

*Attend our MDTP conference in the evening
and stay for the included dinner!*

Maps will be e-mailed to participants after registration.
Parking permits will be provided at the conference.
Carpooling is encouraged.

Mathematics Testing and Placement
University of California, San Diego
9500 Gilman Dr.-0423
La Jolla, CA 92093-0423

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From Interstate 5


EXIT La Jolla Village Drive and go west. Turn right on
Villa La Jolla Drive (first light). Cross over Gilman
Drive into the Gilman Parking Structure.

Pepper Canyon Hall Courtyard is immediately north of
the Gilman Parking Structure.

The California State University/University of California

MDTP
Mathematics Diagnostic Testing Project

 UCSD

 **The California State University**
EARLY ASSESSMENT PROGRAM

This conference is generously supported with funding from the
CSU Early Assessment Program, the UCSD Mathematics
Department, and the CSU/UC Mathematics Diagnostic Testing
Project (MDTP).

EAP: <http://www.calstate.edu/EAP>
UCSD Mathematics: <http://math.ucsd.edu>
MDTP: <http://mdtp.ucsd.edu>
MDTP San Diego: <http://mdtpsandiego.ucsd.edu>

Please share with all your Math teachers.

University of California, San Diego

Thursday, March 26, 2009

3:30 PM — 7:45 PM

Pepper Canyon Hall Courtyard

Contact:

Monnie Barker

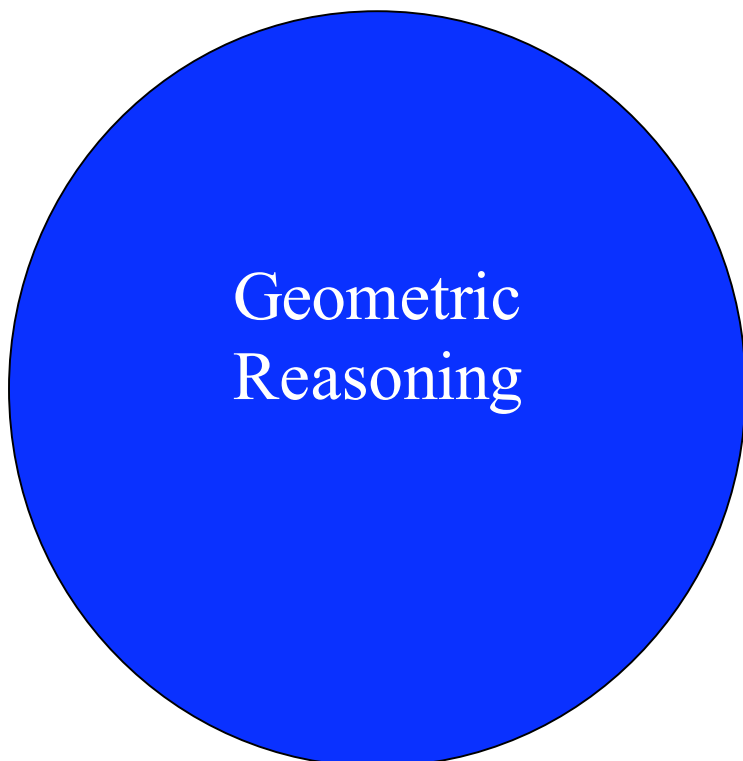
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 **The California State University**
EARLY ASSESSMENT PROGRAM

The California State University/University of California

MDTP
Mathematics Diagnostic Testing Project



Geometric
Reasoning

Thursday, March 26, 2009
UC San Diego
3:30 PM — 7:45 PM
Pepper Canyon Hall Courtyard

Geometric Reasoning

Registration Fee (\$20)
waived thanks to the
SDSU EAP

Conference Objectives

Several breakout sessions will highlight topics that will be of interest to classroom teachers of upper elementary, middle, and high school mathematics. There will be opportunities for both new *and* experienced MDTP users to attend sessions regarding how to use MDTP materials and services effectively.

The conference will explore questions about the learning and teaching of geometry and what geometric reasoning means. We begin by surveying the landscape of the subject (geometry) to better understand what content is encompassed. What are the big ideas of geometry? What roles do inductive and deductive proof play? Then we consider what geometric reasoning entails. Mark Driscoll (*Fostering Geometric Thinking*, Heinemann, 2008) suggests that geometric reasoning consists of at least four specific, mathematical habits of mind. He believes that through proper instruction these habits of mind can be developed in students.

The California Mathematics Framework states that geometry may be taught using a synthetic approach or an analytic approach. What are the differences between these approaches? How do these approaches affect the content of the geometry taught and the geometric ways of thinking (habits of mind) that students develop?

Program

1. Getting the Most out of MDTP: Orientation for New Users
Bruce Arnold, MDTP San Diego Site Director, UCSD
2. The Early Assessment Program (EAP)
Rosie Villafana, SDSU EAP Coordinator
Tiamo DeVettori, CSU San Marcos EAP Coordinator
3. Mathematics Support Classes
Anna Garfinkel, Diegueno Middle School Math Department Chair, San Dieguito UHSD
4. Algebra 1 Testing of 8th Grade Students
Jerry Lederman, The Preuss School UCSD Math Department Chair
5. Geometry and the Imagination
Yana Mohanty, San Diego Math Circle
6. Geometry and Visualization
Patrick Callahan, University of California Office of the President
7. Synthetic and Analytic Geometry in Problem Solving
Jeffrey Rabin, UCSD Professor of Mathematics

The conference is jointly sponsored by the CSU Early Assessment Program, the UCSD Mathematics Department, and the CSU/UC Mathematics Diagnostic Testing Project (MDTP).

Plenary Session

"Synthetic and Analytic Geometry in Problem Solving" by Jeffrey Rabin

What are *geometry* and *geometric reasoning*? In his 1982 talk, "What Is Geometry," Sir Michael Atiyah said: *Broadly speaking I want to suggest that geometry is that part of mathematics in which visual thought is dominant whereas algebra is that part in which sequential thought is dominant. This dichotomy is perhaps better conveyed by the words "insight" versus "rigor" and both play an essential role in real mathematical problems.*

The California Mathematics Framework (2006) states: *The main purpose of the geometry curriculum is to develop geometric skills and concepts and the ability to construct formal logical arguments and proofs in a geometric setting. Although the curriculum is weighted heavily in favor of plane (synthetic) Euclidean geometry, there is room for placing special emphasis on coordinate (analytic) geometry and its transformations.* [The word *analytic* has been added.]

What are the differences between the synthetic and analytic approaches to teaching (and learning) geometry? How do these approaches affect the content of the geometry taught and the geometric ways of thinking (habits of mind) that students develop?

Conference Information

Parking, conference materials and handouts, refreshments, and dinner are included. If you need a confirmation, please provide your e-mail address on the registration form. No phone reservations accepted. *Reserve a space now!*

Registration Request Print clearly. One person per form. Please make *additional* copies of form if needed.

Name _____ Phone (____) _____

Address _____

City _____ Zip _____

School Name _____

Address _____

City _____ Zip _____

E-mail Address (required for confirmation) _____

Fax to (858) 534-1011 or mail to:
 University of California, San Diego
 MDTP San Diego
 9500 Gilman Dr., 0423
 La Jolla, CA 92093-0423

Registration Deadline: March 23, 2009
 No phone reservations accepted.

The registration fee of \$20 has been waived this year due to a generous one-time grant by the SDSU EAP.