction for students in grades 3, 4, and 5 and science instructional support and guidance for all classroom teachers. Since joining Patronis Elementary School, she has secured $40,000 in funding to support science instruction and environmental education and developed a schoolwide environmental stewardship program focused on marine debris and its impact on marine ecosystems. She established a multi-age First LEGO League robotics program at Patronis supporting efforts to bring coding, robotics, fun, and core values to young learners. Her work in the community includes program management, curriculum development and teacher training for STEM in a Box, a joint effort between Florida State University and the Navy Lab-Panama City.

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Nancy

Dr. Nancy Hopkins-Evans*+
Associate Director for Program Impact
BSCS Science Learning

Nancy Hopkins-Evans is the Associate Director for Program Impact at BSCS Science Learning. As a former college chemistry professor, she understands and cares deeply about students having exceptional learning experiences in science that leverage their communities and cultures while building conceptual understanding as they figure out science ideas instead of learning about science through memorization of facts and theories. She has worked in large and small school systems developing and implementing curriculum, professional learning and assessment aligned to state standards, the common core state standards, and the Next Generation Science Standards. She presents at conferences and leads professional learning for teachers, principals, directors, and superintendents focused on experiences and activities that support effective teaching and learning for ALL students particularly those from under-served and under-estimated communities. She recently served on a National Academies of Sciences, Engineering and Medicine committee to develop the consensus study report entitled, Call to Action for Science Education, Building Opportunity for the Future. She holds degrees in chemistry from Chestnut Hill College and Villanova University and earned a Ph.D. in biological chemistry from the University of Michigan.

Joe

Prof. Joseph Krajcik*+
Lappan-Phillips Professor of Science Education
Michigan State University College of Education

Joseph Krajcik serves as director of the CREATE for STEM Institute and is the Lappan-Phillips Professor of Science Education and a University Distinguished Professor at Michigan State University. Throughout his career, Joe has collaborated with colleagues and science teachers to design and test project-based learning environments to improve teaching practices and to research student learning and engagement. Joe has also investigated the design of formative assessment to promote student learning and recently, he has explored the use of machine scoring to assess open-ended assessment tasks. Joe served as president NARST from which he received the Distinguished Contributions to Science Education Through Research Award in 2010. He served as lead writer for developing Physical Science Standards for the NGSS and the lead writer for the Physical Science Design team for the Framework for K-12 Science Education. In 2020, Joe was elected to the National Academy of Education and received the prestigious McGraw Prize for Innovation in Pre-K-12 Education and in 2021, the International Society for Design and Development in Education Prize for Excellence in Educational Design. He has published over 100 peer reviewed manuscripts and his book on Project-based Learning is in its fifth edition.

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Okhee

Dr. Okhee Lee
Professor of Childhood Education
New York University

Okhee Lee is a professor in the Steinhardt School of Culture, Education, and Human Development at New York University. She is widely known for advancing research, policy, and practice that simultaneously promote science and language learning for all students, particularly multilingual learners. Lee was a member of the NGSS writing team and served as leader for the NGSS Diversity and Equity Team. She also was a member of the Steering Committee for the Understanding Language Initiative at Stanford University. Her research involves integrating science, language, and computational thinking with a focus on multilingual learners. Her latest work concentrates on justice-centered STEM education with multilingual learners to address pressing societal challenges using the case of the COVID-19 pandemic.

Lee brings research and policy to practice. Her team developed a yearlong fifth-grade science curriculum called *Science And Integrated Language*, or *SAIL*, that translates the new science standards into classroom practice with a focus on multilingual learners. The curriculum will undergo a field trial in New York City Public Schools with NSF funding. Using the SAIL curriculum, Lee's team published teacher resources in collaboration with the New York State Education Department. In addition, her team published teacher resources in collaboration with the National Science Teaching Association that reaches science and STEM educators across the nation.

Lee is the recipient of numerous honors, awards, and fellowships, including:

- American Association for the Advancement of Science – Fellow: Section Q Education in 2021
- American Educational Research Association – Exemplary Contributions to Practice-Engaged Research Award in 2021, Division K Innovations in Research on Equity and Social Justice in Teacher Education Award in 2019, AERA Fellow in 2009, and Distinguished Career Contribution Award from the Committee for Scholars of Color in Education in 2003
- Korean-American Educational Researchers Association – Inaugural Distinguished Researcher Award in 2019
- Michigan State University – Honorary Doctor of Humanities degree recipient and keynote speaker at Baccalaureate Commencement Ceremony in 2022
- National Academy of Education – Member in 2022
- National Science Teaching Association – NSTA Distinguished Service to Science Education Award in 2020
- University of Miami Provost's Award for Research Activity in 2008

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Lawrence

Prof. Lawrence Lerner
Professor Emeritus
California State University, Long Beach

Lawrence Lerner is Professor Emeritus, College of Natural Sciences and Mathematics, California State University, Long Beach. He has worked in condensed-matter physics, the history of science, and, for the past three decades or so, as a consultant on curricular matters in K-12 science education. Lerner is the author of two university-level physics textbooks, a translation of Giordano Bruno's Copernicus-based philosophical work *The Ash Wednesday Supper*, and several hundred journal articles, book chapters, and the like. He was a major author of the 1990 California Science Framework. He lives with his wife, a retired chemist, and two dogs in the mountains south of San Francisco. He is very fond of good conversation, good music, good food, and good wine.

