



creating balance in an unjust world



University High School
Los Angeles, CA

conference on
math education &
social justice

Welcome

Welcome to the sixth conference on mathematics education and social justice. The Creating Balance in an Unjust World conference brings together educators, parents, students, activists and community members to explore the connections between math education and social justice.

Through school visits, workshops, and featured speakers we hope to strengthen and extend the network of educators who implement social justice curricula, promote the use of alternative assessments, and explore culturally relevant and accessible math programs at schools and community groups across the country.

This conference exists because of your continued work in the field of mathematics education at schools, universities and in local communities. Through your struggles in sustaining and campaigning for educational justice, we continue to strengthen our network.

Your participation and contributions help to keep the conference accessible for educator and youth participants. Thank you for participating in this conference and joining us in this journey.

This conference is primarily organized by current and former public school teachers. We are open to having other voices and people participate in the planning of future conferences.

Schedule

Friday, January 17th

All Day School Visits

6:00 PM Networking Event

Saturday, January 18th

8:00 - 9:00 AM Registration and Breakfast

9:00 - 10:00 AM Keynote: Jane Margolis

10:10 - 11:25 PM Workshop Session 1

11:35 - 12:35 PM Lunch (Cafeteria)

12:45 - 2:00 PM Workshop Session 2

2:10 - 3:30 PM Workshop Session 3

3:40 - 4:55 PM Panel

Sunday, January 19th

9:30 - 10:30 AM Networking Breakfast

10:40 - 11:55 AM Workshop Session 4

12:05 - 1:05 PM Working Meetings, Lesson
Planning Space, Networking
(Lunch provided)

Saturday, January 18th

Workshop Session 1 (10:10-11:25 AM)

Modeling Home: What's Your Material World? (part of the Rethinking Mathematics strand)	Preservice Teachers in Action: Teaching Elementary Students Mathematics Using Social Justice Contexts	Reflections on Exploring Computer Science and Creating New Futures for Historically Marginalized Students	The Beauty of Mayan Numbers: A lesson that relevant culturally and rigorous mathematically
Room A	Room B	Room C	Room D
Attending to Student Motivation Through Critical Practice to Improve Students' Algebra Learning	They can't learn OUR math.....Teaching the African American Learner	Youth Citizen Design: A Social Justice Pedagogy for Teaching Design Thinking	
Room E	Room F	Room G	

Workshop Session 2 (12:45-2:00 PM)

LottaFacts: A critical analysis of the state lottery through mathematics (part of the Rethinking Mathematics strand)	Making the Argument for Centering Critical Pedagogy in Socially Just STEM Education for middle school, Urban African American Males	Bridging the Technology Divide: Free Tech Tools for Engaging Social Justice Math Lessons	People's Mathematics
Room A	Room B	Room C	Room D
Mathematics Serving the Community: Empowering Community Organizations with Youth Research	Mathematical Literacy or Assessment of Mathematical Literacy: The Dichotomy Between Mathematics Assessment and Social Stratification	Error Analysis: Restorative Assessments For Reflection & Learning	
Room E	Room F	Room G	

Workshop Session 3 (2:10-3:30 PM)			
Transparency of Water (part of the Rethinking Mathematics strand)		Technology and Youth Participatory Action Research	From User to Maker: Inspiring Diversity in Technical Careers and Engineering
Room A		Room C	Room D
Techniques that build community, utilize writing, embed reflection and the search for errors in the mathematics classroom	Supporting Mathematical Reasoning and Literacy Using Graph Stories	Green Geometry: Designing a Sustainable Community	
Room E	Room F	Room G	

Sunday, January 19th			
Workshop Session 4 (10:40-11:55 AM)			
Using Rethinking Mathematics in the Classroom: Teachers' Experiences and Voices PANEL (part of the Rethinking Mathematics strand)	That's not fair! : Teaching fractions to preschoolers through fairness and justice	The Oscars, Video Games, and Twitter: Critical Media Literacy and Mathematics	Reparations: A Cultural Context for Math Instruction
Room A	Room B	Room C	Room D
Social Justice and Community Action Through Math	Mathematics, Equity, and Community		
Room E	Room F		

Keynote Speaker



Jane Margolis

Jane Margolis, UCLA Senior Researcher, studies disparities in learning opportunities that fall according to race, gender, and socio-economics. She focuses on computer science education as an indicator and window into how inequality is produced in this country. Her research has resulted in national partnerships with K-12 school districts through the innovative high school program, Exploring Computer Science, that is committed to broadening participation in computing. Margolis is the lead author of two award-winning books: *Unlocking the Clubhouse: Women in Computing* (MIT Press, 2002), and *Stuck in the Shallow End: Education Race, and Computing* (MIT Press, 2008).

