Leadership Seminar on Mathematics Professional Learning

March 8-10, 2023 | Portland, Oregon

Program

Agenda, Speaker Biographies & Session Summaries

TEACHERS DEVELOPMENT GROUP

ACKNOWLEDGEMENTS

Teachers Development Group (TDG) is a nonprofit organization, founded in 1998 by Linda Foreman and her colleagues. Linda had a vision of mathematics teaching, learning, and leadership that fueled TDG's K-12 professional learning from 1998-2017. She also had a vision for the annual TDG Leadership Seminar on Mathematics Professional Learning. Stimulated by the cutting-edge ideas presented in researchers' sessions, she envisioned the entire Seminar community (i.e., teacher leaders, math coaches, school and district administrators, professional development providers, curriculum developers, and researchers) engaged in conversation around an important theme in math education. The goal of the 2023 Seminar is for all of us to deepen our understanding, through individual and collective reflection and dialogue, of what it means to shift PK-12 math instruction and professional learning from the support of "all students" to centering the needs of students of color, linguistically minoritized students, and students living in poverty. I am happy you have decided to join us.

The vision, leadership, and commitment offered by TDG's Board of Directors have been key to the organization's financial and programmatic success and are greatly appreciated, especially over the last several years as TDG faced enormous challenges brought about by the pandemic.

Teachers Development Group Board of Directors

Harold Asturias, Lawrence Hall of Science
Robert Q. Berry III, University of Arizona
Jill Board, Teachers Development Group
Marjorie Kostelnik, University of Nebraska
Cathy Martin, Denver, Colorado
Marrielle Myers, Kennesaw State University
Kathy Pfaendler, Teachers Development Group

The commitment, expertise, and hard work offered by TDG's professional development specialists as they engage in the daily work of supporting math teachers' and school leaders' learning around the country, are crucial to the organization's success. I give my heartfelt thanks to each of them as they make it possible for TDG to exist.

Teachers Development Group
Mathematics Professional Development Specialists

Shelly Allen, Augusta, GA
Laura Bower, Tacoma, WA
Cheryl Cameron, Happy Valley, OR
Carolyn Choi, Portland, OR
Bill Feeley, Charlottesville, VA
Julie Fredericks, Beaverton, OR
Murrel Hoover, Elkview, WV
Denise Huddlestun, Atlanta, GA
Jennifer Kallenberger, Gig Harbor, WA
Kerry Morton, Bend, OR
Lori McMullen, Aurora, CO
Rose Palmer, Scappoose, OR
Kathy Pfaendler, Beaverton, OR
Melissa Plummer, Roseburg, OR
Lindsay Wood, Kent, WA
Patrice Woods, Portland, OR

Special thanks are also extended to Jill Board, Executive Director of Program, whose relentless commitment to the organization coupled with her outstanding skills and expertise support the success of this Seminar and the day-to-day work of all TDG employees. Lisna Lai, TDG's Accounting and Program Specialist, does extraordinary work on all matters related to TDG's daily accounting operations and program logistics and she does so with notable patience and attention to detail, accuracy, and timeliness. We also could not survive as an organization without the database expertise of Paul Navarre and the accounting expertise and experience of Sengu Thomas and TDG's CFO, Karin Wandtke. Additional thanks are extended to Fred Rectanus and Judy Martin, who volunteered in support of this Seminar and throughout the year.

Finally, I wish to express my gratitude to TDG Board Member, Marrielle Myers, who went above and beyond her service as a TDG Board member to help TDG with assembling the remarkable group of session leaders for this year's Seminar and constructing what promises to be an incredible learning opportunity on equity and math education for all of us.

Thank you all for attending and engaging together with us in the important and urgent work of the 2023 Leadership Seminar.

Ruth Heaton, CEO, Teachers Development Group

seminar AGENDA

WEDNESDAY MARCH 8

4:30 pm – 6:45 pm	Registration and Check-In	Mount Hood Foyer
5:30 pm – 6:45 pm	Opening Reception (Hot and Cold Hors d'oeuvres and Cash Bar)	Mount Hood Foyer
6:45 pm	Opening - Ruth Heaton	Mount Hood Ballroom

Plenary A — Mount Hood Ballroom

Marrielle Myers

There is Promise in Our Journeys: How Choosing to Pause, Ponder, and Pursue Grants us Power to Seek Equity and Justice for Historically Marginalized Students

TEAM COLLABORATION DURING THE SEMINAR

Several spaces throughout the hotel, found in the foyers of Garden, Cascade, and Mount Adams, have been set with round tables and chairs specifically for Team Collaboration throughout the Seminar.

THURSDAY MARCH 9

6:45 am – 8:00 am	**Breakfast ~ Team Collaboration** Team meeting spaces available in the foyers of Garden, Cascade, and Mount Adams.	**Mount Hood Foyer**
8:00 am – 9:30 am	**Concurrent 1** **Allison Hintz** *Mathematizing Children's Literature: Listening to Family Knowledge and Cultural Ways of Being within Stories* (repeats Concurrent 4) **Mount Hood A** **Mandy Jansen** *Mathematics Teachers' Entry Points into Ambitious Mathematics Instruction: The Case of Rough Draft Math* (repeats Concurrent 4) **Mount Adams** **Jared Webb** *Reconstructing Mathematics Education to Promote Liberation, Flourishing, and Brilliance* (repeats Concurrent 4) **Mount Hood C** **Teresa Dunleavy** *Using Complex Instruction to Dismantle White Supremacy Culture* (repeats Concurrent 5) **Cascade** **Paulo Tan** *Humanizing Disabilities in Mathematics Education: Going Beyond Inclusion)* (repeats Concurrent 4) **Garden**	
9:30 am – 9:45 am	**Transition**	
9:45 am – 11:15 pm	**Concurrent 2** **Jennifer McCray and Priscila Pereira** *Identity as Opportunity: Using Early Math Teaching to Move toward Equity* (repeats Concurrent 6) **Mount Hood A** **Harold Asturias** *Seeing and Empowering All Students* (repeats Concurrent 6) **Mount Adams** **Maddy Aheam, Mark Freed, Cathy Martin, and Kathy Pfaendler** *Navigating the Complexities of Detracking when Engineering Equitable Systems in Math* (repeats Concurrent 6) **Mount Hood C** **Richard Velasco** *Mapping Our Practice Towards Rehumanizing Mathematics* (repeats Concurrent 6) **Cascade** **Queshonda Kudaisi** *Engaging with Social Justice Tasks in the Mathematics Classroom* (repeats Concurrent 3) **Garden**	
11:30 pm – 12:30 pm	**Lunch ~ Team Collaboration** Team meeting spaces available in foyers of Garden, Cascade, and Mount Adams.	**Mount Hood Ballroom**