Ramon

Dr. Ramon Lopez
Professor of Physics
University of Texas at Arlington

Ramon E. Lopez received his B.S. in Physics in 1980 from the University of Illinois, and his Ph.D. in Space Physics in 1986 from Rice University. He is currently a Professor in the Department of Physics at the University of Texas at Arlington (UTA) where he leads a research group that works in both space physics and science education. He is also a Co-Director for the UTeach Arlington teacher preparation program. His current research focuses solar wind-magnetosphere coupling, magnetic storms, and the application of research-based pedagogy to upper division and graduate physics courses.

Dr. Lopez is the author or co-author of over 130 peer-reviewed publications (H-index=38), as well as the popular science book “Storms from the Sun.” Dr. Lopez has served on numerous committees of the National Academies, such as the Committee of Solar and Space Physics and the 2012 Decadal Survey Steering Committee, as well as NASA’s Living with a Star Program Steering Committee, among other community service roles. Dr. Lopez is active in promoting science education and diversity in science at all levels. He was one of the Co-Chairs of the writing team that produced the Next Generation Science Standards. He has served on several scientific or education-related committees of the American Geophysical Union, the American Physical Society (APS), the National Academy of Sciences, the American Association for the Advancement of Science (AAAS), the American Association of Physics Teachers (AAPT). He has served as a member of the Board of Directors of the Society of the Advancement of Chicanos and Native Americans in Science (SACNAS) and he was the President of the National Society of Hispanic Physicists from 2018-2022.

Dr. Lopez has won numerous awards for his work in both space physics and science education, including the 2002 APS Nicholson Medal, the 2010 SACNAS Distinguished Scientist Award, the 2012 APS Edward A. Bouchet Award, two NASA Group Achievements Awards, the 2018 Great Minds in STEM Education Award, and he is a member of the UT System and UT Arlington Academies of Distinguished Teachers. Dr. Lopez is a Fellow of the APS, the AAAS, and the AAPT.

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Michael

Mr. Michael Lowry*
Science Department Chair
The McCallie School, Chattanooga, TN

Michael Lowry is a Nationally Board Certified Teacher (physics) and Presidential Awardee for Excellence in Science Teaching at The McCallie School in Chattanooga, TN. He is the Department Chair for Science, a climbing coach, and serves as a contributing editor to *The Science Teacher* and *The Clearing House*. He is interested in using emerging technologies (VR/AR) to improve the teaching and learning of science and engineering. As a Fulbright Fellow in Singapore, his research project explored the role of department chair as reform agent. He served as the High School Division Director at the National Science Teaching Association and is a Curricular Field Tester for the National Center for Science Education. He has been a participant in the National Endowment for the Humanities Summer Seminars for Teachers, a Woodrow Wilson Fellow (Environmental Science and Biology Institutes) at Princeton University and a Research Experience for Teachers (RET) participant at Penn State University, College of Engineering.

Heather

Ms. Heather Morley*
High School Science Teacher, Adjunct Professor
Champlain Valley Union High School, Champlain Valley, VT

Heather Morley is a science teacher at Champlain Valley Union High School and an adjunct professor at the University of Vermont. The power of using relevant phenomena to provide opportunity for all students to communicate their thinking led Heather to become a national facilitator for NGSX, a professional learning pathway that supports teachers making the shifts in teaching and learning advanced in NGSS. She is also a board member of the Vermont Science Teaching Association. Heather earned a B.S. in forestry and an M.Ed. from The University of Vermont.

Blessing

Dr. Blessing Mupanduki*
Senior Assessment Specialist
Department of Defense Education Activity (DoDEA)

Dr. Blessing Mupanduki is a Senior Assessment Specialist at the Department of Defense Education Activity (DoDEA). Before assuming his current position in 2016, he worked in scientific research, science and mathematics education, and leadership capacities, nationally and internationally in Central America, Europe, and Africa, at the middle and high school, and college levels, in private and public education settings. Prior to joining DoDEA, Dr. Mupanduki performed various administrative functions as the lead systemwide Science Assessment Specialist for the California Department of Education (CDE), since 2010. In 2009, he was awarded the California Educational Research Association's (CERA's) Outstanding Educational Research Award and represented California at the American Educational Research Association's (AERA's) 2010 Annual International Conference where he was also awarded a Distinguished Paper Award for his research in contextualized STEM education. Along the years, Dr. Mupanduki developed an educational worldview and interest that amalgamates STEM education, scientific and educational research, in collaborative, transformational, and

progressive teaching, learning, leadership, and empowerment that are grounded in mutual professional partnerships among school, community, national, and international change agents at all levels of education across national, continental, and cultural boundaries. He understands and greatly values the uniqueness and mutual benefits of diversity to humanity and for global citizenry. Dr. Mupanduki holds a Master's in Chemistry and Physics of Polymers (Materials Science and Engineering) and a Doctorate in Educational Leadership, with a research focus on contextualized STEM (Chemistry and Mathematics) education.