Featured Panelists



Kyndall Brown

Kyndall Brown over 28 years of experience in mathematics education. He was a secondary mathematics teacher in LAUSD for 13 years, teaching at both the middle and high school levels. He has been a professional development provider for the past 19 years, serving as a mathematics resource teacher for the Los Angeles Systemic Initiative in LAUSD, and as mathematics teacher consultant for and director of the UCLA Mathematics Project (UCLAMP). He is currently the executive director of the California Mathematics Project.

Kyndall Brown holds a bachelor's degree in mathematics from UC Irvine, masters degrees in computer-based education and mathematics education from CSU Dominguez Hills, and a Ph.D. from UCLA's Graduate School of Education and Information Studies. He also has a single subject credential to teach mathematics in the state of California.



Frank Divinagracia

Frank is an Algebra 2 teacher at Da Vinci Science in Hawthorne, CA.. He is a UCLA Teacher Education graduate and was at Leuzinger High School in Lawndale for his first thirteen years of teaching before his last five years at Da Vinci. He is a Nationally Board Certified math teacher, former department chair, lots of other good things, and loves talking about education. Whenever he feels he has learned a great deal about education, schools, etc., then his

eyes somehow, someway are opened up to even greater things.

Featured Panelists (cont'd)



Mary Johnson

I have had the privilege of working with pre-service teachers and novice teachers as a co-teacher within the Urban Parent Teacher Education Collaborative (UPTEC) at Pepperdine University. The UPTEC program is a teacher education program designed to better prepare teachers for urban schools by including urban parents and community leaders in the pre-service process. Parents are an integral part of the UPTEC program and, similarly, I have worked with multiple teacher education programs across Southern California (e.g. Cal State University of Northridge, Cal State Los Angeles, University of California, Los Angeles, Loyola Marymount University).



Caline Khavarani

Caline Khavarani Smith teaches Algebra and Geometry at Da Vinci Science High School. Her teaching experience includes five years at Hawthorne High School, two years at Ithaca High School (in upstate New York), and one year in El Paso, teaching community college and tutoring at the Juvenile Detention Center. Caline earned her M.Ed. from UCLA's Graduate School of Education and double majored in math and French as an undergraduate at UCLA. She frequently teaches professional development workshops for UCLA's Curtis Center and in the past has led workshops for her school districts and

Cornell University.

Featured Panelists (cont'd)

Marty Romero



Marty's professional experiences include being a mathematics educator for urban middle and high schools in Los Angeles 16 years. He has also been a mathematics instructional coach for Los Angeles Unified School District and a local and regional technology trainer for Texas Instruments. He currently is a fourth year Ph.D. candidate in the Urban Schooling program at UCLA and works for the Teacher's Education Program (TEP), UCLA Math Project, and the UCLA Civil

Rights Project. Marty's research interests focus on the teaching and learning of mathematics and how teachers can be supported to develop equity-minded attitudes and practices in their learning environments.

Lisa Usher-Staats



Devoted past 30 years to advance K-12 mathematics equity & excellence: currently, Secondary mathematics coordinator, LAUSD; member, Region XI California Math Network; President, CMC South (Past President in 2014). Initiated mathematics education services for Migrant Education, Juvenile Court schools, African-American students, special needs students, and English learners and standard English learners throughout career. Co-developed a 'Cultural Proficiency Continuum' for mathematics; CMC, NCTM, CABE presenter.



