UCLA DEPARTMENT OF MATHEMATICS



2021

MATHEMATICS TEACHING VIRTUAL CONFERENCE

Addressing Dual Challenges:

SYSTEMIC INEQUITY
AND
COVID-19



Saturday, March 6, 2021 9am–3pm online

WELCOME!



We enthusiastically welcome you to The Curtis Center's 14th Annual Math and Teaching Conference! This year, our conference is virtual and includes an incredible lineup of speakers who will engage you with this year's theme of Addressing Dual Challenges: Systemic Inequity and Covid-19. During this day of meaningful and relevant talks by current teachers, research mathematicians and mathematics educators, we will work together to improve the mathematical experiences of all K-12 students. We hope you find the conference helpful and inspiring, as you continue your amazing work of supporting students at your schools.

Warm wishes,

Heather Dallas
EXECUTIVE DIRECTOR

THE UCLA CURTIS CENTER

The <u>UCLA Curtis Center</u> is a group of K-12 and university mathematics enthusiasts who are working together to ensure a world class mathematics education for ALL students.

Currently, we:

- Provide opportunities for K-12 teachers to deepen their understanding of the mathematics they teach, extend their knowledge of mathematics, and learn how to apply their mathematical knowledge to the work of teaching.
- Train undergraduates for careers in mathematics education.
- Develop mathematics assessments focused on problem solving, communicating reasoning, and application of mathematics.
- Write high quality mathematics activities for students in local schools to give them a view of mathematics as a creative reasoning and problem solving activity with intrinsic beauty and meaningful application.

THE UCLA SITE OF THE MATHEMATICS DIAGNOSTIC TESTING (MDTP)

MDTP is a joint CSU/UC project that develops diagnostic and written response assessments designed to measure students' preparedness for mathematics course work from grades six to calculus. MDTP assessments are purposefully developed and validated by MDTP Workgroup members which include faculty from CSU, UC, community colleges, and secondary schools. Teachers are supported by eight regional MDTP sites located at CSUs and UCs. MDTP site directors and staff assist teachers to access and administer MDTP online and paper testing and offer local data workshops and training to interpret and use MDTP diagnostic data formatively, all free of charge. The MDTP Assessment System helps teachers and students focus on topics, skills, and conceptual understanding support students to succeed in learning collegiate mathematics. During the COVID-19 pandemic, MDTP offers remote testing. The UCLA MDTP site serves Los Angeles and Ventura counties.



9:00-10:15AM MORNING PLENARY SESSION



Dr. Edray H. Goins

Professor of Mathematics, Pomona College

A Black Man's Journey from South Central to Studying Dessins d'Enfants

Goins had a passion for knowledge that was unstoppable in spite of the lack of academic offerings available to him at his majority Black high school. He independently created his own AP prep courses in calculus, chemistry, and physics. He went on study mathematics at Caltech, earned a doctorate degree in mathematics from Stanford, and conducted postdoctoral work at Princeton. Thirty years later, Goins' pathway in the mathematical sciences was featured in the New York Times.

Unfortunately, many Black high school students across the nation do not have access to courses in STEM. How does access to STEM education limit the participation of Blacks in mathematics? What do Black students experience in and out of the classroom? How can we position all of our students to be successful in mathematics in an age where the deaths of African Americans frequently make the evening news? What can we as educators do in the age of #BlackLivesMatter? In this interactive presentation, the speaker will discuss these thought provoking questions from his personal experiences as a former student in LAUSD; a former high school teacher at Eastside College Preparatory High School in East Palo Alto, California; and a former professor at Purdue University in West Lafayette, Indiana.

DR. EDRAY GOINS is a mathematics professor at Pomona College whose research interests include origami as branched covers of elliptic curves. Prof. Goins is an alumnus of the LAUSD, Cal Tech and Stanford and President of the National Association of Mathematics, which promotes the success of underrepresented minorities in the mathematical sciences.

10:25–11:40 AM MORNING BREAKOUT SESSIONS



Dr. Makoto Yoshida

Professor in Residence at the university partner schools, William Paterson University

BUILDING STRONG NUMBER SENSE AND ADDITION AND SUBTRACTION FLUENCY WITH VISUAL COHERENT INSTRUCTION AND LEARNING

RESEARCH & RECOMMENDATIONS, GRADES K-2

In this session, teachers will learn how to develop a strong number sense and reliable calculation skills in their young students using visualization of numbers using ten-frames. Teachers will discuss how to develop calculation strategies and the skills of addition and subtraction with and without regrouping. Lastly, they will learn a system for targeted and tailored student practice, including how to assess systematically students' progress toward developing fluency.