Tiffany

Dr. Tiffany Neill*
Deputy Superintendent of Curriculum and Instruction
Oklahoma State Department of Education

Tiffany Neill is the Deputy Superintendent of Curriculum and Instruction for the Oklahoma State Board of Education and the past president for the Council of State Science Supervisors. She is a member of the National Science Foundation STEM Advisory Panel. She also served as co-principal investigator for Advancing Coherent and Equitable Systems of Science for 7 years. Prior to her current role, Neill served as the executive director of curriculum and instruction for 3 years and as the director of science and engineering education for 5 years at the Oklahoma State Department of Education. She began her career in education as a middle and high school science teacher. She has served on National Academies of Sciences, Engineering, and Medicine committees authoring the reports: Changing Expectations for the K–12 Teacher Workforce: Policies, Preservice Education, Professional Development, and the Workplace (2020), Science and Engineering in Preschool Through Elementary Grades: The Brilliance of Children and Strengths of Educators (2022) and Call to Action for Science Education: Building Opportunity for the Future (2022). Neill is completing a Ph.D. in instructional leadership and academic curriculum in science education at the University of Oklahoma.

Jessica

Mrs. Jessica North*
8th Grade Science Teacher
Waunakee Community School District

Jessica North is an eighth-grade science teacher in the Waunakee Community School District. She graduated from the University of Wisconsin-Madison with a Bachelor of Science degree in elementary education and earned her National Board Certification in 2012. Over the last eighteen years in Waunakee, Jessica has held a variety of leadership roles within the district, including middle school science building coordinator, K-12 science department chair, and was co-founder of the district Science Leadership Team. She continuously works to support the professional development of science teachers and NGSS alignment in curriculum and assessment, which included planning and implementing a Summer Science Institute for teachers and educational leaders across the state. In order to share and ignite a passion for science with her students, she started the Science Olympiad team at her middle school back in 2007 and currently serves as the Division B representative on the Wisconsin Science Olympiad Board. Additionally, over the last fifteen years, Jessica has partnered with a team at the Wisconsin Center for Education Research on a variety of grants to develop, implement, and enhance a design-based science curriculum. As part of this relationship, she has extensive experience using dynamic digital texts and virtual simulations to support student learning. Currently, she is piloting an innovative technology platform to score student writing and provide real-time feedback.

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Martin

Mr. Martin Osae
Middle School Teacher
West Dallas STEM School

Martin Osae is a middle school teacher at West Dallas STEM School in the Dallas Independent School District where he teaches 7th Grade Honors and 8th Grade Science. Martin Osae attained National Board-Certified status in 2008 and currently mentors National Board candidates from across the state through Region 10 Education Service Center. For several years Osae served as Instructional Lead Coach and provided mentoring and support to science teachers in the Dallas Independent School District. Returning to the classroom three years ago, he continues to teach and build capacity for science at West Dallas STEM School. Martin Osae is also a Distinguished Toastmaster and has served as Area Director to four Toastmasters Clubs and has also served in numerous leadership roles with Toastmasters International. Martin Osae is very passionate about providing opportunities to both students and teacher to engage in hands on science explorations. He recently founded STEM In The City, an initiative geared towards promoting STEM careers among the minority and immigrant youth in the community.

Eric

Dr. Eric Pyle*
Professor of Geoscience
James Madison University

Eric Pyle is a Professor of Geoscience Education at James Madison University. He uses his background in K-12 and college-level STEM education and program assessment and evaluation to support teachers of science at the preservice and inservice career stages. He also supports student research that is consistent with the goals and objectives of the BA-Earth Science program, namely communicating science to non-scientific audiences.

He is also engaged in field-based instruction for both teachers of science as well as future geoscientists, working in both the US and in Ireland. He currently serves as the Co-Curator for Education and Outreach of the JMU Mineral Museum. A Fellow of the Geological Society of London, he is also the Chairperson of the History & Philosophy of Geology Division of the Geological Society of America (GSA) and the Retiring President of the National Science Teaching Association (NSTA).

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Helen

Prof. Helen Quinn*
Professor of Particle Physics and Astrophysics, Emerita
SLAC National Accelerator Center

Helen Quinn received her Ph.D in physics at Stanford in 1967. She has taught physics at both Harvard and Stanford. Dr. Quinn's work as a particle physicist has been honored by the Dirac Medal (from the International Center for Theoretical Physics, Italy), the Klein Medal (from the Swedish National Academy of Sciences and Stockholm University), the Sakurai Prize (from the American Physical Society), and the 2018 Benjamin Franklin Medal for Physics (from the Franklin Institute). She is a member of the American Academy of Arts and Sciences, the National Academy of Science, and the American Philosophical Society. She is a Fellow and former president of the American Physical Society. Dr. Quinn has long been active in science education; since her retirement in 2010 this has been her major activity. She served as Chair of the US National Research Council's (NRC) Board on Science Education (BOSE) from 2009-2014. She was as a member of the BOSE study committee that developed the report "Taking Science to School" and chaired the committee for the "Framework for K-12 Science Education," which provides the basis for science standards now adopted by over 40 states in the US. She also contributed to follow-up NRC studies on assessment and implementation of such standards. From 2015-2018 Helen served at the request of the President of Ecuador as a member of the "Comision Gestora" to help plan and guide the initial development of the National University of Education of Ecuador.