12:30 pm – 1:45 pm	**Plenary B** Julia Aguirre *Meeting Students' Needs or Not: Examining Dilemmas with Tracking PK-12 Math Education*	Mount Hood Ballroom
1:45 pm – 2:00 pm	**Transition**	
2:00 pm – 3:30 pm	**Concurrent 3** **Kristen Reed and Shakesha Thompson** *Adding Family Math into the Equation: Supporting Learning Opportunities at Home and at School* (repeats Concurrent 5) **Mount Hood A** **Abi Leaf and Brian Lawler** *Structuring a System to Drive Improvement in High School Mathematics* (repeats Concurrent 5) **Mount Adams** **Queshonda Kudaisi** *Engaging with Social Justice Tasks in the Mathematics Classroom* (repeats Concurrent 2) **Mount Hood C** **Kristine Ho and Cristina Navarro-Aguirre** *Exploring Students' Lived Experiences and How Mathematics Can be Used as a Tool for Change* (repeats Concurrent 5) **Cascade** **Gabrielle Bernal** *Culturally Sustaining Mathematics for Making Sense and Persevering through Solving Problems through Real World Problems* (repeats Concurrent 6) **Garden**	
3:30 pm – 3:45 pm	**Dessert Break**	Mount Hood Foyer
3:45 pm – 5:15 pm	**Concurrent 4** **Allison Hintz** *Mathematizing Children's Literature: Listening to Family Knowledge and Cultural Ways of Being within Stories* (repeats Concurrent 1) **Mount Hood A** **Mandy Jansen** *Mathematics Teachers' Entry Points into Ambitious Mathematics Instruction: The Case of Rough Draft Math* (repeats Concurrent 1) **Mount Adams** **Jared Webb** *Reconstructing Mathematics Education to Promote Liberation, Flourishing, and Brilliance* (repeats Concurrent 1) **Mount Hood C** **Naomi Jessup** *Anti-deficit Noticing of Children's Mathematical Thinking: A Tool for Critical Reflection and Action* (repeats Concurrent 5) **Cascade** **Paulo Tan** *Humanizing Disabilities in Mathematics Education: Going Beyond Inclusion)* (repeats Concurrent 1) **Garden**	
5:15 pm – 6:15 pm	**Seminar Social ~ Light Fare and Cash Bar** Team meeting spaces available in the foyers of Garden, Cascade, and Mount Adams.	Mount Hood Foyer

FRIDAY MARCH 10

6:45 am – 8:00 am **Breakfast ~ Team Collaboration** Mount Hood Foyer
Team Collaboration meeting spaces available in foyers of Garden, Cascade, and Mount Adams.

8:00 am – 9:30 am **Concurrent 5**

Kristen Reed and Shakesha Thompson *Adding Family Math into the Equation: Supporting Learning Opportunities at Home and at School* (repeats Concurrent 3) **Mount Hood A**

Abi Leaf and Brian Lawler *Structuring a System to Drive Improvement in High School Mathematics* (repeats Concurrent 3) **Mount Adams**

Naomi Jessup *Anti-deficit Noticing of Children's Mathematical Thinking: A Tool for Critical Reflection and Action* (repeats Concurrent 4) **Mount Hood C**

Teresa Dunleavy *Using Complex Instruction to Dismantle White Supremacy Culture* (repeats Concurrent 1) **Cascade**

Kristine Ho and Cristina Navarro-Aguirre *Exploring Students' Lived Experiences and How Mathematics Can be Used as a Tool for Change* (repeats Concurrent 3) **Garden**

9:30 am – 9:45 am **Transition**

9:45 am – 11:00 am **Plenary C** Mount Hood Ballroom

Melissa Adams-Corral

Choosing Asset-Based Recognition with Multilingual Children and Immigrant Families

11:15 am – 12:00 pm **Lunch ~ Team Collaboration** Mount Hood Ballroom
Team Collaboration meeting spaces available in the foyers of Garden, Cascade and Mount Adams.

12:15 pm – 1:45 pm	**Concurrent 6** **Jennifer McCray and Priscila Pereira** *Identity as Opportunity: Using Early Math Teaching to Move toward Equity* (repeats Concurrent 2) **Mount Hood A** **Harold Asturias** *Seeing and Empowering All Students* (repeats Concurrent 2) **Mount Adams** **Maddy Ahearn, Mark Freed, Cathy Martin, and Kathy Pfaendler** *Navigating the Complexities of Detracking when Engineering Equitable Systems in Math* (repeats Concurrent 2) **Mount Hood C** **Richard Velasco** *Mapping Our Practice Towards Rehumanizing Mathematics* (repeats Concurrent 2) **Cascade** **Gabrielle Bernal** *Culturally Sustaining Mathematics for Making Sense and Persevering through Solving Problems through Real World Problems* (repeats Concurrent 3) **Garden**
1:45pm – 2:00 pm	**Transition**
2:00 pm – 3:00 pm	**Dessert and Coffee & Reflection and Dialogue: Creating Plans for Action** During this session, you will have an opportunity to meet, reflect, and dialogue with Seminar participants who are in similar roles to your own within schools, districts, and other professional contexts across the country. With the support of session facilitators, you will reflect, strategize, and plan for action based on your Seminar learning. You will also have opportunities to dialogue about topics of participants' choice related to shifting from a "for all students" perspective to centering needs of students of color, linguistically minoritized students, and students living in poverty. **Attend with the group below that most closely aligns with your interests.** *K-5 Coaches, Instructional Specialists, and Teachers on Special Assignment (TOSA)* **Mount Hood A** *Elementary Teachers* **Mount Adams** *Grades 6-12 Coaches, Instructional Specialists, and Teachers on Special Assignment (TOSA)* **Mount Hood C** *Middle and High School Teachers* **Cascade** *K-12 Principals and District Administrators* **Garden**

Speaker Index

Melissa Adams-Corral	University of Texas - Rio Grande Valley
Julia Aguirre	University of Washington -Tacoma
Maddy Ahearn	Lane Education Service District, OR
Harold Asturias	Lawrence Hall of Science, CA
Gabrielle Bernal	University of Michigan
Teresa Dunleavy	Seattle, WA
Mark Freed	Oregon Department of Education
Ruth Heaton	Teachers Development Group
Allison Hintz	University of Washington - Bothell
Kristine Ho	UCLA Math Project
Amanda (Mandy) Jansen	University of Delaware
Naomi Jessup	Georgia State University
Queshonda Kudaisi	University of North Texas
Brian Lawler	Kennesaw State University
Abi Leaf	Escondido Union High School
Cathy Martin	Denver Public Schools (Emerita)
Jennifer McCray	Erickson Institute
Marrielle Myers	Kennesaw State University
Cristina Navarro-Aguirre	UCLA Math Project
Priscila Pereira	Erickson Institute
Kathy Pfaendler	Teachers Development Group
Kristen Reed	Education Development Center
Paulo Tan	John Hopkins University
Shakesha Thompson	Education Development Center
Richard Velasco	University of Oklahoma
Jared Webb	North Carolina A & T University

Speakers & Sessions

about Melissa Adams Corral

Melissa Adams Corral is an assistant professor of Mathematics Education at the University of Texas, Río Grande Valley. Before receiving her PhD, she spent seven years as a bilingual elementary teacher in central Texas. Her research deploys theories and methods from community organizing in classroom-based practice and explores topics shaping the intersection of race, language, and mathematics education.