MAKOTO YOSHIDA is one of the foremost experts on Lesson Study in the U.S. His doctoral dissertation on lesson study in Japan, presented to the University of Chicago in 1999, helped to introduce lesson study in the United States and the world. In addition to collaborating to conduct lesson study in the NJ and NY area, he has spent many years studying mathematics textbooks from countries such as Singapore, China, Thailand and Japan. He also involved in a project translating Japanese mathematics textbooks (Grades 1 to 9) and teacher manuals (Grades 1 to 5) into English. In 2017 he was President of the Association of Mathematics Teachers of New Jersey (AMTNJ) and continues to provide guidance to this valuable organization. In addition to his focus on lesson study, he is also interested in helping young students to learn and master basic math skills with understanding and enjoyment, so they will have deeper mathematics learning in their future.



Julie McGough

Teacher on Special Assignment, Elementary Mathematics Instructional Specialist, Azusa Unified School District

FORMATIVE ASSESSMENT TOOLS TO GUIDE INSTRUCTION

RESEARCH & RECOMMENDATIONS, GRADES 3-5

Formative assessments provide both teachers and students an opportunity to check in on student learning and then provide feedback and reteaching as needed. We will explore a variety of resources for formative assessments which target learning from the lowest grain size (lesson/standard level) to the largest grain size (domain level). Come prepared to explore the resources with colleagues from similar grade levels and select some formative assessments you can use with students this week!

JULIE MCGOUGH is a bilingual educator who is passionate about equipping all students and teachers with the tools they need to be successful. She has over 26 years of experience and was recognized as a finalist for California State Teacher of the Year. She currently serves as a PK-5th grade math coach and loves learning math with teachers and students. She also served as a member of the Smarter Balanced Performance Task writing team.



Rachel Behr-Hirst
Secondary Mathematics Specialist, UCLA Curtis Center
EXPLORING DECIMAL MULTIPLICATION

PEDAGOGY, GRADES 4-5

Come explore a classroom-ready mathematics activity to support students with decimal multiplication! In this breakout session, we will walk through a fifth-grade mathematics lesson designed to help students understand Common Core Math Standard 5.NBT.7 by exploring multiplication through concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. This lesson has already been adapted for a virtual classroom environment.

RACHEL BEHR-HIRST holds a Master of Arts in Education, a Bachelor of Science in Mathematics for Teaching from UCLA. She served as both a teacher and instructional coach in under-served high poverty schools in South Central Los Angeles and East Los Angeles. She currently provides mathematical and pedagogical training to mathematics teachers across California, in addition to authoring mathematics performance tasks as part of The Curtis Center's partnership with the Smarter Balanced Assessment Consortium. Rachel has particular expertise in the analysis of CAASPP data for formative assessment and is passionate about engagement and using data to inform decisions. When not working, Rachel enjoys tending to her succulent garden.



Sunny Chin-LookMath Instructional Specialist, Alhambra Unified School District

"IF ONLY THEY KNEW FRACTIONS"

PEDAGOGY, GRADES 6-8

The hidden message of this microaggression statement is "Because they don't know fractions, they cannot learn upper grade math." To ameliorate such deficit thinking, this session will explore a strategy that engages students in re-conceptualizing fractions, and, simultaneously, advancing in grade level learning. Virtual manipulatives will be applied to adapt the strategy to remote learning.

SUNNY CHIN-LOOK is a National Board Certified Teacher and a K-8 Mathematics Instructional Specialist in Alhambra Unified School District. She was a member of the 2012 California Mathematics Framework Committee and a presenter for Curtis Center summer institutes for teachers.



Dr. Marty RomeroProfessor of Mathematics, Santa Ana College

CULTURALLY RESPONSIVE AND HUMANIZING MATHEMATICS CLASSROOMS

RESEARCH & RECOMMENDATIONS, GRADES 6-12

Learning math offers students ways to understand, critique, and transform their world. This workshop will examine how culturally responsive teaching and the humanizing of mathematics classrooms may advance these goals. We will explore meaningful and practical ways to create classrooms that ensure students experience these learning opportunities. A brief introduction of the community college mathematics landscape and how it may influence your teaching will be included.