Workshop Session 1

The Beauty of Mayan Numbers: A lesson that relevant culturally and rigorous mathematically

Charles Snyder, chsnnyder36@gmail.com

City Arts and Tech High School

Room D

This interactive session will begin by briefly introducing ancient number systems including those used in Roman and Babylonian cultures. The idea of zero as a conceptual breakthrough will then turn the session to Mayan numbers and a sample lesson (materials included) that engages students of all levels of middle, high school and higher education will be featured. It will conclude with a discussion of how contemporary number systems that are alternative to base-10 can be used to strengthen numeracy and algebraic representation skills.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Professors, Undergraduate Students, Graduate Students

Reflections on Exploring Computer Science and Creating New Futures for Historically Marginalized Students

Clifford Lee, chl3@stmarys-ca.edu

Cueponcaxochitl D. Moreno Sandoval, cueponcaxochitl@asu.edu

Jean Ryoo, jjryoo@gmail.com

Odetta DeConge' Board, oaboard@gmail.com

St. Mary's College of California

Room C

Building on Jane Margolis's keynote presentation on equity and Computer Science, this panel brings together current Exploring Computer Science (ECS) teachers, coaches, students and former students from LAUSD. They will complement Margolis's theoretical and empirical research with concrete examples and reflections from their practice. Audience members will have an opportunity to learn about the challenges and successes from the perspectives of those that taught the lessons, as well as those that receive it.

Intended Audience: Middle School Teachers, High School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students

Workshop Session 1 (cont'd)

Attending to Student Motivation Through Critical Practice to Improve Students' Algebra Learning

Rahila Simzar, M.Ed., M.A. (Doctoral student) rmunshi@uci.edu

University of California, Irvine

Room E

How can educators apply motivationally adaptive pedagogy to their teaching practice? Is the intersection of motivation research and critical practice the key to increasing students' equity in access and success in the mathematics gatekeeper course, Algebra? This workshop will provide teachers with the foundational knowledge of motivation research and motivationally adaptive teaching tools that are grounded in critical practice and social justice agendas to increase student success in Algebra. Attendees will leave with the knowledge of contemporary motivational frameworks, an understanding of national movement and progress around Algebra policy, and a toolbox for creating critically inspired motivationally adaptive math classrooms!

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Undergraduate Students, Graduate Students

Modeling Home: What's Your Material World? (part of the Rethinking Mathematics strand)

Jana Dean, jdean@reachone.com

Jefferson Middle School

Room A

Middle schoolers in most schools feel crowded most of the time. Learn to connect middle schoolers' experience with tight spaces to indoor living conditions around the world. By building scale model homes according to a random chance of birth, students reason in three-dimensions, practice important middle school ideas in ratio and measurement and think critically about what is a fair share of the earth's resources. You will practice building and leave with the know-how and hand-outs to enact this project with your students. This session is based on a Rethinking Mathematics 2 article written by facilitator Jana Dean.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers

Workshop Session 1 (cont'd)

They can't learn OUR math.....Teaching the African American Learner

Michelle Cody, michellealexandria.cody@gmail.com

Erin Hartfield, erinh393@gmail.com

Aptos Middle School/University of San Francisco

Room F

In this session, we will talk about the current mathematical climate for young African American students, the perceptions of the new racial identities (black students can't) and how that affects the student's ability to perform. We will give session participants strategies for redefining student relationships with math as well as provide examples of culturally responsive lessons.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Parents, Community Activists, Graduate Students

Preservice Teachers in Action: Teaching Elementary Students Mathematics Using Social Justice Contexts

Joan Kwako, jkwako@d.umn.edu

James Clayton, jclayton@saintpeters.edu

University of Minnesota Duluth

Room B

In this session we will share the rewards and challenges preservice teachers (PSTs) faced when implementing social justice mathematics lessons in their elementary classrooms. Through videos of PSTs teaching in third and fifth grade classrooms, participants will see how the PSTs overcame what they perceived were the barriers to using contexts such as racial profiling, poverty, access to clean water, and rBGH in milk when teaching mathematics. In addition, elementary PSTs at a significantly different college share their own views of the videos and how they would need to adapt the lessons to fit their own diverse groups of students.

Intended Audience: Elementary Teachers, Middle School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students

Workshop Session 1 (cont'd)

Youth Citizen Design: A Social Justice Pedagogy for Teaching Design Thinking

Sepehr Vakil, sepehr.vakil@gmail.com

Sarah Van Wart, Tapan Parikh, vanwars@gmail.com, parikh@berkeley.edu
UC Berkeley/REALM

Room G

In this workshop we will present a new pedagogical framework, Youth Citizen Design, for teaching design thinking that encourages social justice and civic engagement. Design pedagogies are usually rooted in cognitive theories of design thinking. Youth Citizen Design offers a framework for teaching that is rooted in a sociocultural and situated understanding of design. Additionally, Youth Citizen Design centers civic engagement and technology within the design process. This workshop will engage teachers and students in design activity that is part of the pedagogical framework, provoking discussion and brainstorming around teaching at the intersection of design, technology, and civic engagement.