PLENARY C

Choosing Asset-Based Recognition with Multilingual Children and Immigrant Families

When students who have recently arrived in the United States enroll at your school, what data is collected upon arrival and what kinds of data are regularly collected of all students? How does this data impact what happens in classrooms? In this interactive session, participants will identify the data currently collected by their school and consider what that data allows us to see. Together, we will explore how "data-driven instruction," often considered a best practice, can work to further marginalize students labeled English Learners and/or Newcomers by directing educators to see and center problems in ways that keep us from seeing and centering young people. In this session for all grade-levels, findings from recent research will showcase the brilliant futurity of migrant families dreaming and building possible futures and we will reflect on these examples alongside your school's current data-collection practices. We will then engage with an asset-based tool I created to provide educators with people-centered data on recently arrived young people. Participants will use this tool to think about young people in their school contexts and reflect in small groups. After exploring anonymized, composite examples from asylum-seekers, participants will consider what this data might mean for math classrooms and envision ways their schools could begin to take a more people-focused approach to data collection and instructional planning. I will close with principles for taking people-oriented stances in our work as math educators and provide time for individual written reflection on what comes next for you.

about Julia Aguirre

Julia Maria Aguirre is a Professor of Education at the University of Washington Tacoma. Her research interests include equity studies in mathematics education, teacher education, and culturally responsive mathematics pedagogy. She has taught mathematics in formal and informal classroom settings. A primary goal of her work is preparing new generations of teachers to make mathematics education accessible, meaningful, and relevant to today's youth. She is co-author of the book, The Impact of Identity in K-8 Mathematics: Rethinking Equity-based Practices. She welcomes all to join her in making mathematics more humanizing, just, and equitable for our nation's young people.

PLENARY B

Meeting Students Needs or Not: Examining Dilemmas with Tracking in PK-12 Math Education

Practices that permeate mathematics classrooms have persistently contributed to the reproduction of patterns of racism and oppression. Rooted in larger systems and structured, some of these practices (e.g., insisting that young children sit still and straight up, excluding children who are interpreted as having "behavior problems") are visibly harmful to students who are members of historically marginalized groups, while others, thought to be "best practices" (e.g., some taken-for-granted discussion norms) yet are nonetheless causing harm. Many mathematics educators have worked assiduously to develop alternative practices and approaches that aim to disrupt these patterns of racism and oppression. We argue that these efforts are crucial to change practice and make classrooms places where children thrive, and that they depend on closely attending to and supporting the discretionary work of teaching and the development of teachers who are also steeped in the oppressive patterns of our society. Moreover, we claim that mathematics classrooms, re-envisioned and practiced in anti-racist ways, have a special role to play in the struggle for justice, more broadly. The session will examine concrete examples of this work and discuss applicability of these examples to all PK-12 grade levels.

about Maddy Ahearn

Maddy Ahearn is the K-12 math specialist at the Lane Education Service District and a PhD candidate in Critical and Sociocultural Studies in Education at the University of Oregon. As a math specialist, Maddy supports educators across the county as they interrupt practices that maintain inequities and work towards cultivating the brilliance of the students in our care. As a researcher, Maddy studies how whiteness functions to reinscribe inequities in systems at times of reform.

CONCURRENT 2 AND 6

Navigating the Complexities of Detracking when Engineering Equitable Systems in Math
Leading session with Mark Freed, Cathy Martin, and Kathy Pfaendler

This panel will address efforts that are underway in Oregon to reimagine high school mathematics through instituting a 2+1 course model and the implications this model has for detracking efforts across the state. The 2+1 course model describes a core two-credit course sequence for all students that opens up possibilities for a specialized eleventh grade mathematics course that aligns with students' college and career plans. Flexibility created within the 2+1 model takes pressure off tracking students into accelerated tracks in middle school and normalizes the first high school course to be taken in grade 9. Cathy Martin, former Associate Chief of Academics for Denver Public Schools, offers perspectives on why detracking high school mathematics is an urgent and critical need and situates Oregon's initiatives in reform efforts nationwide. Mark Freed, Math Education Specialist, Oregon Department of Education, provides an overview of Oregon's reform efforts in high school mathematics and explains the state's strategies for implementing detracking over the next several years. Maddy Ahearn, Math Specialist, Lane Education Service District, describes her collaborative work with other statewide math leaders, and school district administrators and teachers to support the design and development of high school math content and the implementation of ambitious math instruction. Kathy Pfaendler, PD Math Specialist, Teachers Development Group, shares goals, activities and resources that are a part of professional learning Modules being created to contribute to statewide implementation efforts of ambitious math instruction. Examples come from High School.

about Harold Asturias

Harold Asturias has worked for over 17 years at The Lawrence Hall of Science, the science center at the University of California, Berkeley. His work has focused on equity in mathematics education, helping preK-12 teachers and their leaders to create powerful, equitable, and coherent learning experiences for their student by connecting mathematics understanding and language development. His work supports the development of students' positive mathematical identity while addressing the racial and social injustices pervasive in our educational systems. Harold is a member of TDG's Board of Directors.

CONCURRENT 2 AND 6

Seeing and Empowering All Students

Deficit thinking permeates math education and it leads to unjust decisions, and practices. Racism and inequity are products of design; they can be redesigned. Thus, we must design mathematical powerful learning to empower our students at the margins and, by doing so, empower all students. By focusing on a few focal students, we create improvements that benefit all students in the classroom. Further, we create a coherent learning experience by developing students' understanding of relevant grade-level mathematics, agency, and ownership of learning, and ability to use language for academic purposes. So, how do we use focal students to learn about their assets—interests, aspirations, funds of knowledge, perceptions, and ways of thinking? How would we use those assets to design powerful learning opportunities for all our students? And what would it look like if grade-level mathematics were represented through a canonical set of tasks? Standards are the language of policymakers. Math tasks are the language of the classroom and the glue that creates a coherent learning experience for students. In this session we will reflect on our own identities and biases and examine how they influence some of the "best practices" we currently employ in support of "all children." We will then use this critical self-examination to redesign instructional practices toward antiracist math education. We will explore an innovative free tool—Math Milestones—that supports equitable instructional designs by connecting curriculum, students' agency, and academic language. And we will discuss how when used formatively, the tasks can reveal and promote student thinking when we make them part of an agency and mathematics interview of focal students. Examples come from Grades 3-8.

about Gabrielle Bernal

Gabrielle (Gaby) Bernal is a former special education teacher in the California Bay Area and a current doctoral candidate in Educational Studies at the University of Michigan. She was born and raised in Watsonville, California. Gaby is a Chancellor's Doctoral Incentive Program Fellow at San José State in the Special Education Department. Gaby's interdisciplinary research is rooted in culturally sustaining mathematics education in formal and informal spaces centering Indigenous and Latine communities, homes, and schools within the US and Mexico.