MARTY ROMERO is a Mathematics Professor at Santa Ana College. Prior to Santa Ana College, he spent sixteen years as a mathematics educator in East and South Los Angeles. From 2010-2014 he was a professor and faculty advisor for future mathematics and science teachers in the UCLA Teacher Education Program. He earned his BS (UCLA) and MS (CSULA) degrees in Mathematics and a Ph.D in Education (UCLA) with an emphasis on urban schooling and math education.



Dr. Dan Teague

Instructor of Mathematics, NC School of Science and Mathematics **BUILDING A MATHEMATICAL MODEL FOR POOLED TESTING IN ALGEBRA II AND CALCULUS**

PEDAGOGY, GRADES 9-12

This fall, Duke University instituted an aggressive testing program of asymptomatic students on campus for COVID-19 using a pooling process to minimize the use of reagents and the time for and expense of testing. This timely and relevant optimization process can be investigated by students in in classes from Algebra II using graphs and data analysis to Calculus using standard optimization tools. The Group Testing Problem has been a standard in our Precalculus and Modeling curricula for many years, only to become new and important again during this year of pandemic. I will share the variety of methods students have used to investigate this process.

DAN TEAGUE, teague@ncssm.edu, is an Instructor of Mathematics at NCSSM. He has served on the Board of Governors of the Mathematical Association of America as 2nd Vice President of the MAA. He recently completed a term as Director-at-Large on the NCTM Board of Directors. Dan's special interest in in mathematical modeling and served as a lead author of the GAIMME Report.



Dr. Guershon Harel

Professor of Mathematics, Department of Mathematics, University of California, San Diego

INSTRUCTIONAL ACTIVITIES THAT ADVANCE COMMON CORE MATHEMATICAL PRACTICES AND THEIR GUIDING PRINCIPLES

RESEARCH & RECOMMENDATIONS, GRADES 9-12

The talk will focus on two questions:

- 1. What sort of instructional activities advance students' ability to model situations mathematically, bring about a change in the role of proof in the mathematics curriculum, and develop mathematical structure sense among students?
- 2. What are some of the guiding principles for the construction and implementation of such activities?

GUERSHON HAREL'S research interest is in cognition and epistemology of mathematics and their application in the learning and teaching of mathematics. His research has focused on two areas: the *multiplicative* conceptual field (MCF) and advanced mathematical thinking (AMT).



Michelle Welford

Director of Assessment, UCLA Curtis Center

WRITING RICH AND COHERENT APPLIED MATH TASKS FOR THE CLASSROOM

RESEARCH & RECOMMENDATIONS, GRADES 3-11

What characterizes a rich and coherent applied math task? Why would teachers want to incorporate applied math tasks into their classroom? We'll learn how to identify rich applied math tasks, and then learn some principles for writing applied math tasks for your classroom. You will actively participate in a portion of the Curtis Center Applied Math Task Writing training that The Curtis Center authoring team underwent before starting to write performance tasks for the Smarter Balanced end of year summative assessment. This session will be energetic, informative, engaging and leave you wanting more.

MICHELLE WELFORD holds a Bachelor's degree in Mathematics, a Master's in Education and is a Nationally Board Certified Teacher. She taught high school mathematics for 10 years during which time she wrote her own Geometry and AP Statistics curriculum. Her efforts significantly improved student access to success on the AP Statistics exam, with pass rates increasing from 20% to 94% after she took over the program. Michelle also served for five years as an instructional coach for the Los Angeles Unified School District during which time she also wrote professional development curriculum in geometry for the UCLA Mathematics Department. Michelle was Co-Director of the 2015-2017 Smarter Balanced Performance Task Project during which time she was pivotal in the development of 168 mathematical modeling tasks used in summative assessments across 21 US States. As Director of Assessment for The UCLA Curtis Center, she continues to lead a team of educators and mathematicians from across the United States in writing performance tasks for the Smarter Balanced assessment.



Dr. Marcus Roper

Professor of Mathematics, UCLA Department of Mathematics

THE MATH OF COMPUTER VISION

MATHEMATICS FOR TEACHERS, GRADES K-12

Have you noticed how good your phone has gotten at taking photos? In the last ten years there has been a revolution in computer vision — in the ability of computers to interpret photos and video — and this revolution can be felt everywhere, from the phones in our pockets, to new medical imaging tools, to the future prospect of self-driving cars. Together we will explore the mathematics of computer vision — how images are represented mathematically, and how they can be analyzed to find objects, e.g. faces in Facebook photos. We will present some ways that these applications can be used to illustrate math topics taught in classrooms from elementary school through high school.