Ashlyn

Ms. Ashlyn Razzo
Director of Science Achievement, 9-12
Achievement First

Ashlyn Razzo is the Director of Science Achievement, 9-12 at Achievement First. Ashlyn hails from New York City, where she was raised in various neighborhoods across Queens & the Bronx. Ashlyn left the big city to study Biology & Theatre at Hamilton College in Clinton, NY before heading down south to serve as a Teach for America (TFA) Corps Member in Miami-Dade. After TFA, she made her way back to the Big Apple, where she taught Biology, Chemistry, and AP Biology at Uncommon Schools and earned her MAT from Relay GSE. After watching her advisory grow from squirrely teenagers to mature and confident young adults, Ashlyn made the decision to leave the classroom to broaden her impact as a district administrator at Achievement First. Since then, Ashlyn has had an invaluable impact on hundreds of students across New York, Rhode Island, and Connecticut.

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Philip

Prof. Philip Reed*
Professor, STEM Education and Professional Studies
Old Dominion University

Philip A. Reed, PhD, DTE, is a Professor in the Darden College of Education and Professional Studies at Old Dominion University in Norfolk, Virginia. He served as the seminal chair of the STEM Education and Professional Studies Department for four years, has been the undergraduate program director (UPD) for the Industrial Technology program, the Technology Teacher Education program, and the graduate program director (GPD) of the Occupational and Technical Studies MS and PhD programs. Dr. Reed was the 2020-2021 President of the International Technology and Engineering Educators Association (ITEEA). Dr. Reed was the ITEEA Region One Director from 2015-2017 where he helped establish the ITEEA China International Center and assisted with the implementation of the Engineering by Design (EbD) curriculum in Kuwait. In November 2019 he represented ITEEA at the Asia STEM Summit in Cebu, Philippines. He has also served as secretary and vice president of the Council on Technology and Engineering Teacher Education (CTETE), an affiliate council of ITEEA.

Brian

Dr. Brian Reiser*
Professor of Education and Social Policy
Northwestern University

Brian Reiser is the Orrington Lunt Professor of Education and Social Policy at Northwestern University. Reiser's work explores how to make science learning more meaningful in K-12 classrooms as students investigate questions and problems they identify. Reiser's research examines how to support students in science knowledge-building practices through storyline curriculum materials and teaching approaches, and how teachers learn as they enact these reforms. Reiser heads NextGen Science Storylines, a researcher-teacher collaborative developing and investigating design principles for storyline units in which students help manage the trajectory of science knowledge building. Reiser leads the Northwestern team of the OpenSciEd Developer's Consortium, working with ten state education agencies to create and field test middle school and high school storyline instructional materials released as open educational resources.

Reiser was a member of the National Research Council's Board on Science Education from 2011 to 2018, serving on the NRC committee authoring A Framework for K-12 Science Education (guiding development of the Next Generation Science Standards, NGSS), and reports recommending policies for NGSS assessment and implementation. Reiser collaborated with districts and states around the country to design and support professional learning programs supporting K-12 teachers in NGSS implementation. Reiser was a founding member at Northwestern of the first graduate program in Learning Sciences, chairing the program from 1993, shortly after its inception, until 2001. Reiser is a Member of the National Academy of Education, a Fellow of the International Society of the Learning Sciences, and a Fellow of the American Educational Research Association. Reiser earned his Ph.D. from Yale University and has been a researcher at Carnegie Mellon University and professor at Princeton University.

He holds a Bachelor of Arts degree in Psychology from University of Pennsylvania, a Master's degree in Psychology from New York University, and a PhD in Cognitive Science from Yale University.

Yvette

Ms. Yvette Selby-Mohamadu*
Lifetime Member
NSBE DC Professionals - Pre-College Programs

Yvette Selby has several years of experience providing leadership, strategic and technical expertise in developing and delivering scientific assessments and fostering collaboration on overarching policy issues in her professional roles at the Environmental Protection Agency (EPA). As a STEM professional, Yvette has been a member of the National Society of Black Engineers (NSBE) for over 25 yrs. Through the years, Yvette has served on the National NSBE Professionals Board, Region II Professionals Board, and held leadership positions that contribute and improve NSBE programming for Pre-College, Collegiate, and Professional Members. She has developed and implemented STEM enrichment programs that engage K-12th grade students, encouraging them to learn about opportunities in engineering and science. Yvette has coached FIRST Jr. Lego League teams, judged National (Future City) and World robotics competitions (VEX IQ), as well as trained and coached others in implementation and evaluation of STEM enrichment programs.

In addition, Yvette represents Washington DC's Ward 5 on the Citywide Parent Leader Board of Parents Amplifying Voices in Education (PAVE), a non-profit organization which brings together Washington, DC parents to impact education in our city. She shows her passion and pride in being a culturally responsible engineer and community advocate whose mission is to help others succeed. Yvette is devoted mother to 17-year-old twins.

Yvette holds a Bachelor of Science degree in Chemical Engineering from Northwestern University, and a Master of Engineering degree in Civil (Environmental) Engineering from Howard University. She is a Deputy Division Director for the Existing Chemicals Risk Assessment Division in EPA's Office of Chemical Safety and Pollution Prevention.

