

EMPOWERING YOUR

MATH SUPERHEROES *DEEPER LEARNING SYMPOSIUM*

JANUARY 25-27, 2017 | IRVINE, CALIFORNIA

#MathSuperheroes
@MIND_Research
mindresearch.org



MIND Research Institute

A neuroscience and education social benefit organization

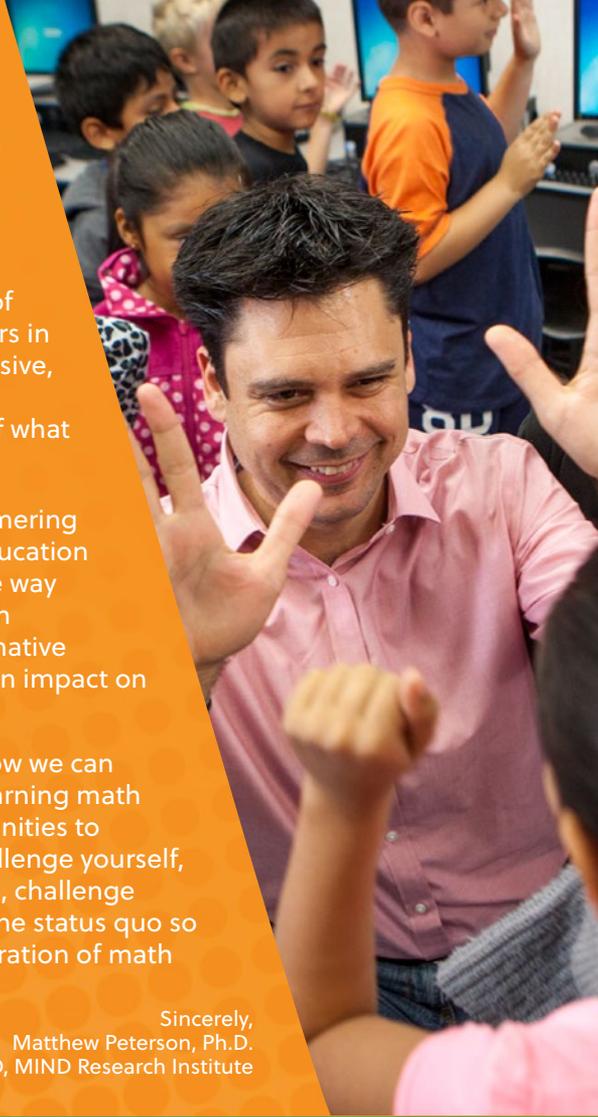
DEAR MATH SUPERHERO CREATOR:

Welcome to our Deeper Learning Symposium! We've been hard at work putting together an experience like you've never encountered before. In addition to going deep inside the minds of some of the most amazing leaders in education, you'll dive into immersive, hands-on experiences that will challenge your current notions of what innovative learning looks like.

For over 20 years, I've been hammering away at solutions to our math education crisis. Yet, the "status quo" of the way we're teaching and learning math continues, with too few transformative programs that are truly making an impact on math understanding.

I invite you to think deeper on how we can change our current models of learning math to provide students with opportunities to experience deeper learning. Challenge yourself, challenge each other, and please, challenge me! Together, let's break out of the status quo so that we can create the next generation of math superheroes!

Sincerely,
Matthew Peterson, Ph.D.
Co-founder & CEO, MIND Research Institute



ABOUT MIND RESEARCH INSTITUTE

MIND Research Institute is a neuroscience and education social impact organization, dedicated to ensuring that all students are mathematically equipped to solve the world's most challenging problems. MIND's distinctive visual approach to math and problem-solving is the basis of its innovative, research-proven ST Math® programs for elementary and secondary schools. The visually-based ST Math program has been shown to double or triple schools' growth rates in math proficiency. Through its MathMINDs movement, MIND engages the community in hands-on mathematical experiences outside of the classroom in an effort to shift the cultural perception of math from being scary and frustrating to exciting and essential. MIND's programs currently reach more than one million students and 44,000 teachers at 3,200 schools in 45 states and the District of Columbia.

WEDNESDAY, JANUARY 25

3:00-6:00

Event Registration Open

Trabuco Foyer

5:30-8:00

Opening Reception: Cocktails & Heavy Hors d'oeuvres

Saddleback & Trabuco

THURSDAY, JANUARY 26

8:00-9:00

Continental Breakfast

Salon A/B Foyer

Event Registration Open

Salon A/B Foyer

9:00-10:15

Welcome

Salon A/B

Breaking the Status Quo: An Interactive Journey

Moderators: **Brienne Albert, Jessica Carlson,
Twana Young & Dorene Uhrich**

Group 1: Quail Hill
Group 2: Saddleback
Group 3: Trabuco
Group 4: Woodbridge

We begin with an opportunity to experience math class through the eyes of a student. Witness an illuminating juxtaposition between the curriculum status quo and instructional innovation.