PROFESSOR MARCUS ROPER received his Ph. D. in mathematics from Harvard University and joined the UCLA Mathematics Department in 2010. In addition to teaching mathematics, he conducts research in mathematical problems coming from physics and biology. He is particularly interested in fungal mycelia, the microvascular system and design and optimization of inertial microfluidic devices.



Dr. Karen C. Fuson

Professor Emerita, Northwestern University

Balanced Learning-Path Teaching in the Classroom and Remotely

will overview a research-based approach to mathematics teaching and learning that balances understanding and fluency and supports success by learners from all backgrounds. The balanced approach ends the math wars by beginning where students are and moving through mathematically-desirable and accessible learning paths to fluency. Teachers develop responsive Math Talk classrooms in which students solve, explain, question, and justify math thinking. Much of the classroom-based research developing this approach was carried out in high poverty schools and in schools with many students for whom English is a second language. I will show videos of students explaining their math thinking in classrooms from high-poverty areas. I will then summarize materials and approaches that colleagues and I have made for balanced teaching remotely using Google slide decks. These can be used by students to show their thinking to everyone on a Zoom or other platform. The teacher can also use these visual representations and problem situations to lead math talk conversations with students from PK through Grade 6.

Dr. Karen C. Fuson is a Professor Emerita at Northwestern University and has published over 80 articles in mathematics education. Dr. Fuson is an author of the K-6 Math Expressions curriculum and numerous NCTM publications. She is also a CCSS-M writing team author and advisor to the Smarter Balanced Assessment Consortium.

1:40-3:00 PM

AFTERNOON BREAKOUT SESSIONS



Dr. Sybilla Beckmann

Meigs Distinguished Professor of Mathematics, Emeritus, University of Georgia

HOW THE CONCEPT OF MEASUREMENT IS VALUABLE FOR UNDERSTANDING MULTIPLICATION, DIVISION, FRACTIONS, RATIO, AND PROPORTIONAL RELATIONSHIPS

MATHEMATICS FOR TEACHERS, GRADES K-5

In this session we will examine and explore some important mathematical concepts through a lens of measurement. We will see how the measurement question, "How many (or much) of this does it take to make that exactly?" is valuable for interpreting multiplication, division, and fractions. We will then explore how measurement is important for concepts on the K-5 mathematical horizon related to ratio and proportional relationships, including slope and equations for lines. Dynamic Geogebra sketches will help us visually explore and develop intuition for how and why measurement is foundational for many important topics in mathematics.

SYBILLA BECKMANN has a PhD in mathematics from the University of Pennsylvania. She has done research in Arithmetic Geometry, but her current main interests are mathematical cognition, the mathematical education of teachers, and mathematics content for PreK through Grade 8. Sybilla developed several mathematics content courses for prospective elementary school teachers at the University of Georgia and wrote a book for such courses, Mathematics for Elementary Teachers, published by Pearson Education. She was a member of the writing team of NCTM's Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics and a member of Committee on Early Childhood Mathematics of the National Research Council. She was a member of the mathematics writing team for the Common Core State Standards for Mathematics.



Kelly Ann Sassone

Teacher, Da Vinci Schools, Curtis Center Elementary Mathematics Specialist

TEACHING ADDITION FLUENCY THROUGH GAMES

PEDAGOGY, GRADES K-2

Play is an important aspect of a healthy and balanced life and during these challenging times, play can bring a much-needed sense of joy, safety, and connectedness. This session will explore how games we play at home and in the classroom develop addition fluency in kindergarten through second grade. Participants will explore how games directly support student development of addition and subtraction strategies such as counting on, making ten, decomposing a number leading to ten, using the relationship between addition and subtraction, and creating equivalent, but easier or known sums.

KELLY ANN SASSONE has been a classroom teacher for 15 years. She has taught multiple grade levels between kindergarten and sixth grade and is an elementary math specialist with the UCLA Curtis Center. Kelly Ann also teaches Math 74 at UCLA; a course that aims to facilitate student development of the professional mathematical and pedagogical understandings required to teach California's K-5th grade mathematics curriculum. Her passion is bringing joy to mathematics for young learners and supporting teachers as they grow in their understanding of mathematical development in children.