Intended Audience: High School Teachers, Youth, Community Activists, Graduate Students



Workshop Session 2

Mathematics Serving the Community: Empowering Community Organizations with Youth Research

Brad Kohl, brad.kohl@breckschool.org

Amanda Zeidner, Leslie Hayes, Emily Colwell

Room E

Community-Based Research in Applied Mathematics empowers promising students, passionate for service, to use their math skills as pro bono mathematicians in a research initiative for nonprofit clients. As they cultivate a new lens for participants, student researchers will share their experiences and lead participants through activities and assessments they have created. Participants, with student leaders, will explore ways to create community-based research opportunities that support their own program needs, stakeholders, and core beliefs.

Intended Audience: High School Teachers, Youth, Community Activists, Professors, Undergraduate Students, Graduate Students

People's Mathematics

Swapna Mukhopadhyay, swapna@pdx.edu

Brian Greer, brian1060ne@yahoo.com

Graduate School of Education, Portland State University

Room D

We will begin by introducing the concept of ethnomathematics, the mathematics of activities such as counting, locating, measuring, playing, designing, and explaining found in all cultures. Next we will present a framework for analyzing forms of mathematical activity, and generate and discuss examples for its the four categories. Then, drawing on the experience of the teachers present, we will consider how to enhance school mathematics with the ethnomathematical perspective, bearing in mind constraints on teacher autonomy, and how mathematics may be a tool for examining issues of importance to children and their communities, and the global citizens they will become.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Community Activists, Professors, Undergraduate Students, Graduate Students

Workshop Session 2 (cont'd)

Mathematical Literacy or Assessment of Mathematical Literacy: The Dichotomy Between Mathematics Assessment and Social Stratification

Patrice Parker, pparker12@student.gsu.edu

Nathan Wisdom, nwisdom1@student.gsu.edu, Kori Maxwell,

kmaxwell7@student.gsu.edu, Jason Hunter, jhunter5@student.gsu.edu,

Alanna Johnson, ajohnson185@student.gsu.edu, Nathalie Smalls,

Nsmalls1@student.gsu.edu

Georgia State University

Room F

Assessment is a complex construct that has been explored in depth by many scholars. However, it is still a primary gatekeeper to success in many areas including mathematics. This workshop will address the question “how can assessment be designed to effectively evaluate learners’ understanding of mathematics?” The participants of this session will engage in a critical conversation around definitions of knowledge, knowing, understanding and learning. Ultimately, a working framework of assessment will be created during this session.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students

Error Analysis: Restorative Assessments For Reflection & Learning

Lucine Madatovian, lmadatovian@sjhumanitas.org

Social Justice Humanitas Academy

Room G

Mathematics is cumulative by nature and if students don't grasp the early concepts, they will continue to struggle through the duration of the course. By providing an incentive (the opportunity to earn points back) and scaffolded questions designed to probe at misunderstandings, I use the process of error analysis to get students to reflect on their mistakes and learn from them, rather than casting their tests aside. Come learn about the process, hear first-hand from students how much they value the process and receive sample assessments and questions to help you get started on the process in your own classroom.

Intended Audience: Middle School Teachers, High School Teachers, Undergraduate Students, Graduate Students

Workshop Session 2 (cont'd)

Bridging the Technology Divide: Free Tech Tools for Engaging Social Justice Math Lessons

Jeady Vilchis, Jeadiv@gmail.com

Room C

Students from our communities often find it difficult to engage in math lessons and teachers find it difficult to use the technology accessible to them. Given these pressing issues, this workshop facilitated by female Year Up Bay Area students and their IT instructor will demonstrate engaging tech tools to use in your class. As of 2011 the National Center for Educational Statistics found the ratio of connected computers to students in urban classes to be 3:1. We will present math lessons using concrete data that reveal social justice inequalities in our communities via proven (and free) online tools. Some of the tools will be: Google Drive Spreadsheet and Forms, Poll Everywhere, Video Games/Gamification, and even how to create an interactive whiteboard for less than \$50!

