

# Intersection Points Newsletter

The Newsletter of the Research Council on Mathematics Learning

April - May 2022 Volume 47 No. 2 The Research Council on Mathematics Learning seeks to stimulate, generate, coordinate, and disseminate research efforts designed to understand and/or influence factors that affect mathematics learning.

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# Message from our President

### "Developing Computational Skills in Contexts of Problem Solving"

Dr. Jerry Becker, Keynote #2, 29th Annual Conference of the Research Council of Mathematics Learning

I did not intend to search for a quote from Dr. Jerry Becker, but I found the title of his keynote address in the conference program for what I consider my very first professional attendance of an Annual Conference of the Research Council of Mathematics Learning, and intentionally am including the title of his presentation here to honor his memory. The conference, held in Memphis, TN from March 7-9, 2002, was themed The Music of Mathematics in Memphis. My first professional attendance was memorable for a wide variety of reasons that, as I reminisced on the familiar, recent, and wholly new faces at our 49th Annual Conference in Grapevine, TX this March 3-5, made this a similarly memorable professional experience, 20 years later.

First, I consider this my first professional attendance because I am positive I had attended parts of conferences in my younger years alongside my parents, Drs. Melfried and Judith Olson. However, what made this meeting important to me was that I was the Graduate Assistant that worked with them on the project they presented at the 29th conference. I was invited by them and Dr. Kim Hartweg to attend in order to provide insight on the project and gather feedback for their work. Reminiscing on our 49th Annual Conference, and seeing my colleagues with younger family members within earshot of engaging academic discussions simply reminded me of how much our membership seems to (as far as I have observed) honor their knowledge of how we understand processes of learning (i.e., to some degree sociologically and culturally intertwined processes with mechanisms of radical constructivism at individual consciousness levels) throughout many of our life interactions. I was provided similar opportunities in my life to interact with scholars who were far beyond my knowledge and understanding about the world, but who knew deeply to engage simply as another human being. I will never be able to express my gratitude for the interactions I had, and feel deeply privileged to be perhaps a small part of such opportunities for others at our March conference.

Second, as evidenced by Dr. In Becker's Keynote address title, I feel our field has productively made steps honoring notions that computational skills are deeply intertwined in students' cognitive processes through engaging in purposeful, meaningful, thoughtful problem solving situations. In his talk at our March conference this year, Dr. Daniel Brahier provided a deeply thoughtful, and I felt accurate to my understandings, perspective from his vantage point of the ebbs and flows in mathematics education over the past 41 years. Dr. Trena Wilkerson's research presented in her compelling, thoughtful, and community-focused Founder's Lecture, provided, in my opinion, an incredible look at ways in which our journal provides our field with research around what it means to problem solve. Through her presentation I got the impression that our membership explores concepts deeply rooted in the fundamental notion of, What does it mean to learn "mathematics"? That is, what are ways in which humans culturally define mathematics, and throughout the process define what it means to "know" or "understand" or "learn" that "mathematics." Perhaps it is our membership exploring just "who" is provided opportunities for productive and successful problem solving experiences, or ways in which positionality, history, identity, humanity affects how we define mathematical successes and engagements with mathematics. Dr. Enrique Ortiz presented a virtual setting in which teachers are provided opportunities to problem solve real-time in a virtual classroom with student participation preprogrammed to provide divergent contexts in which teachers can problem solve the problem of "teaching mathematics to other humans." Fundamentally, to me, these perspectives revolve around how we humans interpret ourselves as a conscious problem solving animal; the ways in which we are somehow able to, overtime and with guidance and perseverance and accommodation, able to hone our internal processes and schemata to be whatever we consider "more efficient" (often tied to notions of temporality), but such new knowledge seems to enhance our adaptability to new, situations, understandings, and knowledge. For me, there is an overabundance of research from our field to comfortably move forward with the idea that problem solving is a key way to build computational and conceptual understanding — in fact, perhaps there are those among our membership that would ask, Fundamentally in our fourdimensional space-time reality, is computational understanding ever, to any degree, non-conceptual?