1:40-3:00 PM AFTERNOON BREAKOUT SESSIONS CONTINUED



Julie McGough

Teacher on Special Assignment, Elementary Mathematics Instructional Specialist, Azusa Unified School District

ELEMENTARY MATH ROUTINES FOR STUDENT ENGAGEMENT AND VOICE

PEDAGOGY, GRADES 3-5

Math routines create opportunities for mathematical conversations which engage students in the Standards for Mathematical Practice as well as grade level content standards. We will experience a variety of routines that help third through fifth graders develop their understanding of fractions. The routines can be implemented in virtual or in-person instruction and are ready for use next week!

JULIE MCGOUGH is a bilingual educator who is passionate about equipping all students and teachers with the tools they need to be successful. She has over 26 years of experience and was recognized as a finalist for California State Teacher of the Year. She currently serves as a PK-5th grade math coach and loves learning math with teachers and students. She also served as a member of the Smarter Balanced Performance Task writing team.



Julian Rojas

Secondary Mathematics Specialist, UCLA Curtis Center

THE TERMINATOR: A SAMPLE KEYSTONE LESSON

PEDAGOGY, GRADES 6-8

Despite the loss of instructional time due to CoVid, this 7th grade lesson will address multiple math standards to get students exposed to grade level content. Participants will connect two topics in grade 7, rational numbers and probability, through a dice game. Participants will engage in conversations around terminating and non-terminating decimals in both the teacher and student roles. This lesson is ready for use and includes virtual adaptations.

JULIAN ROJAS holds a Master of Arts in Education and a Bachelor of Science in Mathematics for Teaching from UCLA. He had several years of middle and high school practitioner experience teaching mathematics, engineering and computer science in public and private schools in Los Angeles before joining The Curtis Center full time in 2020. Julian's career has been marked by advocacy for under-served, marginalized and at-risk communities including liaison work to the Spanish speaking community and Diversity Equity and Inclusion work. He has also presenter at Twitter Math Camp where he shared his school's approach to Standards-Based Grading. Julian currently provides mathematical and pedagogical training to mathematics teachers across the State of California.

1:40-3:00 PM AFTERNOON BREAKOUT SESSIONS CONTINUED



Dr. Kimberly Samaniego

Director of the CSU/UC Mathematics Diagnostic Testing Project (MDTP), Director of Mathematics Testing and Placement at UC San Diego

MAPPING A NEW NORMAL: USING MDTP DIAGNOSTIC DATA TO UNDERSTAND AND BRIDGE YOUR STUDENTS' UNFINISHED LEARNING

RESEARCH & RECOMMENDATIONS, GRADES 6-12

Teaching math during a pandemic presents multiple challenges for educators and students. With disruptions in face-to-face instruction, math educators need to function within a new normal of what students learn and retain during remote access and distance learning. Join this session to learn how MDTP supports teachers to administer MDTP remotely and use diagnostic data to understand what their students know and the nature of their unfinished learning.

In this session we will provide an overview of the MDTP Assessment System to include descriptions of MDTP tests available for remote testing, how to administer MDTP remotely, and suggestions for how to use MDTP assessments to support distance learning. Additionally, we will learn how to analyze the diagnostic results formatively and explore instructional strategies to map learning for so that students are able to access the math in their current class and develop readiness for the next level.

The CSU/UC Mathematics Diagnostic Testing Project (MDTP) is a state-funded project to provide California secondary math educators free resources and training to promote and support student readiness and success in secondary and postsecondary mathematics courses. (This paragraph is part of the abstract also but should be a new paragraph)

DR. KIMBERLY SAMANIEGO is the Director of the CSU/UC Mathematics Diagnostic Testing Project (MDTP), the Director of Math Testing and Placement, and a math instructor at UC San Diego. Her research interests focus on teacher learning, educational reforms, and equitable teaching practices in mathematics classrooms. In addition to her postsecondary roles, she is a 20-year veteran secondary mathematics teacher, department chair, instructor of preservice secondary mathematics teachers, and teacher-trainer.

1:40-3:00 PM AFTERNOON BREAKOUT SESSIONS CONTINUED



Eden Murphy

Secondary Mathematics Specialist, UCLA Curtis Center

ADDRESSING MULTIPLE MATH STANDARDS WITHIN A LESSON - INTRODUCTION TO CIRCULAR FUNCTIONS

PEDAGOGY, GRADES 9-12

Despite heroic efforts, achievement and equity gaps remain, and in most cases, are exacerbated by distance learning. To address the loss of learning due to COVID 19 and the widening achievement gaps, this session will provide an example of a math lesson designed to address multiple math content and practice standards. Come experience this math lesson as a student learner and investigate the pedagogy behind lesson design, gaining tangible contexts for student exploration. The lesson will address connections between graphs of $y = \sin x$ and $y = \cos x$ and the x and y coordinates of points moving around the unit circle. We will also discuss how a teacher could incorporate "Just in Time" review of below grade level content.