Sharon

Dr. Sharon Sikora
Director of Middle School Curriculum
Sacred Heart Schools, Atherton, CA

Dr. Sharon Sikora is currently the Director of Middle School Curriculum after serving five years as the PreK - high school science curriculum specialist for Sacred Heart Schools in Atherton, California. Sharon continues to teach high school chemistry. In 2016, Sharon left her classroom of 10 years at Punahou School in Honolulu, Hawaii to focus her attention on national education advocacy and policy as a 2016 - 2017 Einstein Distinguished Educator Congressional fellow serving in the US Senate at the Office of Senator Schatz (HI). Sharon has a Bachelor of Arts in Zoology from Pomona College and a Master of Science and Doctor of Science in Chemistry from the University of Denver. She completed a post-doctorate study in science education as a Senior Fellow at the NSF funded Center for Learning and Teaching in the West (CLTW) after which she served as Denver Public Schools district science coordinator. Sharon has collaborated on and presented sessions with NSELA Professional Development Institute in Anaheim, California. Sharon's leadership activities have spanned the international, national, state, district, school, and classroom levels. With

over 20 years as a science educator and published author, Sharon is committed to improving education for all!

Iris

Dr. Iris Wagstaff
Founder and Executive Director
Wagstaff STEM Solutions

Dr. Iris R. Wagstaff is a chemist, STEM educator, DEI consultant, and science policy advisor. She is the Founder and Executive Director of Wagstaff STEM Solutions, an education and diversity consulting company. She has a BS in Chemistry from UNC-Greensboro, a MS in Chemistry from NC A&T State University, and a PhD in Science Education Research & Policy from NC State University. She has over 20 years of experience at the K-20 levels in culturally relevant STEM education, curricula development and K-12 teacher professional development. She has worked in all four workforce sectors (industry, academia, federal government, and nonprofit). She was a research chemist at the Dow Chemical Company for 15 years before transitioning to STEM education research. Her social science research focuses on examining factors that enhance science self-efficacy, science identity, and STEM career intent in K-12 students. She served as a 2015-2017 AAAS Science and Technology Policy Fellow at the DOJ National Institute of Justice Office of Investigative and Forensic Sciences where she developed and led an agency-wide diversity and inclusion initiative. She serves on several advisory boards that include the National Organization of Black Chemists and Chemical Engineers, the Department of Defense STEM Education Consortium and the American Chemical Society Diversity, Equity, Inclusion and Respect Board. She has received several honors that include the Women of Color in STEM K-12 Education Award, the NOBCChE Henry McBay Award for Chemical Education, and the AERA Science Teaching and Learning Research Award.

Jason

Mr. Jason Zimba
Chief Academic Officer, STEM
Amplify

Jason Zimba has spent his career advocating for high-quality curriculum and instruction for all students. Over the last 30 years, Zimba has contributed to numerous endeavors advancing excellent STEM education, including Engage New York and the Next Generation Science Standards. In 2019, Zimba created Math Milestones, a nonprofit organization that creates resources for educators who work with diverse communities of Black students, English learners, and students in poverty. He has worked with the nonprofit Learning Heroes on resources to inspire and equip parents with information to help their children succeed in school. A Rhodes scholarship recipient and former professor of physics and mathematics, Zimba holds a bachelor's degree from Williams College, with a double major in mathematics and astrophysics; a master's degree in mathematics from the University of Oxford; and a doctorate in mathematical physics from the University of California at Berkeley. He is the author of the book "Force and Motion: An Illustrated Guide to Newton's Laws." Zimba has taught mathematics and physics to university and high school students, and incarcerated adults. As the first person in his family to attend college, Zimba has a deep commitment to giving all students access to a high-quality education and the opportunity to excel in STEM and other fields.

2028 NAEP Science Assessment Framework Update
Technical Advisory Committee

Catherine

Dr. Catherine Close
Vice President, Psychometrics
Renaissance Learning

Catherine Close is Vice President of Psychometrics at Renaissance Learning. She has been with Renaissance for over 11 years starting as a psychometrician to now leading a team that works on assessments, primarily computerized adaptive tests (CAT) and curriculum-based measures in the K-12 space. She also serves on technical advisory groups for organizations such as Ofqual in England, and others. Catherine graduated from the University of Minnesota, Twin Cities in 2011 with a PhD in Educational Psychology focusing on Psychometrics and Statistics.

Karla

Dr. Karla Egan
Principal
EdMetric, LLC

EdMetric LLC's founder, Dr. Karla Egan, is internationally recognized for her work in standard setting. Throughout her 20-year psychometric career she has designed and led over 60 standard setting workshops, published work related to standard setting, and delivered numerous presentations related to improving standard setting. Dr. Egan created an innovative framework for achievement level descriptors that was used by Smarter Balanced, and she was a member of the National Academy of Sciences committee for evaluating the National Assessment of Education Progress (NAEP) achievement levels in Reading and Mathematics. In addition, she serves on ad-hoc committees that advise the National Assessment Governing Board on NAEP achievement levels. Due to her deep expertise, Dr. Egan often serves as an external evaluator for standard setting workshops.