CONCURRENT 3 AND 6

Culturally Sustaining Mathematics for Making Sense and Persevering in Solving Problems through Real World Problems

This session will be grounded in theories such as embodied mathematics, disability justice, and performance studies in mathematics education teaching and learning, specifically for Students of Color and Students with Learning Disabilities. This interdisciplinary approach will include time for reflection, storytelling, centering humanity, and other influences of practice. The group will collaborate using Padlets in documenting a shared understanding of Culturally Sustaining Pedagogy (Paris, 2012; Paris & Alim, 2014), an understanding of the direct connection between making sense of math problems and humanizing problem-solving. Educators, administrators, coaches, and leaders will decompose their practice and routines, identify necessary tools and norms, and reflect as they look forward to working with their students, families, and colleagues. The group will attend to the importance of language and questions such as: What's something you teach/practice every year, and what does this mean for my students/community? What can/should I change? What assumptions have I made that can benefit from a humanizing or culturally sustaining (mathematics) practice? During this session, participants will co-analyze unit plans that attend to the same content, grapple with the importance of adapting to the group, and then discuss how that work can begin. The main goal of this session is to attend to the embodiment of mathematics for Students of Color, Students with Learning Disabilities, and their communities through a focus on care and de-centering racism, ableism, and whiteness. Participants will discuss theories, analyze plans, and have time to begin brainstorming and applying an asset-based approach to their work. Examples from High School.

about Teresa Dunleavy

I am an educator. I am a learner. I am a mathematician. I am a white woman. These identities influence how I approach working with students, teachers, and teacher candidates in university and PK-12 classrooms. I started as a high school mathematics teacher. My work has progressed over the last 20 years to center students' humanity through practices that dismantle white supremacy and to support the development of antiracist, justice-oriented, discourse-based teaching and learning communities.

CONCURRENT 1 AND 5

Using Complex Instruction to Dismantle White Supremacy Culture

In this session, we will deepen our understanding of the potential for complex instruction (CI), a known equity-centered pedagogy, to dismantle White Supremacy Culture (WSC) in mathematics learning. We will work as a community to co-construct how, if at all, the classroom use of CI can play a role in dismantling the systems of oppression that have continued to produce inequitable outcomes for so many students in mathematics classrooms. (1) We will start by deepening our understanding of how 40+ years in which colorblind "math for all" approaches have continuously failed to close opportunity and achievement gaps for historically marginalized students in mathematics learning. (2) We will unpack the characteristics of WSC (Jones & Okun, 2001; Okun 2020), in our learning environments. We will use our understanding of the characteristics of WSC to analyze video excerpts from the Lo & Dunleavy (2021) Using Complex Instruction to Dismantle White Supremacy Culture (DwsCI) Project. In the DwsCI project, Lo & Dunleavy (2021) analyze 5 group-worthy tasks from Lo's high school Pre-Calculus classroom. Analysis of video excerpts will allow the group to consider how and whether aspects of Lo's use of complex instruction (Cohen & Lotan, 2014) align with antidotes for WSC (Citron & Colleagues, 2020). (3&4) We will analyze how our own personal and professional identities (Su, 2020; Seda & Brown, 2021) play a role in our

ability to dismantle WSC in our learning spaces. Participants will leave the session with one or more goals related to their own context. Examples from High School.

about Mark Freed

Mark Freed is a mathematics education specialist at the Oregon Department of Education whose responsibilities include content standards support and instructional materials review. Mark is passionate about re-imaging math systems through the revision of the state math standards, which includes equitable student access to high school math pathways. His current work now includes supporting Oregon districts adopt revised curricular materials and connect math pathways conversations in Oregon with similar work happening across the country.

CONCURRENT 2 AND 6

Navigating the Complexities of Detracking when Engineering Equitable Systems in Math
Leading session with Maddy Ahearn, Cathy Martin, and Kathy Pfaendler

This panel will address the efforts that are underway in Oregon to reimagine high school mathematics through instituting a 2+1 course model and the implications this model has for detracking efforts across the state. The 2+1 course model describes a core two-credit course sequence for all students that opens up possibilities for a specialized eleventh grade mathematics course that aligns with students' college and career plans. Flexibility created within the 2+1 model takes pressure off tracking students into accelerated tracks in middle school and normalizes the first high school course to be taken in grade 9. Cathy Martin, former Associate Chief of Academics for Denver Public Schools, offers perspectives on why detracking high school mathematics is an urgent and critical need and situates Oregon's initiatives in reform efforts nationwide. Mark Freed, Math Education Specialist, Oregon Department of Education, provides an overview of Oregon's reform efforts in high school mathematics and explains the state's strategies for implementing detracking over the next several years. Maddy Ahearn, Math Specialist, Lane Education Service District, describes her collaborative work with other statewide math leaders, and school district administrators and teachers to support the design and development of high school math content and the implementation of ambitious math instruction. Kathy Pfaendler, PD Math Specialist, Teachers Development Group, shares goals, activities and resources that are a part of professional learning Modules being created to contribute to statewide implementation efforts of ambitious math instruction. Examples from High School.

about Ruth Heaton

WELCOME AND INTRODUCTIONS

Ruth Heaton is the Chief Executive Officer (CEO) of Teachers Development Group (TDG) since August 2017. TDG is a nonprofit provider of mathematics professional learning for PK-12 teachers and leaders nationwide. TDG has as its mission to improve students' mathematical understanding and achievement, particularly students of color,

linguistically diverse students, and students living in poverty. Ruth and her TDG colleagues collaborate with districts, educational service units, universities, and various public and private funding agencies to design, provide, and study math professional learning nationwide. TDG is currently serving teachers and leaders in 12 states and 40 school districts and is the recipient of 6 externally funded grant awards from federal, state, and private foundation funding sources. Through these grants, TDG works in partnership with colleagues from 6 universities to support professional learning and do research focused on creating and studying practices, routines, and tools in service of equitable math teaching and learning. Ruth holds an affiliated faculty appointment with the Department of Mathematics and Statistics at Portland State University. She was the Gilmartin Professor of Mathematics Education at the University of Nebraska-Lincoln, where she held a faculty appointment for more than 20 years in the Department of Teaching, Learning, and Teacher Education.

about Allison Hintz

Allison Hintz is an Associate Professor of Mathematics Education at the University of Washington, Bothell. She studies teaching and learning alongside educators to create experiences where children are heard, understood, and inspired as mathematical sense-makers. She is the co-author of Intentional Talk: How to Structure and Lead Productive Mathematical Discussions and Mathematizing Children's Literature: Sparking Connections, Joy, and Wonder Through Read-Alouds and Discussion.

CONCURRENT 1 and 4

Mathematizing Children's Literature: Listening to Family Knowledge and Cultural Ways of Being Within Stories

Stories lie at the heart of families and communities. Yet stories tend to be an underrepresented source of discussion and sensemaking about mathematics. Join us in this session to look inside the pages of children's literature, written and illustrated by authors and artists of color, to notice vibrant opportunities for children from marginalized communities to see themselves and make connections between stories, their lives, communities, and the world. Also, learn how to intentionally open up spaces to deeply listen to and respond responsibly to children's thinking in our planning and facilitating of discussions. In this session participants will 1) Examine the ways stories are a resource for rehumanizing mathematics; 2) Consider how stories help us hear and center student and family knowledge and cultural ways of being, specifically families of color; 3) Explore stories to notice opportunities for learning from and with families; 4) Imagine how to create a more vibrant and inclusive version of mathematics. Examples come from Elementary.

about Kristine Ho

Kristine Ho serves as Director of Math Programs at UCLA, Center X since June of 2017. UCLA Mathematics Project (UCLAMP) is part of a statewide program that strives to positively impact TK-12 educators, students, communities, and school districts in the Los Angeles basin. We partner with these entities to provide rich and

transformative Mathematical experiences in urban schools. UCLAMP has developed programs that help prepare equity-focused, reflective, and responsive leaders in Mathematics.