10:30-11:30

The Four Neural Subsystems of Learning

Presenter: **Matthew Peterson**

Salon A/B

Advances in brain research have moved educators closer than ever before to teaching math the way the brain actually learns. Journey with us to uncover a neuroscience-based, unifying theory that interconnects disparate approaches to dramatically transform education.

11:30-12:15

Neural-Charged Learning Made Real

With new understanding of the four neural-subsystems, explore a variety of innovative activities, ideas and environments, each having potential to be replicated in your schools. Work with real students and experience neuroscience-based instruction coming to life.

Salon D
"Innovation Room"

12:15-1:30

Lunch

Salon A/B

Afternoon Breakout Sessions

Breakout #1 1:30-2:20pm	Breakout #2 2:30-3:20pm	Breakout #3 3:30-4:20pm
Quality Instruction to the Core Quail Hill		Quality Instruction to the Core Quail Hill
Student Engagement: The Difference a Game Makes Saddleback	Student Engagement: The Difference a Game Makes Saddleback	Innovative Blended Learning: Promoting a Paradigm Shift Saddleback
	Inside the Curious Mind of a Mathematician Woodbridge	Inside the Curious Mind of a Mathematician Woodbridge
Creative Mathematics: Beyond the Academics Trabuco	Equitable Access: Discover the True Power of Language Trabuco	Equitable Access: Discover the True Power of Language Trabuco

4:30-6:00

Free Time

6:00-9:30

Taste of Math

Saddleback & Trabuco

Featured Culinary Partners: Cress Restaurant, High School Inc., Le Petite Spoon and Villa Roma

Taste of Math showcases the beauty of mathematics in the culinary arts. A collection of notable chefs will delight the taste buds with mathematically charged menus.

FRIDAY, JANUARY 27

8:00-9:00

Continental Breakfast

Saddleback

9:00-10:30

Expert Panel and Closing Remarks

Trabuco

Facilitator: Greg Toppo

Panelists: Jill Diniz, Barbara Haeffner, Kathleen Leos and Tricia Lopez

Hear from a panel of education experts representing the major pain points of school leadership. Join an ongoing conversation on exactly how collaboration, innovation and perseverance will solve our math education crisis.

Quality Instruction to the Core

Presenter: Jill Diniz

Whether, to your teachers, the Common Core is a close companion or a dreaded obligation, there still is much to learn! How can school leaders leverage the shifts of the Common Core to change math teaching? Common Core curriculum designer, Jill Diniz, shares her insider's perspective on what it takes to provide students with the highest quality math instruction.

Student Engagement: The Difference a Game Makes

Presenters: Greg Toppo & Kurt Squire

Everyone loves a good game, especially the young minds of our students. Learn how to leverage the unique motivation and excitement that is coupled with game-play to provide high-quality instruction that is both fun and effective. Hear from the experts about the transformative power of games and best-practices for educators who want to innovate their learning environments through game-based instruction.

Creative Mathematics: Beyond the Academics

Presenters: Hari & Jenneffer Pulapaka

Food is considered creative and experiential, by why isn't math? Hear from a brilliant pair, full-time math professor/part-time executive chef and podiatrist/sommelier, as we explore the amazing parallels of mathematics and the culinary arts. Realize the power and necessity of mathematical creativity and taste some wine while you're at it!

Inside the Curious Mind of a Mathematician

Presenter: Alissa Crans

What do mathematicians do on a day to day basis? Being a mathematician has little to do with arithmetic or number crunching and more to do with asking questions and exploring where those questions lead. Learn how curiosity, rather than calculation, is the ultimate mathematical superpower and how educators can foster this level of engagement and interest in their own math classrooms.

Equitable Access: Discover the True Power of Language

Presenters: Kathleen Leos & Nigel Nisbet

What does it feel like in today's math classrooms for English language learners? Take a deep dive with leading ELL education advocate and expert, Kathleen Leos, into the importance of teaching mathematical language and concepts simultaneously and how to make this a reality in your schools, classrooms and communities. Discover why good teaching methods for English language learners are good teaching methods for all.

Innovative Blended Learning: Promoting a Paradigm Shift

Presenters: Brian Coffey & Brian Seymour

Blended learning is more than a buzzword: it is a revolutionary way to engage students in deeper learning. Experience blended learning from the perspective of two practitioners who are changing the way their schools teach. Discuss the importance of using technology as a strategic instructional tool and discover how to create an atmosphere that encourages educators to truly innovate their learning environments.