In addition to her work in standard setting, Dr. Egan served as the lead psychometrician for several statewide assessment programs. She is also a member of the Technical Advisory Committees for Dynamic Learning Maps, Louisiana, Missouri, and North Dakota, and she is chairperson for the Indiana Technical Advisory Committee.

Previously, Dr. Egan worked as an associate at the National Center for the Improvement of Educational Assessment (NCIEA) and as both research scientist and research manager at CTB/McGraw-Hill. In 1999, she received her Ph.D. from the University of Massachusetts, Amherst, where she studied under Ron Hambleton and Hariharan Swaminathan. Although she was awarded her Ph.D. in the field of Sociology, her coursework and dissertation were in the areas of psychometrics and methodology.

2028 NAEP Science Assessment Framework Update
Technical Advisory Committee

Bonnie

Dr. Bonnie Hain
Senior Director of Education Solutions
Derivita

As Derivita's Sr. Director of Education Solutions, Bonnie works cross-functionally to help Derivita scale its impact, so more educators can help expand student competencies in core content. After graduating with her Ph.D. in English from Stony Brook University, Bonnie has spent over 25 years in the field of education as a teacher, administrator, researcher, and a Reading and Language Arts assessment developer. She has led assessment design and development projects for districts across the United States, for the Maryland State Department of Education, and for the Partnership for Assessment of College and Careers (PARCC). A mother of three grown children and a grandmother of three, Bonnie resides currently with her family near Baltimore, Maryland and spends her free time reading and sailing.

Mike

Dr. Michael Kolen
Professor Emeritus, Educational Measurement and Statistics
University of Iowa

Michael J. Kolen is a Professor Emeritus of Educational Measurement and Statistics at the University of Iowa. Dr. Kolen received his doctorate from the University of Iowa in 1979, his MA degree from the University of Arizona in 1975, and his BS degree from the University of Iowa in 1973. He served on the faculty at Hofstra University from 1979-1981, and he worked at American College Testing (ACT) from 1981-1997, including being Director of the Measurement Research at ACT from 1990-1997. He served on the Educational Measurement and Statistics faculty at the University of Iowa from 1997- 2017.

Dr. Kolen co-authored three editions of the book *Test Equating: Methods and Practices*, published by Springer. He has published numerous articles and book chapters on various topics in educational measurement and statistics, including test equating and scaling.

Dr. Kolen has been President of the National Council on Measurement in Education (NCME) and is past editor of the *Journal of Educational Measurement*. He is a Fellow of Division 5 of the American Psychological Association, and a Fellow of the American Educational Research Association. Dr. Kolen received the 1997 NCME Award for Outstanding Technical Contribution to the Field of Educational Measurement, the 2008 NCME Award for Career Contributions to Educational Measurement, and the 2020 NCME Annual Award. He served on the 2014 Joint Committee on the *Standards for Educational and Psychological Testing*.

2028 NAEP Science Assessment Framework Update
Technical Advisory Committee

Jim

Dr. James Pellegrino
Distinguished Professor of Education
University of Illinois at Chicago

James W. Pellegrino is Liberal Arts and Sciences Distinguished Professor and Founding Co-director of the Learning Sciences Research Institute at the University of Illinois Chicago. He studies children's and adult's thinking and learning and the implications of research and theory for assessment and instructional practice. He has published over 300 books, chapters and articles related to cognition, instruction, and assessment. His research on science education and assessment has been funded by the National Science Foundation, the Institute of Education Sciences, and private foundations. He helped direct the College Board's redesign of curriculum frameworks and assessments for the Advanced Placement courses in biology, chemistry, and physics. His recent projects have focused on the design of high-quality science assessment and instructional resources for K-8 classrooms. He has chaired several National Academy of Sciences study committees that have issued major reports related to science education, including the Committee for the *Evaluation of the National and State Assessments of Educational Progress*, the Committee on *Learning Research and Educational Practice*, and the Committee on the *Foundations of Assessment* which issued the report *Knowing What Students Know: The Science and Design of Educational Assessment.* Most recently he served on the Committee on *Science Learning: Games, Simulations and Education* and the Committee on a *Conceptual Framework for New Science Education Standards*. He chaired the Committee on *Defining Deeper Learning and 21st Century Skills*, and co-chaired the Committee on *Developing Assessments of Science Proficiency in K-12*. He is a lifetime member of the National Academy of Education and the American Academy of Arts and Sciences. He currently serves on the NAEP Validity Studies Panel and on the Technical Advisory Committees for state assessment programs including those of Illinois, Maine, New York, Rhode Island, Texas, and Vermont.

Willy

Dr. Guillermo Solano-Flores
Professor of Education
Stanford University Graduate School of Education

Dr. Guillermo Solano-Flores is Professor of Education at the Stanford University Graduate School of Education. He specializes in educational assessment and the linguistic and cultural issues that are relevant to both international test comparisons and the testing of cultural and linguistic minorities. His research is based on the use of multidisciplinary approaches that use psychometrics, sociolinguistics, semiotics, and cognitive science in combination. He has conducted research on the development, translation, localization, and review of science and mathematics tests. He has been principal investigator in several National Science Foundation-funded projects that have examined the intersection of psychometrics, semiotics, and linguistics in testing. He is the author of the theory of test translation error, which addresses testing across cultures and languages. Also, he has investigated the use of generalizability theory—a psychometric theory of measurement error—in the testing of English language learners and indigenous populations. He has been advisor to countries in Latin America, Asia, Europe, Middle East, and Northern Africa on the development of national assessment systems and the adaptation and translation of tests into multiple languages.