CONCURRENT 3 AND 5

Exploring Students' Lived Experiences and How Mathematics Can Be Used as a Tool for Change
Leading session with Cristina Navarro-Aguirre

What does it mean to teach for equity and what does it look like to reach ALL students in the classroom? Come join us as we explore the lived experience of a migrant farm worker, Lorena Hernandez, in Central California. Together we will use Mathematics to understand the culture, assets, and inequities salient in her life and her surrounding communities. Our session will focus on unpacking the process of starting with student's lives as a window to equity and meaningful change. As a group, we will examine resources, detail questions, and share how to authentically hear from students and their families. All the while, positioning their lives as a vehicle for change in order to make space for learning and transformation. As questions emerge around equity and quality of life, we will use Mathematics to help us understand Lorena's narrative at a deeper level. This process will give insight into the generative practices of positioning student voice and experiences at the center of teaching and learning of Mathematics. As we make meaning and develop deeper insight into Lorena's life, we will also take time to reflect and discover our own equity lens and world views. Creating a space to pause, explore systemic structures of inequity and process the impacts of these structures on students' lives. Our collective analysis will help us continue down the path towards more equitable and innovative teaching practices that engage ALL students, particularly, Black, Indigenous, Persons of Color students and students of poverty. Examples from Grades K-12.

about Amanda (Mandy) Jansen

Amanda (Mandy) Jansen is a Professor in the School of Education at the University of Delaware. Prior to her current position, she was a middle school mathematics teacher in Arizona. She earned her Ph.D. in educational psychology at Michigan State University. Her book, Rough Draft Math, was published by Stenhouse. Mandy strives to address equity in mathematics teaching and learning through supporting teachers to recognize strengths in every student's thinking, at every stage of their thinking.

CONCURRENT 1 AND 4

Mathematics Teachers' Entry Points into Ambitious Mathematics Instruction: The Case of Rough Draft Math

Ambitious mathematics teaching is instruction that incorporates and builds upon students' thinking (Anthony et al., 2015). The purpose of this session is to reflect upon teachers' entry points into enacting rough draft math, a case of ambitious teaching, so teacher leaders can empower more teachers to amplify and value students' thinking. Rough draft math (Jansen, 2020) is when teachers create welcoming spaces for students to share in-progress thinking, provide explicit opportunities to revise thinking, and focus on growth over performance. This approach can be equity-minded when teachers amplify strengths in students' drafts and intentionally disrupt hierarchies of academic status (Jilk, 2016). Teachers are cautioned to monitor their biases so that they recognize brilliance in mathematical thinking of Black, Latinx, Indigenous students of color. Attendees will learn about teachers' driving motivations to

rough draft math, as informed by interviews with teachers (grades 3-12) from eight states who participated in book studies or professional learning. Teachers' enactments varied depending upon their motivations; after all, "the motivation to do things differently is as important as knowledge and skill to creating consistently ambitious practice" (Lampert et al., 2013, p. 227). Attendees' opportunities to actively engage include: (1) reflecting upon how their own histories and motivations drive their work to teach ambitiously; (2) discussing one another's histories and motivations through experiencing a protocol to promote active listening (among colleagues or students); (3) eliciting and revising their thinking about how awareness of relationships between teachers' motivations and enactments of ambitious teaching practice can inform their work as teacher leaders. Examples from Grades 4-12.

about Naomi Jessup

In her 20 years as an educator, **Naomi Jessup** was an elementary teacher, K-8 mathematics coach, K-12 formative assessment coach, and district administrator. She is currently an assistant professor of mathematics education at Georgia State University in Atlanta, GA working with teachers and parental partnerships. Her work focuses on examining mathematics teaching practices that disrupt deficit notions of children's mathematical ways of thinking and being attributed to race, gender, language, and socioeconomics.

CONCURRENT 4 AND 5

Anti-deficit Noticing of Children's Mathematical Thinking: A Tool for Critical Reflection and Action

In this session, we will explore the complexities of mathematics teaching practices that centers marginalized student populations. Participants will learn about an anti-deficit noticing framework (FAIR), that seeks to counter deficit discourses and practices that minimize children's mathematical thinking and ways of being. Teacher noticing includes attending to children's mathematical ideas, interpreting those ideas, and deciding how to respond. Through video-clips and written work of students in grades 2 – 5, we will analyze teachers' attending, interpreting, and decision-making based on a teacher's framing of students, mathematics, and interactions. Utilizing guiding questions connected to the FAIR framework, participants will engage in creating action-steps for anti-deficit noticing and equitable mathematics teaching practices. Examples from Elementary.

about Queshonda Kudaisi

Queshonda Kudaisi is an assistant professor of mathematics education at the University of North Texas in the Department of Teacher Education and Administration. She has almost a decade of experience in mathematics education which includes her work in both private and public schools, work as a mathematics teacher, teacher educator, instructional coach, researcher, curriculum developer, non-profit STEAM executive director, and consultant. Her teaching, research, and service center social justice in mathematics education.

CONCURRENT 2 AND 3

Engaging with Social Justice Tasks in the Mathematics Classroom

In this session, participants will be led through an in-depth exploration of teaching mathematics for social justice. To begin, participants will learn background knowledge to support their understanding of teaching mathematics for social justice, including how this approach supports BIPOC students' learning of mathematics content. Afterward, participants will engage in an activity using mathematics to explore, understand, and respond to a social justice issue. For a deeper understanding of this pedagogical approach, participants will analyze the features of the social justice mathematics task using several instructional and curricular frameworks. By the end of the session, participants will be prepared with the basics of teaching mathematics for social justice and encouraged to design and implement their own tasks with students. Examples from Middle School.

about Brian Lawler

Brian Lawler's scholarship focuses on equity issues in mathematics education; in particular, the personal epistemologies of adolescent mathematicians: Do young people see themselves as mathematical authors? During his 30-year career as a mathematics educator, he has supported teachers, schools, and districts to detrack mathematics programs and transform teaching. His current research projects (district change and community organizing) focus upon how schools and districts transform their mathematics instruction to foreground student mathematical inventions against the backdrop of high-stakes education.

