Whether you are new to or experienced with inquiry, come join us for an active, participatory conference to learn from and connect with fellow educators!

The National Inquiry-Based Learning and Teaching Conference seeks to build community around learning and teaching with inquiry, especially in mathematics, to challenge each participant to grow at the boundary of their practice, and to do this work by living the value these communities place on inclusion and active, co-constructed educational experiences. This conference provides a forum for collaboration among all educators interested in teaching with inquiry, including K-16+ educators, education researchers, and both new and experienced practitioners.

KEYNOTE SESSION LEADERS:

Belin Tsinnajinnie  
Santa Fe Community College

Darryl Yong  
Harvey Mudd College

Organizing Committee

Brian Katz, Co-Chair
Christine von Renesse, Co-Chair
Susan Crook
Brianna Donaldson
Celil Ekici
Talithia Williams
Keynote Abstracts:

From Place Values to Place Matters: An Indigenous Perspective on Calls for Diversity, Equity, and Justice in Mathematics and Mathematics Education

Belin Tsinnajinnie, Santa Fe Community College

Abstract: Despite perspectives that view mathematics as universal and culture free, policies and practices in mathematics education continue to perpetuate forces of settler colonialism and assimilation. Failed U.S. policies in Native American education illustrate the damaging impacts of assimilation and settler colonialism in education. What practices in our mathematics programs perpetuate settler colonialism and assimilation? In what ways can attenuating to our sense of place better serve goals of equity, justice, and inclusion?

Inquiry-Oriented Instruction as Principled Improvisation

Darryl Yong, Harvey Mudd College

Abstract: A very common IBL instructional routine involves posing tasks to students, monitoring their progress, and providing support as students tackle those tasks. The monitoring and supporting phases of instruction are often highly improvisational because they are less scripted and more dependent on what students do and say. What principles guide you during these phases of instruction? How can we work toward greater mathematical understanding, greater equity and inclusivity in our classes during this phase of instruction?

All abstracts are available online at the following links:

Workshops

Interactive Sessions

Posters

Live Classrooms
Thursday, June 5

◊ **Registration**
9:00 am — 5:00 pm  Majestic Foyer, Tower B2

◊ **Opening Remarks**
1:00 pm — 1:35 pm  Majestic Ballroom, Tower B2

◊ **Workshops — In parallel**
1:45 pm — 3:15 pm  Vail Room, Tower B2

- **Diving, Wading, and Dipping your Toes into I-BME**
  Jessica Hagman, Colorado State University
  Taylor Martin, Sam Houston State University

- **An Introduction to Team-Based Learning**
  Drew Lewis, University of South Alabama
  Adriana Salerno, Bates College

- **Using Scholarship of Teaching on IBL to Overcome Amnesia, Fantasia, and Inertia as Pitfalls for Teaching**
  Celil Ekici, Texas A&M University — Corpus Christi

- **New to Talking about Equity**
  Valerie Peterson, University of Portland
  TJ Hitchman, University of Northern Iowa

- **Leading Mini-Workshops for Maxi Impact: Key Concepts and Practices for Sharing IBL with Colleagues**
  Stan Yoshinobu, California Polytechnic University, San Luis Obispo
  Sandra Laursen, University of Colorado Boulder

◊ **Coffee Break**
3:15 pm — 3:45 pm  Majestic Foyer, Tower B2

◊ **5-Minute Reports**
3:45 pm — 4:15 pm  Majestic Ballroom, Tower B2

◊ **Interactive Sessions — In parallel**
4:25 pm — 4:50 pm  Vail Room, Tower B2

- **Catapult Student Understanding of Parabolic Functions**
  Kimberly Ann Currens, Texas A&M University
  Sandra Nite, Texas A&M University

- **Reading like a Mathematician: Metacognitive Conversation in the Math Classroom**
  Alison Lynch, California State University, Monterey Bay

- **An Active Approach to Calculus II and How it can Help Address (and Create?) Challenges**
  Jeanette Mokry, Dominican University
  Aliza Steurer, Dominican University
Capitol Room, Tower B1

Engage me ... Students want Action

Shelly Ray, Community College of Aurora

Terrace Room, Tower B1

Exploring Co-Generative Dialogues with Undergraduates to Improve Teacher Feedback Practices in a Probability and Statistics Class

Mitchelle Wambua, Ohio University

Columbine Room, Tower B1

An Asset-Based Approach to Analyzing College Algebra Students’ Reasoning on Graphing Tasks

Amber Gardner, University of Colorado Denver
Amy Smith, University of Colorado Denver
Gary Olsen, University of Colorado Denver
Heather Lynn Johnson, University of Colorado Denver

◊ Poster Session & Cash Bar

5:00 pm — 6:00 pm Majestic Foyer, Tower B2

◊ Banquet Keynote with Belin Tsinnajinnie

6:15 pm — 8:15 pm Majestic Ballroom, Tower B2

Friday, June 6

◊ Breakfast

8:00 am — 9:00 am Majestic Foyer, Tower B2

◊ Live Classrooms — In parallel

9:00 am — 10:35 am Online

Using GeoGebra 3D Graphing Calculator to Facilitate Active Fun, Student-Centered Discovery Based Learning

Tim Brzezinski, Brzezinski Math and Central Connecticut State University

Vail Room, Tower B2

Game and Simulation Based Learning and IBL

Victor Piercey, Ferris State University

Baltimore Room, Tower B1

Polynomial Root-Dragging

Matt Boelkins, Grand Valley State University

Terrace Room, Tower B1

Modeling with Mathematics—The Skyscraper Movie

Scott Adamson, Chandler-Gilbert Community College

Columbine Room, Tower B1

Tactile Activities for Mathematical Discovery

Angie Hodge, Northern Arizona University
Ellie Blair, Northern Arizona University