Lastly, for our members who have been a part of our organization for limited time, graduate students members, and even more seasoned veterans who are perhaps looking for some motivation from those that came before us and plowed the water so we could follow in their wake, I highly suggest taking time this summer and revisiting our organizations research history. Simply by looking through the program of our 29th Annual Conference, I have once again been deeply encouraged to see that our field both relies on ideas and frameworks that continue to push our understandings, as well as incorporate ideas that continually push our thinking of just what mathematics is, just where a human animal may encounter those mathematical structures. In particular, at our March 2002 conference, John Evans (a then former box top artist) presented Memphis, Mathematics, and Music, Dr. Stephen T. Kitai, Ph.D. (then Director, Neuroscience Institute) presented on How Does the Brain Control Movement: By the Number or by Trial and Error?, and James Segars (then Federal Express, Manager of Concept System Form Design) presented on Flying Forward with FedEx. Each of these presentations, including Dr. Becker's keynote, stand out to me as formative in my thinking about mathematics — including that not only was it okay to question fundamental sociocultural definitions (and misunderstandings) of "mathematics," but that it was critical if I was ever going to help myself understand the interplay and structures of mathematics with our collective lived human experiences.

As we head into summer months, hopefully with time to reflect, recharge, and reengage ourselves in our next research ponderings, I simply will share my deep gratitude for this organization. For the space and support for one another's ideas, and perspectives to guide our continual schemata reorganizations of what we see to be mathematical, and what we see to be the learning of the mathematical.

Dr. Travis A. Olson, Ph.D.
President - Research Council of Mathematics Learning

# 50th Anniversary for the RCML Annual Conference

## Reflecting on the Past, Refracting into the Future



Call for Proposals - Click here!

The **50th Annual Conference** of the Research Council on Mathematics Learning (RCML) will be held in **Las Vegas, Nevada, March 2–4, 2023** at the Alexis Park All-Suite Resort. Refracting is defined as serving or tending to refract or turning from a direct course. Hence this year's conference theme is: Reflecting on the Past, Refracting into the Future. This year we hope to reflect on our past as we direct our path into the future, rather than maintaining the status quo. The purpose of the RCML conference is to share current research in mathematics education, and within this context we ask all potential presenters to submit scholarship that reflects on the past and provides directions for the future of mathematics learning. RCML prides itself on supporting faculty and advanced graduate students as they report on finished findings, share about works-in-progress, and engage in and be receptive to constructive comments on preliminary framings/findings.

We will be accepting proposals soon! Please be prepared to address how your proposed research addresses the organization's mission, as stated here:

The Research Council on Mathematics Learning seeks to stimulate, generate, coordinate, and disseminate research efforts designed to understand and/or influence factors that affect mathematics learning.

Speaker proposals must be submitted no later than Sunday, September 4, 2022.

## **Graduate Student Opportunity!**

## **Graduate Student Assistant to RCML Proceedings Editor**

#### Description

The Research Council on Mathematics Learning is looking for a graduate student with excellent communication and organizational skills to assist the publications committee with various administrative tasks by serving as the organizational hub. Candidates should be able to assist the publications committee by handling tasks such as organizing and updating files and folders, keeping track of emails for RCML, and constructing polite and professional email responses. To be successful in the position, candidates should be professional, deadline oriented, and attentive while also being accurate. They should always be prepared and responsive.

### Responsibilities:

- · Managing the organization of files and folders.
- · Screening RCML emails and constructing email responses when appropriate.
- Maintaining polite and professional communication with supervisor(s) via phone and/or e-mail.

### Requirements:

- Undergraduate Degree in Mathematics, Mathematics Education or related field.
- · Administrative experience preferred.
- · Excellent computer skills.
- · Attention to detail.
- Desire to be proactive and create a positive impact for the field of Mathematics Education.

#### Benefits:

- Free RCML Conference Registration for 2023
- · Free RCML Membership for 1 year

Interested candidates should contact Dr. Colleen Eddy at colleen.eddy@unt.edu by June 30, 2022.

# **Upcoming Conferences and Meetings:**

Conference for the Advancement of Math Teaching (CAMT) - July 13-15, San Antonio, TX
International Group for Mathematical Creativity and Giftedness (IGMCG) - September 25-28, Las Vegas, NV
National Council of Teachers of Mathematics Annual Meeting (NCTM) - September 28 - October 1, Los Angeles, CA
School Science and Mathematics Association Annual Meeting (SSMA) - October 27- October 29, Missoula, MT
Psychology of Mathematics Education (PME-NA) - November 17-20, Nashville, TN

### 2023

Association of Mathematics Teacher Educators (AMTE) - February 2-4, New Orleans, LA Research Council of Mathematics Learning (RCML) - March 2-4, Las Vegas, NV American Educational Research Association (AERA) - April 13-16, Chicago, IL



## **Contact Info:**

Research Council on Mathematics Learning P.O. Box 26170 UNCG - TEHE Dept SOEB 482 Greensboro, NC 27402

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