EDEN MURPHY has over ten years of mathematics teaching and coaching practitioner experience in the Apple Valley Unified School District. She created an equitable and accessible pathway to Calculus in her district while becoming a leader in instruction that centers around student inquiry of mathematics by means of modeling and proof. Currently, Eden provides mathematical and pedagogical training to teachers across California, in addition to authoring mathematics performance tasks as part of The Curtis Center's partnership with the Smarter Balanced Assessment Consortium. Eden has particular expertise around best practices for online instruction as well as appropriate use of educational technologies in the mathematics classroom.



Dr. Roxy Peck

Professor Emerita, Cal Poly, San Luis Obispo

DEVELOPING STATISTICAL THINKING BY ENGAGING STUDENTS IN MEANINGFUL AND RELEVANT LEARNING

MATHEMATICS FOR TEACHERS, GRADES 9-12

Statistical thinking and the ability to analyze data are critical in a data-driven world, but an approach that focuses on procedural fluency does little to prepare students for success. This session considers implementation of recommendations in the new GAISE II Report (Pre-K-12 Guidelines for Assessment and Instruction in Statistics Education II). These recommendations include focusing on data analysis as an investigative process, including a variety of data and variable types, and providing students with opportunities to develop multivariable thinking. Several classroom activities (suitable for in-person or virtual instruction) that are consistent with these recommendations and that illustrate how students can be engaged in ways that promote meaningful and relevant learning for all students will be explored.

ROXY PECK is a professor emerita of statistics at Cal Poly, San Luis Obispo. She was a faculty member of the Statistics Department for thirty years, serving for six years as Chair of the Statistics Department and thirteen years as Associate Dean of the College of Science and Mathematics. Nationally known in the area of statistics education, Roxy was made a Fellow of the American Statistical Association in 1998 and in 2003 she received the American Statistical Association's Founders Award in recognition of her contributions to K-12 and undergraduate statistics education.

1:40-3:00 PM

AFTERNOON BREAKOUT SESSIONS CONTINUED



Director of Student Supports, Smarter Balanced Assessment Consortium, University of California, Santa Cruz

Trisha Klein

Dr. Vitaliy Shyyan

Director, Student Supports, Smarter Balanced Assessment Consortium

ACCESSIBILITY CONSIDERATIONS FOR MATH ASSESSMENTS AND INSTRUCTION



RESEARCH & RECOMMENDATIONS, GRADES 3-11

Given the recent shift from predominantly in-person to remote and hybrid assessment contexts and the need for various accessibility resources for diverse students, what is the Smarter Balanced Assessment Consortium housed at the University of California, Santa Cruz, doing to provide high-quality, innovative accessibility resources for students with diverse needs and preferences? The consortium is currently providing over 60 accessibility resources on its assessments and corresponding formative assessment accessibility strategies, and this session will highlight processes and approaches to developing innovative universal tools, designated supports, and accommodations, as well as corresponding accessibility strategies, and their implications for ensuring that assessments are fair and equitable. These resources are also incorporated in synchronous and asynchronous accessibility strategies to support students in remote contexts in addition to classroom settings. Presenters will describe the processes of developing innovative accessibility resources and strategies and ensuring that they meet high educational standards. Successes and challenges associated with providing effective accessibility resources and strategies for diverse students with unique accessibility needs and preferences will also be addressed.

VITALIY SHYYAN serves as a Director of Supports for Students. He works with Smarter Balanced Co-Directors, senior leadership, and Consortium Governing States to sustain and enhance the assessment system to improve outcomes for diverse students, including English learners, students with disabilities, and English learners with disabilities. Vitaliy received his Ph.D. in Educational Policy and Administration from the University of Minnesota, with a Comparative and International Development Education major and Program Evaluation minor. He also holds a Master's Degree in Educational Policy and Administration and another Master's Degree in English Language and Literature. Vitaliy provides guidance on the Curtis Center & SBAC Performance Task Authoring Project.

TRISHA KLEIN comes from the field of vision impairment and blindness and has been with Smarter Balanced for almost five years supporting the consortium's mission to provide an accessible assessment system. She has a particular passion for supporting students with disabilities and assistive technology. Trisha provides accessibility guidance on the Curtis Center & SBAC Performance Task Authoring Project.