2028 NAEP Science Assessment Framework Update
Educator Advisory Committee

Jackie

Ms. Jaclyn Austin
Instructional Facilitator, Secondary Science
Howard County Public School System, MD

Jaclyn (Jackie) Austin is currently the Instructional Facilitator of Secondary Science for the Howard County Public School System where she supports the development and implementation of curriculum and assessment throughout grades 6-12 science. She contributes to the overall strategic direction and effectiveness of the Secondary Science program, and supports cross-functional teams on projects in the Division of Academics. She leads the planning, organization and implementation of professional development activities and programs for teachers, instructional team leaders, administrators, and other staff to ensure implementation of curriculum, equitable access to advanced science courses, and alignment to Maryland College & Career Readiness Standards and Next Generation Science Standards. Jackie's classroom teaching experience includes teaching science in middle schools across multiple districts in Maryland and Florida. She has served as a classroom teacher, science team leader, STEM master teacher, STEM grant coordinator, pre-service mentor, curriculum writer, and resource teacher over the years. She contributes to state and national activities related to the adoption, implementation, and refinement of standards, curriculum, and assessment. She is an active member of the National Science Teaching Association serving on advisory boards and leading conference committees. She has served locally as the president for the Maryland Association of Science Teachers. Jackie is also a Certified Workplace Mindfulness Facilitator and champions the science of wellbeing and mindfulness across organizations.

Mihir

Mr. Mihir Datta
Teacher, Grades 9-12 – Chemistry, Physics, Advanced Algebra
Holmes County Consolidated School District, MS

After working as a principal in India for 20 years, Mihir Datta immigrated to Mississippi and returned to the classroom.

2028 NAEP Science Assessment Framework Update
Educator Advisory Committee

Kellie

Dr. Kellie Finnie
Director of Curriculum and Innovation
Dearborn Height District, MI

Dr. Kellie Finnie is presently the Director of Curriculum and Innovation in the Dearborn Heights District #7. Prior to her position in Dearborn Heights, Kellie worked as a Science Training and Support Coordinator with the Detroit Public Schools Community District. Kellie also worked for the CREATE for STEM Institute at Michigan State University where she served as a post-doc researcher, assisting in the development and implementation of project-based science curricula at the elementary and high school levels. Kellie holds a Doctor of Philosophy degree in Curriculum and Instruction with a focus in Science Education from Wayne State University.

Genevieve

Mrs. Genevieve Garcia
Teacher, Grades 9-12 (Chemistry, Physics, Physical Science)
Lower Yukon School District, AL

Genevieve Garcia is a high school chemistry, physics, and physical science teacher at Kotlik School in the Lower Yukon School District in Alaska. She has 20 years of teaching experience. She has been participating various science events as coach, adviser, facilitator, and judge. She graduated Master's in Science Teaching major in Physical Science and Doctor of Philosophy in Science Education major in Chemistry. She is a Science Module writer and a science book evaluator. She is interested in basic research and applied research. Her institutional funded basic research topics are teaching and learning, human resource development and school governance. She has conducted and published applied science research with topics on bioactive compounds, phytochemical analysis, zoochemical analysis, cytotoxicity, proximate composition and biodiversity. She is also a science research journal peer reviewer.

Frank

Mr. Francis Panion
Science Instructional Coach, K-5
Miami Dade Public Schools, FL

Frank Panion is an elementary science instructional coach at Frederick Douglass Elementary School in Miami-Dade County Public Schools. He is an energetic educator with over 25 years experience as a classroom teacher in Chicago Public Schools, with a focus in science education. Frank is fully bilingual in Spanish and English and is passionate about working with and supporting all leaners. In collaboration with, and as an employee of Loyola University Chicago, he has expertise in the training of educators and presentation of new curricula and teaching techniques to local, regional and national audiences. His current professional goals include the development of the necessary school infrastructure to support effective science program implementation in each school, or district, with which he works. Frank has his undergraduate degree from Marquette University, Milwaukee, and his master's degree from Columbia College, Chicago.

2028 NAEP Science Assessment Framework Update
Educator Advisory Committee

Karen

Mrs. Karen Pollari
Teacher, Grades 2, 3, and 5
Sidney Public Schools, MT

Karen Pollari is an educator in Sidney, Montana. She has been teaching for 20 years. Karen served on the 2015 Montana Science Standards Writing committee for Montana in addition to the PAO (Process - Assessment-Outcome) committee. She has also worked with Cambium Assessments to review and write science assessment questions for the state of Montana. In 2022, Karen returned to the United States Department of Education (Ed Count) Assessment Panel to work on Designing Three-Dimensional Classroom Science Assessments. She most recently received the 2022 Teresa Veltkamp Advocacy Award for Excellence in Indian Education.