Intended Audience: Classroom teachers, parents, students*

**Teachers are highly encouraged to bring their own laptop or tablet.*

LottaFacts: A critical analysis of the state lottery through mathematics (part of the Rethinking Mathematics strand)

Vivian Lim, viv.lim@gmail.com

Alex Cristando, Soledad Fernandez, Phiola McFarlane, Lauren Shookhoff, Mat Sullivan, acristando@gmail.com, sfernandez@newheightsacademy.org, bethechangeuwantoc@gmail.com, Lauren.shookhoff@gmail.com, matsull@gmail.com

Room A

City Digits, Brooklyn College of the City University of New York

How does the lottery work? What is the probability of winning a prize? Is the lottery a regressive tax? In this session, high school mathematics teachers and students lead participants in sampling a place-based mathematics curriculum that focuses on these and other questions about the lottery. Participants will model aspects of the combinatorics involved in analyzing lottery games with manipulatives and analyze interactive digital maps that relate to the lottery. Presenters will showcase products created by high school students and facilitate a discussion about how this type of curriculum presents opportunities for students to think critically with mathematics.

Intended Audience: Middle School Teachers, High School Teachers, Youth, Professors, Undergraduate Students, Graduate Students

Workshop Session 2 (cont'd)

Making the Argument for Centering Critical Pedagogy in Socially Just STEM Education for middle school, Urban African American Males

Jeremiah Sims, M.A., (PhD Candidate)

Sepehr Vakil, M.S., (Doctoral Student)

Kenyatta Weathersby, M.S.

Dr. Allison Scott, PhD

Vipul Gupta, M.Sc.

Room B

We want to discuss the potentially paradigm-shifting ways in which our out of school program, the Saturday Math and Science Honors Prep Academy (SMASH: Prep) has, arguably, created inroads and vistas for urban African American middle school males into STEM efficacy and the development of a positive STEM identity by alloying critical pedagogy, critical race theory, and emancipatory learning within and through a social justice-oriented, rigorous STEM curriculum. We are fledgling urban educators, for the most part; however, we feel like we may be on to something. The curricular approach that impels SMASH: Prep has resulted in our scholars beginning to contextual STEM. That is to say, they have begun appropriate and applying science, technology, engineering and math for issues that they identify as germane to their lived experiences. The middle school African American males “scholars” that attend SMASH: Prep have demonstrated, in a number of ways, that a rigorous STEM curriculum, predicated on critical pedagogy, can help them re-envision their available identities not only as STEM practitioners, but more importantly as people who apply STEM for socially just local, National and potentially global improvement.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students



Workshop Session 3

Green Geometry: Designing a Sustainable Community

Susan Melgarejo-Torales, mathbruin@gmail.com

Jose Antonio Orozo, jaomath@gmail.com

Room G

In this session I will share a unit designed and taught in Highland Park CA. This unit culminates in a Geometry project that incorporates environmentally friendly strategies and information about sustainability and regeneration. We will also learn how to use Google Sketchup Software, Google Forms and GIS in the classroom. Finally, we will incorporate the use of "Asset Based Community Mapping" and "Needs Assessment" methods in the project. #lessonplan #handouts #technology

Intended Audience: High School Teachers

From User to Maker: Inspiring Diversity in Technical Careers and Engineering

Michael Conway, mconway5@gmail.com

Digital Remix Genius

Room D

How can we increase the quantity and diversity of students who achieve technical degrees, especially in engineering? This workshop will use a tuning protocol to present and solicit feedback on one approach to addressing the question. Digital Remix Genius (DRG) is a project in development that leverages young digital music producers' passion for creativity to help them become the next generation of technological innovators. DRG aims to inspire these artists to move from technology users to makers by engaging them in wiring and programming their own synthesizers. Workshop participants will help design a movement for remixing the field of engineering.

Intended Audience: Middle School Teachers, High School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students, Musicians, DIY electronics enthusiasts, programmers, lyricists

Workshop Session 3 (cont'd)

Techniques that build community, utilize writing, embed reflection and the search for errors in the mathematics classroom

Marla Mattenson, mattenson@gmail.com

University High School, LAUSD

Room E

Community is essential in the CCSS classroom. Students learn how to share, trust each other with structured feedback and engage in a collaboration of finding "errors". Learn innovative methods for homework, classwork, and assessments that engage students in finding their own errors, reflecting and thinking critically about their work and the work of other students. Understand the rationale behind each method, the connection to the 8 Mathematical Practices from the Common Core, and how they give students multiple opportunities for comprehension and success. Students reflect on their own mistakes and master the math content with "2-Day Exams".