FEATURED PRESENTERS



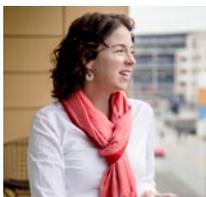
BRIAN COFFEY
@PrincipalCoffey

Brian Coffey is Principal at Herbert Mills STEM Elementary School in Reynoldsburg City Schools of Ohio. Previously, he was assistant middle school principal at Pickerington Local Schools and a STEM coach and teacher in Columbus City Schools. He aims to expand the reach and efficacy of education in his community through effective communication, problem solving and collaboration. Brian received a Bachelor's in Secondary Education and in Sociology from Indiana University and a Master's in Educational Administration from Ashland University.



ALISSA CRANS
PH.D.

Alissa is Professor of Mathematics at Loyola Marymount University and Associate Director of Mathematical Association of America Project NExT. Recognized nationally for her ability to communicate math, Alissa received the Hasse Prize for expository writing on mathematics and Henry L. Alder Award for distinguished teaching. She has extensive experience mentoring women mathematicians through the Summer Mathematics Program at Carleton College, Enhancing Diversity in Graduate Education program and the Summer Program for Women in Mathematics at George Washington University. Alissa earned her B.S. in Mathematics from University of Redlands & Ph.D. in Mathematics from UC Riverside.



JILL DINIZ
@JillDiniz

Jill is Director of Mathematics at Great Minds where she directs the continued development of Eureka Math curriculum and its supporting products and services. From live professional development to digital resources, Jill leads teacher-writers and other professionals as they support implementation and extend curricular offerings. Before joining Great Minds, Jill spent 10 years teaching grades 6-12 and junior college, in fields such as mathematics, AP statistics and AP computer science. Jill served as Mathematics Department Chair and a high school math teacher at Saint Edward's School in Florida. She also developed software for the NASA Space Shuttle program. She earned her B.S. and M.S. in Mathematics from West Texas A&M University.



BARBARA
HAEFFNER
@bhaeffner

Barbara is Director of Curriculum and Instructional Technology at Meriden Public Schools in Connecticut. She works with staff and students to integrate mobile devices and digital content in the K-12 curriculum. Prior to joining Meriden, Barbara provided technology professional development to educators throughout the state. She has also taught at the elementary and college level, and has presented at ISTE, AASA, FETC and CT Educators Computer Association. Barbara earned her Bachelor's from Keene State College, and holds a Master's in Elementary Education from Lesley University, Master's in Educational Media from Central Connecticut State University and Master's in Educational Leadership from University of Bridgeport.



KATHLEEN LEOS
@kwleos

Kathleen is President and CEO of The Global Institute for Language and Literacy Development. She served a six-year presidential appointment as Assistant Deputy Secretary and Director to the U.S. Department of Education's Office of English Language Acquisition. As principal ELL education advisor to the U.S. Secretaries of Education, she advocated for policies and procedures to create a national education and accountability infrastructure that serves millions of English language learners across the U.S. Among the most notable was the initiative to provide communities and parents with effective education models that support high ELL academic achievement. Kathleen is a graduate of George Washington University.



TRICIA LOPEZ

Tricia is Senior Director of Special Programs for IDEA Public Schools of Texas. In addition to her experience as a special education teacher, Tricia's role as a parent of a son with spastic quadriplegia has led her to dedicate her life to quality services for students in special education. She became one of the first IDEA Special Education teachers before assuming the role of interventionist. Through her work with ESL/Bilingual, RTI and other programs, Tricia believes that IDEA is changing lives for struggling students. She received her Bachelor's from Southern Illinois University, Master's in Elementary/Special Education from Northern Arizona University and is a doctoral candidate in Curriculum & Instruction at ASU.



**MATTHEW PETERSON,
PH.D.**
@MIND_Research

Matthew is Co-founder and CEO at MIND Research Institute. The creator of the ST Math instructional software, Matthew leads a team in pushing the boundaries of traditional math learning through environments that convey sophisticated concepts visually, enabling students to gain a deep conceptual understanding of math regardless of language proficiency. He is a visionary for changing the way we approach math and has inspired educators worldwide toward further innovation and creativity in education. After completing three undergraduate degrees from UC Irvine, Matthew received his Ph.D. in Visual Neuroscience from UC Berkeley.



**HARI PULAPAKA,
PH.D.**
@HariPulapaka

Hari is a tenured Associate Professor of Mathematics at Stetson University and co-owner and Certified Executive Chef of Cress Restaurant in DeLand, Florida. Cress Restaurant is a community leader in ecologically sustainable business practices and remains one of the premier farm-to-table culinary experiences in Florida. Hari continues to teach mathematics at Stetson University and recently began a new Food Studies and Sustainability program. He approaches both of his passions, food and mathematics, with the same level of creativity and enthusiasm. Hari received undergraduate and graduate degrees and a Ph.D. in Mathematics from the University of Florida.