Nicolette

Mrs. Nicolette Roque
Middle School Science Teacher
St. Johns County School District, FL

Nicolette Roque has been a middle school science teacher for five years, most recently working at Pacetti Bay Middle School in St. Johns County School District in St. Augustine, Florida. She received her B.A. degree in Earth and Planetary Science from Johns Hopkins University, during which time she volunteered as a Test Writer and Grader for the Maryland Science Olympiad. Shortly after, she received a Master of Health Science in Biochemistry and Molecular Biology from Johns Hopkins Bloomberg School of Public Health. Following graduation, she spent a year serving as an Americorps VISTA in the City of Miami, where she partnered with a community-based organization to promote academic and professional success by introducing high school youth to new careers. Through this partnership, she worked closely with students from Miami-Dade County Public Schools (M-DCPS), which later inspired her to become a middle school science teacher in that same district. During this time, she participated in outreach activities as a member of the Local School Scientific Review Committee and Institutional Review Board to manage the scientific review of student projects submitted to the regional and state science competitions. Nicolette is currently completing her doctorate at Vanderbilt University, and is expected to graduate in fall 2022. Her dissertation, “Attending to the Problem of Professional Learning: A Mixed Methods Study,” focuses on the implications of a teacher professional development program that is locally developed and situated.

2028 NAEP Science Assessment Framework Update
Educator Advisory Committee

Wade

Mr. Wade Whitehead
Elementary School Teacher
Roanoke City (VA) Public Schools

Wade Whitehead is an elementary school teacher at Crystal Spring Elementary School in the Roanoke City, Virginia, Public Schools district. Wade is a nationally recognized fourth-generation public school classroom teacher, consultant, and foundation leader with a record of contributing to educator development and student success around the world. He is a National Board Certified educator who creates and engages one-size-fits-few instruction. Wade is committed to his school community and to building a climate of imagination, discovery, and sharing for students and their families. He is also the founder of a non-profit that identifies and recognizes tomorrow's finest teachers and director of innovative teacher quality initiatives. Wade is an international speaker on topics ranging from differentiated instruction and equitable student engagement to technology integration and school design. He is fiercely dedicated to public schools as America's last bastion of democracy.

2028 NAEP Science Assessment Framework Update
National Assessment Governing Board Staff

Sharyn

Dr. Sharyn Rosenberg
Assistant Director, Assessment Development
National Assessment Governing Board

Dr. Rosenberg serves as the Assistant Director for Assessment Development, which entails serving the Governing Board's Assessment Development Committee and providing expertise on assessment design and development to Governing Board projects, including the development of the NAEP assessment frameworks. Dr. Rosenberg joined the Governing Board in 2013 and served as the Assistant Director for Psychometrics until 2021, working with the Committee on Standards, Design and Methodology and providing technical and psychometric expertise to NAEP achievement level setting activities. Dr. Rosenberg has an extensive background in education, psychometrics, and survey research. Her prior work experiences include Horizon Research, where she conducted complex data analyses and provided psychometric expertise for projects, and the American Institutes for Research (AIR), where she provided research and psychometric support for NAEP and served as the Project Director for the NAEP research and technical support team. The focus of her graduate work at the University of North Carolina at Chapel Hill, where she also earned a Certificate in Survey Methodology from the Odum Institute, was on measurement and quantitative methods.

Lesley

Ms. Lesley Muldoon
Executive Director
National Assessment Governing Board

As executive director, Lesley Muldoon is responsible for overseeing the execution of policies and projects initiated by the Board and serves as its chief of staff. Ms. Muldoon's background is in assessment and nonprofit governance and management. She helped to launch the Partnership for Assessment of Readiness for College and Careers (PARCC), one of the two multi-state assessment consortia to develop next generation large-scale K-12 assessment systems, and supported state leaders throughout the design, development, and implementation of the PARCC assessment system from 2010 to 2017. She played a leading role in creating and managing two nonprofit organizations: Parcc, Inc., the organizational home for the assessments where she served as chief operating officer; and CenterPoint Education Solutions, the parent company of Parcc, Inc., where she served as chief of policy and advocacy.

Before joining Parcc Inc., Muldoon held several positions at Achieve—a nonpartisan, nonprofit education-reform organization that served as the project manager for PARCC—related to the organization and launch of the testing consortium. These included managing PARCC's successful application for $186 million in federal funding. She also conducted policy research and analysis related to standards, assessment, and accountability and worked with state leaders on the implementation of policies to advance student achievement. Earlier in her career, Muldoon served as an aide to former U.S. Representative Rush D. Holt of New Jersey.

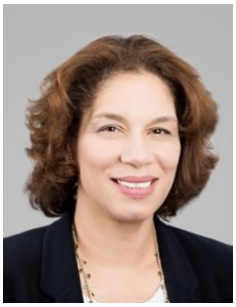
2028 NAEP Science Assessment Framework Update
WestEd Staff

Dr. Steve Schneider
Project Director
WestEd

Steve

Dr. Mark Loveland
Project Co-Director
WestEd

Mark



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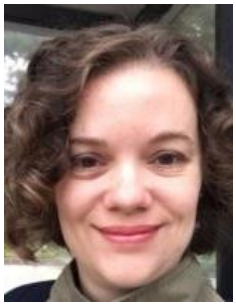

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