Intended Audience: Middle School Teachers, High School Teachers, Parents

Transparency of Water

(part of the Rethinking Mathematics strand)

Selene Gonzalez-Carrillo, selenorama@gmail.com

TERC

Room A

Water, its costs and quality and potential for profit-making are measured in countless ways. But these calculations are often invisible as we go about our daily lives. In this workshop, we share how we delved into attitudes about tap water, the real costs of bottled water, and the potential for using municipal water quality reports. Join us as we share activities that function as a jumping off point for learning science, math, and the politics of water. The presenter, organizer, and educator Gonzalez-Carrillo will speak to her experience scaffolding understanding for a diverse group of learners.

Intended Audience: Elementary Teachers, Middle School Teachers, Youth, Parents, Community Activists, Afterschool workers

Workshop Session 3 (cont'd)

Technology and Youth Participatory Action Research

Mary Candace Full, marycandacefull@gmail.com

Jamie Gravell, jamiejosephson@gmail.com

UCLA

Student facilitators: Humanitas Academy of Art and Technology High School

Room C

With the imminent implementation of the nationwide Common Core State Standards and the utilization of technology to support the standards, it is essential that we ask: What do the youth have to say? In this workshop, high school students from the East side of Los Angeles will discuss their experiences with and progress on original, quantitative research on school technology. Then, the youth will facilitate a discussion on centering young people as critical voices in technology reform.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students

Supporting Mathematical Reasoning and Literacy Using Graph Stories

Sunanda Kushon, sunandakushon@gmail.com

Jaime Park, japark@gseis.ucla.edu

UCLA TEP

Room F

The new mathematics standards require teachers to teach students concepts and further apply these concepts in real world situations. Graph stories can be a wonderful way to teach mathematical thinking and academic language to students. In this session, educators will gain insights into how they may use graph stories with k-12 students with a wide range of English language proficiency levels.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students



Workshop Session 4

The Oscars, Video Games, and Twitter: Critical Media Literacy and Mathematics

Marty Romero, mart2718r@gmail.com

UCLA

Room C

This workshop will present and discuss with participants how the tenets of Critical Media Literacy can connect with classroom mathematics. We will explore how what it means to do mathematics can be linked with media, technology, and popular culture by critically questioning different types of media representations and creating alternative media messages. Classroom activities will be presented but time will be allocated for us to brainstorm potential projects ideas that connect the mathematics you teach to Critical Media Literacy.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Youth, Professors, Undergraduate Students, Graduate Students

That's not fair! : Teaching fractions to preschoolers through fairness and justice

Theodore Chao, teddy.chao@gmail.com

Harvard University

Room B

Young children intuitively understand fairness, especially in equal sharing problems such as, "You and 3 friends are given 6 brownies to share. How many brownies does each child get so everyone gets the same amount?"

This workshop, for parents and preschool/elementary teachers, shows how preschool children, aged 4-6, are capable of solving equal sharing problems involving fairness and injustice. We show video of children engaging in sophisticated fractional thinking revolving around, "What is fair?"

Participants will learn how to introduce equal sharing problems involving fairness to children and connecting to our emerging research.

Intended Audience: Elementary Teachers, Parents, Community Activists, Professors, Early Childhood Teachers

Workshop Session 4 (cont'd)

Using Rethinking Mathematics in the Classroom: Teachers' Experiences and Voices PANEL

(part of the Rethinking Mathematics strand)

Rico Gutstein, gutsteinrico@earthlink.net

University of Illinois at Chicago

Room A

Teachers who have taught Rethinking Mathematics in K-12 schools will share their experiences, and the possibilities and challenges of teaching—and learning how to—mathematics for social justice.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students

Mathematics, Equity, and Community

Cathery Yeh, catheryy@uci.edu

Mark Ellis, Susanna Meza, Susanna Meza, Veronica Lopez, Juan Murillo, mellis@exchange.fullerton.edu, szmsuez@gmail.com, murillj1@uci.edu,

anrahadiaz@sbcglobal.net

University of California, Irvine

Room F

The CCSSM transition has brought about myriad discussions and decisions about curriculum, teaching, and assessment. How do we ensure issues of access, equity, and identity are central to these? Collaboration that includes home, school, and community perspectives is essential for developing programs and processes that promote success for all students. Come engage collectively with educators, parents, and students committed to social justice. Raise concerns and share resources and strategies about how to make access, equity, and identity central to the discussions and decision-making processes within schools and districts transitioning to Common Core mathematics. Please bring any resources or materials you believe would be valuable to others. Time will be allocated for us to share, network, build, learn from, and inspire each other in our work.