CONCURRENT 3 AND 5

Structuring a System to Drive Improvement in High School Mathematics
Leading session with Abi Leaf

For many years we have been able to identify inequitable structures and teaching practices in high school mathematics, yet few school-based initiatives have had sustained impact on these structures or practices. In this session we share what we have learned in efforts across multiple school districts to change structures and instruction in mathematics, including detracking and broadening measures of success. Central will be the story of Escondido Union High School District, one of NCTM's original case studies detailing work aligned with the recommendations in Catalyzing Change. In 2013, EUHSD initiated a focus on equity issues by redesigning the mathematics program to be aligned with the logics of an asset orientation to both students and teachers. We detracked course pathways; selected a problem-based, integrated textbook; reorganized teachers' workdays to focus on community and professionalism, and trained administrators to support this work. During the session, we will discuss critical aspects of the system identified for treatment as well as identify actions that promoted change, what has sustained, and what remains as persistent challenges. Participants will consider their unique context and locus of control in order to identify spaces in which they may be able to initiate meaningful change and leave with an initial draft of a five-year action plan. Examples from High School.

about Abi Leaf

Abi Leaf is a long-term mathematics educator in the Escondido Union High School District in Escondido, CA. Until recently she led a multi-year equity-based change effort at the district level focused on transforming the instructional and professional experiences for all students and teachers of mathematics, including detracking offered math pathways. Her current position as a school-based administrator is serving to broaden her understanding of the systemic change and support necessary to sustain productive change in mathematics instruction and outcomes.

CONCURRENT 3 AND 5

Structuring a System to Drive Improvement in High School Mathematics
Leading session with Brian Lawler

For many years we have been able to identify inequitable structures and teaching practices in high school mathematics, yet few school-based initiatives have had sustained impact on these structures or practices. In this session we share what we have learned in efforts across multiple school districts to change structures and instruction in mathematics, including detracking and broadening measures of success. Central will be the story of Escondido Union High School District, one of NCTM's original case studies detailing work aligned with the recommendations in Catalyzing Change. In 2013, EUHSD initiated a focus on equity issues by redesigning the mathematics program to be aligned with the logics of an asset orientation to both students and teachers. We detracked course pathways; selected a problem-based, integrated textbook; reorganized teachers' workdays to focus on community and professionalism, and trained administrators to support this work. During the session, we will discuss critical aspects of the system identified for treatment as well as identify actions that promoted change, what has sustained, and what remains as persistent challenges. Participants will consider their unique context and locus of control in order to identify spaces in which they may be able to initiate meaningful change and leave with an initial draft of a five-year action plan. Examples from High School.

about Cathy Martin

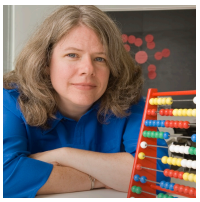
Cathy Martin served as the Associate Chief of Academics for Denver Public Schools and led the development of academic supports and equity-based practices. Prior to this, Cathy served as the K-12 Director of Mathematics in Denver for 12 years where she led standards implementation in mathematics and coordinated the design and delivery of professional learning for teachers, teacher leaders, and school leaders. Most recently, Cathy collaborated with TDG in the design of professional development for teachers, coaches, and school leaders in support of ambitious mathematics instruction. Cathy is a member of TDG's Board of Directors.

CONCURRENT 2 AND 6

Navigating the Complexities of Detracking when Engineering Equitable Systems in Math
Leading session with Maddy Ahearn, Mark Freed, and Kathy Pfaendler

This panel will address the efforts that are underway in Oregon to reimagine high school mathematics through instituting a 2+1 course model and the implications this model has for detracking efforts across the state. The 2+1 course model describes a core two-credit course sequence for all students that opens up possibilities for a specialized eleventh grade mathematics course that aligns with students' college and career plans. Flexibility created within the 2+1 model takes pressure off tracking students into accelerated tracks in middle school and normalizes the first high school course to be taken in grade 9. Cathy Martin, former Associate Chief of Academics for Denver Public Schools, offers perspectives on why detracking high school mathematics is an urgent and critical need and situates Oregon's initiatives in reform efforts nationwide. Mark Freed, Math Education Specialist, Oregon Department of Education, provides an overview of Oregon's reform efforts in high school mathematics and explains the state's strategies for implementing detracking over the next several years. Maddy Ahearn, Math Specialist, Lane Education Service District, describes her collaborative work with other statewide math leaders, and school district administrators and teachers to support the design and development of high school math content and the implementation of ambitious math instruction. Kathy Pfaendler, PD Math Specialist, Teachers Development Group, shares goals, activities and resources that are a part of professional learning Modules being created to contribute to statewide implementation efforts of ambitious math instruction. Examples from High School.

about Jennifer McCray



Jennifer McCray is an Associate Research Professor and the Principal Investigator of the Early Math Collaborative at the Erikson Institute. With Dr. Danny Martin of the University of Illinois Chicago, she leads the Racial Justice in Early Math (RJEM) project. This year, RJEM will offer a Teaching Fellowship for six kindergarten teachers from across the United States, providing mentorship and documenting the experience of the fellows to provide resources for other teachers.

CONCURRENT 2 AND 6

Identity as Opportunity: Using Early Math Teaching to Move toward Equity
Leading session with Priscila Pereira

Math identities are multifaceted and linked to other important identities that children develop. Experiences at the very earliest years of children's education help to shape these identities. Though early educators (birth – kindergarten) strive to create truly equitable opportunities for all children to learn, they still bring implicit biases to their practice (as we all do). Each of us must commit to consciously and deliberately examining our work with young children, striving to become aware of how bias affects our practice, and shifting to create more opportunities for student excellence in math learning. As a group, participants will explore the associations and beliefs we bring to our work with students from different backgrounds, thinking about how these associations and beliefs connect to both race and math. We will use video case studies of young children doing math to brainstorm new thinking and instructional approaches. Finally, we will ask each participant to critically reflect on their early math

teaching and commit to ensuring that children of color, children who live in poverty, and marginalized children have real opportunities to develop positive math identities. Examples from PK-Grade 2.

about Marrielle Myers

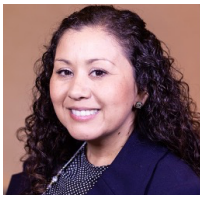
Marrielle Myers (she/her) is an Associate Professor of elementary mathematics education and serves as the Director of Diversity, Equity, and Inclusion for the Bagwell College of Education at Kennesaw State University. Her research lies at the intersection of teaching mathematics for social justice and supporting teachers to develop the political knowledge needed to dismantle systemic racism and oppression in mathematics. Prior to her career in higher education, she taught high school mathematics in Title I schools.