Capitol Room, Tower B1

Derangements and Random Rearrangements: An Exploration of Probability

Heather Danforth-Clayson, Helios School

Beverly Room, Tower B1

A First Day in Real Analysis

W. Ted Mahavier, Lamar University

◊ Coffee Break

10:35 am — 11:05 am Majestic Foyer, Tower B2

◊ Roundtables

11:05 am — 12:05 pm Majestic Ballroom, Tower B2

◊ Lunch

12:05 pm — 1:00 pm Majestic Foyer, Tower B2
5-Minute Reports
1:00 pm — 1:30 pm Majestic Ballroom, Tower B2

Interactive Sessions — In parallel
1:40 pm — 3:15 pm* Vail Room, Tower B2
Repeated Live Classroom: Game and Simulation Based Learning and IBL
Victor Piercey, Ferris State University

1:40 pm — 3:15 pm* Baltimore Room, Tower B1
Repeated Live Classroom: Polynomial Root Dragging
Matt Boelkins, Grand Valley State University

1:40 pm — 2:40 pm* Beverly Room, Tower B1
Orchestrating Productive Mathematical Discussion
Elizabeth Thoren, Pepperdine University

1:40 pm — 2:05 pm Columbine Room, Tower B1
Using Social Media to Improve Student to Student and Student to Instructor Interaction
Kimberly McHale, Heartland Community College
Heather Chapman, Heartland Community College

1:40 pm — 2:15 pm Capitol Room, Tower B1
Developing Academic Success Skills in a Gateway Mathematics Course: Precalculus
Ahlam Tannouri, Morgan State University

2:05 pm — 2:15 pm Terrace Room, Tower B1
Cut and Paste Proofs in Proof-Based Courses
Taylor Martin, Sam Houston State University

2:50 pm — 3:15 pm Beverly Room, Tower B1
The Case of the Missing Vertex: An Example of an IBL Activity from Graph Theory
Suzanne Dorée, Augsburg University

2:05 pm — 2:50 pm Capitol Room, Tower B1
Rethinking Assessment Strategies for the IBLT Environment
Teresa Magnus, Rivier University

2:50 pm — 3:15 pm Terrace Room, Tower B1
Supporting Underrepresented Minority Students in STEM Through In-Class Peer Tutoring
Tara C. Davis, Hawaii Pacific University

3:15 pm — 3:45 pm Capitol Room, Tower B1
Dilution of Poisons as a Tool for Understanding Proportions More Deeply
Ali Bicer, University of Wyoming
Sandra Nite, Texas A&M University

Coffee Break
3:15 pm — 3:45 pm Majestic Foyer, Tower B2

Common Active Component
3:45 pm — 5:30 pm Majestic Ballroom, Tower B2
Building and Sustaining Local IBL Communities
Patrick Rault, University of Nebraska at Omaha
Brian Katz, Conference Co-Chair
Dinner — On Your Own

Saturday, June 7

Breakfast
8:00 am — 9:00 am
Majestic Foyer, Tower B2

Interactive Sessions — In parallel
9:00 am — 10:00 am*
Columbine Room, Tower B1

AIBL Workshop: Build Your IBL Communities
Patrick X. Rault, University of Nebraska at Omaha
Ryan Gantner, St. John Fisher College

Get the Facts Out
Judith Covington, Northwestern State University of Louisiana
Ben Ford, Sonoma Stat University
Christina Eubanks-Turner, Loyola Marymount
Timothy Hendrix, Meredith College
Rose Mary Zbiek, Penn State

Team-Based Learning in a Large Calculus Class
Heather Bolles, Iowa State University
Amanda Baker, Iowa State University
Travis Peters, St. John’s University
Elgin Johnston, Iowa State University
Darin Wohlgemuth, Iowa State University

Incremental, Layered Problem-Based Curriculum Design
Diana Davis, Swarthmore College

Using Graphs to Engage Students in Calculus Classrooms
Anne M. Ho, University of Tennessee
Antonio E. Martinez, San Diego State University
Mary E. Pilgrim, San Diego State University

A Prisoner’s Showdown: Introducing Game Theory through Competition
Kevin Gerstle, Hillsdale College

Heracles and the Hydra
Alex Rennet, University of Toronto—Mississauga

9:35 am — 10:00 am
Terrace Room, Tower B1

Designing and Implementing Active Learning Reform for Calculus 3
Lee Roberson, University of Colorado-Boulder
Faan Tone Liu, University of Denver
Cherry Ng, University of Colorado-Boulder

What Do You Mean When You Say IBL? A Systemic Functional Linguistic Approach
Saba Gerami, University of Michigan
Vilma Mesa, University of Michigan

An Intuitive Approach to Calculus
Alessandra Pantano, University of California—Irvine

Disseminating IBL via Geometry
David M. Clark, SUNY New Paltz
Samrat Pathania, Wallkill High School

5-Minute Reports
10:05 am — 10:30 am
Majestic Ballroom, Tower B2

Networking Coffee Break
10:30 am — 11:00 am
Majestic Foyer, Tower B2

Keynote with Darryl Yong
11:00 am — 12:00 pm
Majestic Ballroom, Tower B2

Closing Remarks
12:00 pm — 12:15 pm
Majestic Ballroom, Tower B2
Acknowledgements

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