Intended Audience: Elementary Teachers, Middle School Teachers, High School Teachers, Youth, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students

Workshop Session 4 (cont'd)

Reparations: A Cultural Context for Math Instruction

Kyndall Brown, kyndallb@math.ucla.edu

Carolee Hurtado, caroleekoehn@gmail.com

Room D

This workshop uses the context of reparations for descendants of enslaved African-Americans to explore a culturally relevant approach to teaching mathematics for African-American students.

Intended Audience: Middle School Teachers, High School Teachers, Youth, Parents, Community Activists

Social Justice and Community Action Through Math

Tizoc Brenes, tbrenes@youthbuildcharter.org

Angela Lopez, Jesus Trigo, Julia Mijango, angelalopez@ucla.edu,

trigo4ed@gmail.com, jmijango@youthbuildcharter.org

YouthBuild Charter School of California

Room E

What does it mean to be a social justice educator? YouthBuild Charter School of California (YCSC) will share its educational model, where a cross-curricular and project-based learning model is used to struggle for social justice. Social justice and community action form the content of the curriculum. Moreover, social justice and community action are the models for praxis, for work in the community where students are creating and joining efforts for justice in their neighborhoods and communities. This workshop will highlight how mathematics education is integrated into this multi-dimensional model of education and community action. Teachers from YCSC will share examples of lessons, authentic assessments, and action projects from their high school curriculum.

Intended Audience: High School Teachers, Parents, Community Activists, Professors, Undergraduate Students, Graduate Students



New & Expanded Edition!

“Who would have thought math could be taught through such compelling social issues as racial profiling, the war in Iraq, and environmental racism?”

LISA DELPIT, author of *“Multiplication Is for White People”*:
Raising Expectations for Other People’s Children

RETHINKING MATHEMATICS

Teaching Social Justice by the Numbers

SECOND EDITION

Edited by Eric “Rico”
Gutstein and Bob Peterson

More than 50 articles show how to weave social justice issues throughout the mathematics curriculum, as well as how to integrate mathematics into other curricular areas. *Rethinking Mathematics* offers teaching ideas, lesson plans, and reflections by mathematics educators. It will deepen students’ understanding of society and help prepare them to be critical, active participants in a democracy. Blending theory and practice, this is the only resource of its kind.

RETHINKING
MATHEMATICS
TEACHING SOCIAL JUSTICE BY THE NUMBERS



Edited by Eric (Rico) Gutstein & Bob Peterson

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2013 • Paperback • 300 pages • ISBN: 978-0-942961-55-3

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The Creating Balance in an Unjust World Conference on Mathematics Education and Social Justice began in New York City in 2007 through a grant Jonathan Osler secured to create the website RadicalMath.org which provides instructional resources for social justice math educators. Jonathan along with Sam Anderson, Marilyn Frankenstein, Ben Griesinger, Rico Gutstein, Kari Kokka, Erica Litke, Tara Mack, Charlotte Marchant, Taeko Onishi, Sara Soullom, and Beth Wehner planned the first conference that drew teachers, professors, graduate students, youth, and community members from across the country and featured Bob Moses, dedicated civil rights organizer through SNCC, author of *Radial Equations*, and founder of the Algebra Project that aims to achieve social justice by empowering all citizens with mathematical literacy.

The current core organizing committee consists of Michael Britt, Geoffrey, Taica Hsu, Carolee Koehn-Hurtado, Kari Kokka, and Tol Lau. We are excited for this sixth annual conference at University High School in Los Angeles, CA. The organizing committee has always been a grassroots group of teachers who volunteer their time and energy in the hopes of bringing together math educators and activists to network, recharge, build, learn from, and inspire each other in their collaborative social justice work. The committee is always seeking feedback ideas and volunteers to improve conference workshops, talks, panels, and networking opportunities for participants. This conference only exists with your continued support, thank you for joining, and email if interested in organizing with us info@creatingbalanceconference.org. Thank you!