PLENARY A

There is Promise in Our Journeys: How Choosing to Pause, Ponder, and Pursue, Grants us the Power to Seek Equity and Justice for Historically Excluded Students

Many teachers of mathematics choose to enter the profession because of a love of the content and the "success" we experienced in school-based mathematics. This was indeed my motivation for majoring in mathematics during undergrad and for pursuing graduate studies in mathematics education. When I started my career as a high school mathematics teacher, I felt prepared and excited to offer my students experiences that were similar to mine as a learner. But upon entering schools as a new teacher, I was met with many challenges such as a) ever-changing standards, b) a barrage of technology tools positioned as the holy grail, c) a focus on testing and data, d) deficit thinking, e) tracking masked as homogeneous grouping and "setting students up for success," and f) problematic labels for students (e.g., low, high, and bubble kids) among other things. And while my programs taught me how to use a range of grouping strategies, incorporate technology, and use formative assessment, I was grossly unprepared to name, explain, or change most of what I faced in my school and classroom. In this session, I will share several stories about cultural collisions, or choques, I faced in my practice that caused me to question my preparation, the system of schooling, and the purpose of teaching mathematics. I will also share how choosing to pause, ponder, and pursue led to me finding my power and creating space for my understanding of equity and justice to evolve. This reflection, which happened individually and in community, led to my understanding of the imperative to move beyond "using best practices to deliver content" to using mathematics as a tool for liberation, justice, and anti-racism. I end by offering reflection questions that seminar attendees can carry with them as they attend sessions and use as a guide to shape their own teaching transformation.

about Cristina Navarro-Aguirre



Cristina Navarro-Aguirre is the Associate Director of elementary mathematics at the UCLA Mathematics Project with a background in teaching Bilingual and Dual Language interdisciplinary education. Her professional experience includes coaching and facilitation in literacy, mathematics, and science. Her post - graduate work at UCLA and USC

were centered on mathematics and language development. Collaborating with culturally and linguistically diverse communities has led her to continue to reflect and study the intersection of mathematics and language development.

CONCURRENT 3 AND 5

Exploring Students' Lived Experiences and How Mathematics Can Be Used as a Tool for Change
Leading session with Kristine Ho

What does it mean to teach for equity and what does it look like to reach ALL students in the classroom? Come join us as we explore the lived experience of a migrant farm worker, Lorena Hernandez, in Central California. Together we will use Mathematics to understand the culture, assets, and inequities salient in her life and her surrounding communities. Our session will focus on unpacking the process of starting with student's lives as a window to equity and meaningful change. As a group, we will examine resources, detail questions and share how to authentically hear from students and their families. All the while, positioning their lives as a vehicle for change in order to make space for learning and transformation. As questions emerge around equity and quality of life, we will use Mathematics to help us understand Lorena's narrative at a deeper level. This process will give insight into the generative practices of positioning student voice and experiences at the center of teaching and learning of Mathematics. As we make meaning and develop deeper insight into Lorena's life, we will also take time to reflect and discover our own equity lens and world views. Creating a space to pause, explore systemic structures of inequity and process the impacts of these structures on students' lives. Our collective analysis will help us continue down the path towards more equitable and innovative teaching practices that engage ALL students, particularly, Black, Indigenous, Persons of Color students and students of poverty. Examples from Grades K-12.

about Priscila Pereira

Priscila Pereira is the director of the Racial Justice in Early Math (RJEM) Project and PhD Candidate in Mathematics and Science Education with a concentration in Gender & Women's Studies at the University of Illinois Chicago. Grounded on sociopolitical perspectives and Black feminist methodologies, Priscila's research focuses on the experiences of Black girls and women in math education.

CONCURRENT 2 AND 6

Identity as Opportunity: Using Early Math Teaching to Move toward Equity
Leading session with Jennifer McCray

Math identities are multifaceted and linked to other important identities that children develop. Experiences at the very earliest years of children's education help to shape these identities. Though early educators (birth – kindergarten) strive to create truly equitable opportunities for all children to learn, they still bring implicit biases to their practice (as we all do). Each of us must commit to consciously and deliberately examining our work with young children, striving to become aware of how bias affects our practice, and shifting to create more opportunities for student excellence in math learning. As a group, participants will explore the associations and beliefs we bring to our work with students from different backgrounds, thinking about how these associations and beliefs connect to both race and math. We will use video case studies of young children doing math to brainstorm new

thinking and instructional approaches. Finally, we will ask each participant to critically reflect on their early math teaching and commit to ensuring that children of color, children who live in poverty, and marginalized children have real opportunities to develop positive math identities. Examples from PK-Grade 2.

about Kathy Pfaendler

Kathy Pfaendler is a founding member of Teachers Development Group and a TDG Board Member, who also serves the organization as a professional development specialist and coach. Her current work is coordinating the development of modules and facilitating professional learning for teachers, coaches, and school leaders to support their work in delivering ambitious and equitable mathematics instruction. The Ambitious Teaching Modules contribute to implementation of heterogeneous groups in the "2+1" model for all Oregon students in their first years of high school mathematics.

CONCURRENT 2 AND 6

Navigating the Complexities of Detracking when Engineering Equitable Systems in Math
Leading session with Maddy Ahearn, Mark Freed, and Cathy Martin

This panel will address the efforts that are underway in Oregon to reimagine high school mathematics through instituting a 2+1 course model and the implications this model has for detracking efforts across the state. The 2+1 course model describes a core two-credit course sequence for all students that opens up possibilities for a specialized eleventh grade mathematics course that aligns with students' college and career plans. Flexibility created within the 2+1 model takes pressure off tracking students into accelerated tracks in middle school and normalizes the first high school course to be taken in grade 9. Cathy Martin, former Associate Chief of Academics for Denver Public Schools, offers perspectives on why detracking high school mathematics is an urgent and critical need and situates Oregon's initiatives in reform efforts nationwide. Mark Freed, Math Education Specialist, Oregon Department of Education, provides an overview of Oregon's reform efforts in high school mathematics and explains the state's strategies for implementing detracking over the next several years. Maddy Ahearn, Math Specialist, Lane Education Service District, describes her collaborative work with other statewide math leaders, and school district administrators and teachers to support the design and development of high school math content and the implementation of ambitious math instruction. Kathy Pfaendler, PD Math Specialist, Teachers Development Group, shares goals, activities and resources that are a part of professional learning Modules being created to contribute to statewide implementation efforts of ambitious math instruction. Examples from High School.

about Kristen Reed

Kristen Reed, Managing Project Director at the Education Development Center, works closely with teachers and families to design learning experiences for children that explore the richness and beauty of mathematics. Her work leverages school-home partnerships to expand access to mathematics learning opportunities for children from

communities traditionally under-represented in STEM fields. She leads studies that iteratively design and test innovative, evidence-based resources for teachers, families, and children with a particular focus on puzzles and game-based materials that support student agency and voice.

CONCURRENT 3 AND 5

Adding Family Math into the Equation: Supporting Learning Opportunities at Home and School
Leading session with Shakesha Thompson

How can we create a connected ecosystem of mathematics learning across school and home boundaries that is inclusive and equitable? In this session, participants will discuss ways to create meaningful partnerships between school, family, and community that open opportunities for young children to not only learn math, but also see math, play with math, and experience math every day. Teachers and families alike share the common goal of wanting children to succeed developmentally, socially, and academically. Unfortunately, there is often a disconnect between home and school, especially among teachers who find it difficult to relate to many of their students' families and among parents who feel alienated from the school community. We believe that bridging this divide is one key to shifting math education's approach from supporting "all children" to an approach that centers the needs of marginalized students including students of color, linguistically minoritized students, and students living in poverty. In this presentation, focused on early childhood, participants will consider the mathematical assets that families bring to the school community, barriers that make it harder for families to be engaged, and what schools can do to increase that engagement. Together, we will watch and discuss videos from a Family Math Learning Community in a highly diverse community that brings together Head Start preschool teachers, family engagement specialists, home visitors, family playgroup facilitators, and librarians to create an ecosystem of mathematics learning. Participants will reflect on ways they can build a more connected ecosystem of learning in their school and local community. Examples from PK-Grade 3.

about Paolo Tan

Paulo Tan is an Assistant Professor of STEM Education in the Department of Educator Preparation & Leadership at the University of Missouri, St. Louis. His research focuses on advancing intersectional justice in and through mathematics education centering disabilities. This includes analyzing the experiences of multi-marginalized knowers and doers of mathematics along their intersectional identities and oppressive forces. He served as a public school middle-secondary mathematics teacher for ten years in culturally and linguistically diverse settings in Kansas and Indiana.