FEATURED PRESENTERS



**JENNEFFER PULAPAKA,
DPM**

@JennefferDee

Jenneffer is a Podiatric Surgeon and Co-owner/General Manager of Cress Restaurant in DeLand, Florida. She opened her practice, DeLand Foot & Leg Center, in 2005 and has helped thousands of patients regain health since. In 2008, Jenneffer and her husband opened Cress Restaurant, a business dedicated to improving our food system through local sources, sustainable practices and refined bold flavors. As Cress's WSET-certified wine director and member of the Wine Scholar Guild, she maintains a dynamic and elegant wine menu that showcases the food. Jenneffer is a pioneer for positive change in her community as she maintains these simple goals: study, travel, dine with others and inspire change.



NIGEL NISBET
@nigel_nisbet

Nigel is Vice President of Content Creation at MIND Research Institute. After teaching high school math and science in LAUSD, where he pioneered the integration of technology into the classroom and utilized project-based learning to engage students' critical-thinking, Nigel served as a Mathematics Specialist at the district, designing and delivering professional development. Currently, Nigel leads a team of creative designers in building engaging, interactive and completely visual learning experiences that teach all students how math really works. He received a Bachelor's in Mathematics from Queen Mary University and a Master's in Educational Administration from CSU Northridge.



BRIAN SEYMOUR
@SeymourEducate

Brian is Director of Instructional Technology for Pickerington Local School District and a former high school science teacher and curriculum coordinator. He is leading Pickerington through a change in blended learning pedagogy and a new One2One device initiative. Brian was named a Connected Educator by Battelle for Kids, was a finalist for ISTE's Technology Leadership Award and is a member of the White House's CSforAll steering committee. Brian believes in a pedagogy first approach where teaching and learning drive the use of technology. He received his Bachelor's from Bowling Green University and Master's from Mississippi State University and Ashland University.



KURT SQUIRE, PH.D.
@ksquire

Kurt recently joined the faculty at UC Irvine's School of Information and Computer Sciences. Previously with the Department of Curriculum & Instruction at University of Wisconsin, he is the author or editor of 3 books and 75+ scholarly publications on learning with technology. Kurt has directed several game-based learning projects, ranging from ARIS, a tool for place-based mobile app development, to ProgenitorX, a game about saving the world from zombies through stem cell technology. His research has been supported by the MacArthur Foundation, National Science Foundation, National Institute for Health, Gates Foundation, the U.S. Department of Education and Microsoft. He received his Ph.D. in Instructional Systems Technology from Indiana University.

FEATURED PRESENTERS



GREG TOPPO
@gtoppo

Greg Toppo authored the nationally renowned book, [The Game Believes in You: How Digital Play Can Make Our Kids Smarter](#), an insightful commentary on how innovative teachers are using games to engage students in learning. After graduating from St. John's College in New Mexico, he taught in both public and private schools for eight years before moving into journalism. Greg currently serves as the K-12 Education Reporter for *USA Today*. He has advocated for students and teachers through his efforts in journalism and prompted worthwhile investigation into important issues such as government propaganda and standardized test erasure.

SYMPOSIUM FACILITATORS



BRIENNE ALBERT
Staff Development Specialist,
MIND Research Institute



JESSICA CARLSON
@jcarlsonmath
Program Manager of
Partnerships Enablement,
MIND Research Institute



BRANDON SMITH
Lead Mathematician,
MIND Research Institute



KARIN WU
@KarinCWu
Vice President, Engagement,
MIND Research Institute



TWANA YOUNG
@Twanayoung
Education Consultant,
MIND Research Institute



DORENE UHRICH
Manager of Staff
Development & Certification,
MIND Research Institute



SYMPOSIUM SESSION RESOURCES CAN BE FOUND AT
http://bit.ly/DLS_Resources

SCHEDULE AT A GLANCE

WEDNESDAY

3:00-6:00

Event Registration

Trabuco Foyer

5:30-8:00

Opening Reception

Saddleback & Trabuco

THURSDAY

8:00-9:00

Continental Breakfast

Salon A/B Foyer

9:00-10:15

Welcome

Salon A/B

Breaking the Status Quo: An Interactive Journey

See inside for location details.

10:30-11:30

The Four Neural Subsystems of Learning

Salon A/B

11:30-12:15

Neural-Charged Learning Made Real

Salon D

12:15-1:30

Lunch

Salon A/B

1:30-4:20

Afternoon Breakout Sessions

See inside for details.

4:30-6:00

Free Time

6:00-9:30

Taste of Math

Saddleback & Trabuco

FRIDAY

8:00-9:00

Continental Breakfast

Saddleback

9:00-10:30

Expert Panel and Closing Remarks

Trabuco