CONCURRENT 1 AND 4

Humanizing Disabilities in Mathematics Education: Going Beyond Inclusion

Historically, disabled students have been dehumanized in education. Typically, they are only offered access to low-rigor mathematics learning that emphasizes rote procedures and narrow skills and are segregated physically and socially from their non-disabled peers. Coupled with the fact that students of color are overrepresented in special education, mathematics educators are crucial to the humanization of multi-

marginalized students. In this presentation, Dr. Tan offers mathematics educators ways to consider, apply, and advance tenets of rightful presence in humanizing mathematics education for and with disabled students. In this session, participants will (1) examine the role of disability (and ableism) in their own life and in society [participants will engage in a turn-and-share activity on their own experiences, followed by large group share out so that participants can further grapple with the concept of ableism], (2) consider the role of disability (and ableism) in schools in the context of inclusion efforts [in small groups, participants will brainstorm ideas on what defines inclusion pertaining to disability, what are the goals of inclusion, and identify some of the major challenges to inclusion efforts and how those challenges relate to ableism], (3) make sense of recent data on inclusion and the problematic nature of inclusion in mathematics education for multi-marginalized students [participants will engage in a notice and wonder activity in pairs while making connections to ableism]; (4) develop a conceptual understanding of rightful presence as opposed to traditional notions of inclusion; and (5) create action plans based on critical reflection and collective dreaming [participants will engage in a shared journaling activity]. Examples from Grades K-12.

about Shakesha Thompson

Shakesha Thompson is a Curriculum and Instruction Associate at the Education Development Center. She has over 15 years of experience in early childhood education (ECE), program management, coaching, and training. She is passionate about the power of early education to open doors to opportunities. In her work, she prioritizes the learning needs of students of color, linguistically minoritized students, students in poverty and students who experience trauma. Thompson is fluent in Portuguese and English and holds a BA in Early Education and an MEd in Educational Leadership and Management.

Adding Family Math into the Equation: Supporting Learning Opportunities at Home and School
Leading session with Kristen Reed

How can we create a connected ecosystem of mathematics learning across school and home boundaries that is inclusive and equitable? In this session, participants will discuss ways to create meaningful partnerships between school, family, and community that open opportunities for young children to not only learn math, but also see math, play with math, and experience math every day. Teachers and families alike share the common goal of wanting children to succeed developmentally, socially, and academically. Unfortunately, there is often a disconnect between home and school, especially among teachers who find it difficult to relate to many of their students' families and among parents who feel alienated from the school community. We believe that bridging this divide is one key to shifting math education's approach from supporting "all children" to an approach that centers the needs of marginalized students including students of color, linguistically minoritized students, and students living in poverty. In this presentation, focused on early childhood, participants will consider the mathematical assets that families bring to the school community, barriers that make it harder for families to be engaged, and what schools can do to increase that engagement. Together, we will watch and discuss videos from a Family Math Learning Community in a highly diverse community that brings together Head Start preschool teachers, family engagement specialists, home visitors, family playgroup facilitators, and librarians to create an ecosystem of mathematics learning. Participants will reflect on ways they can build a more connected ecosystem of learning in their school and local community. Examples from PK-Grade 3.

about Richard Velasco

Richard Velasco is an assistant professor of mathematics education at the University of Oklahoma. He earned his Ph.D. in Curriculum Instruction from Texas Tech University in Lubbock, Texas. Prior to his career in higher education, Richard was a secondary math teacher for twelve years in Guåhan—where he was born and raised—and Washington state. His current research focus seeks to redress sociopolitical issues in mathematics education, particularly for historically and systemically marginalized student populations.

CONCURRENT 2 AND 6

Mapping Our Practice Towards Rehumanizing Mathematics

In the edited book, Rehumanizing Mathematics for Black, Indigenous, and Latinx Students, Dr. Rochelle Gutiérrez advances a framework of rehumanizing mathematics (RM) that positions students from historically and systemically marginalized groups as creators, and not just doers, of mathematics. RM is an ongoing endeavor to counter predominant narratives in mathematics teaching and learning (e.g., mathematical smartness is exemplified in individuals who consistently complete mathematics problems quickly and accurately) by interrogating who belongs to and succeeds in the world of mathematics. RM seeks to challenge supremacy and power to re-position those whose experiences have been dehumanized by systems and groups that claim to be the authorities of mathematics. In this session, I will provide a brief explanation on RM and its eight dimensions and how I used the framework as a lens for my ongoing research with elementary preservice teachers and in-service teachers in Guåhan and the Commonwealth of the Northern Mariana Islands. Then, participants will be invited to engage in deep critical discussion by identifying math teaching practices that are touted to support "all children," but are actually dehumanizing for students in historically and systemically marginalized groups. Recognizing what we as math educators deem to be dehumanizing is the first step to RM. Finally, participants will engage in a RM mapping exercise as a plan of action of how they may rehumanize mathematics, especially the aspects they noted as dehumanizing, as a resource to use in their classrooms and districts. Examples from Elementary.

about Jared Webb

Jared Webb is an assistant professor of mathematics education at North Carolina A&T State University, our nation's largest Historically Black College and University (HBCU). His research and practice focus on bringing together investigations of traditional notions of mathematics teacher learning research with considerations of the ways math education might be reconceptualized so that Black learners to flourish in their humanity and brilliance (Martin, 2018).

CONCURRENT 1 AND 4

Reconstructing Mathematics Education to Promote Liberation, Flourishing, and Brilliance

In this session, we will center the words of Dr. Danny Martin, who "defines Black liberatory mathematics education as the framing and practice of math education that allows Black learners to flourish in their humanity and brilliance" (Martin, 2018). In doing so, participants will explore ways they might reconstruct their mathematics education to center the humanity of their students. We will deconstruct our current visions of mathematics teaching and reconstruct these visions through the lenses of liberation, flourishing, and brilliance. We will then explore the instructional triangle (teachers, students, tasks) through these lenses and engage with current research findings of Black undergraduate preservice teachers' definitions and characteristics of liberation, flourishing, and brilliance and how they impact their visions of mathematics teaching. Finally, participants will reconsider their own visions of mathematics teaching and how they might reconstruct their personal and collective vision and practice so that learners can flourish in their humanity and brilliance. Examples from Elementary.