



Teaching Calculus Using Computer Algebra Systems

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Moderator Bio



Mike Houston

**T³ National Instructor
Riverside High School
Ellwood City, PA**

Mike is in his twelfth year of teaching high school mathematics in Ellwood City, PA. While participating in a TI-Navigator™ Fast-Track in 2007, he learned how technology can effectively cultivate students' wide range of learning styles. During this time, Mike has served as a T³ National Instructor and a contributing author for MathForward™.

Panelists' Bios



Vicki Carter

T³ National Instructor

Timmonsville, SC

Vicki has been teaching high school math for 40 years and currently serves as the math department chairperson at West Florence High School. She is co-chair of the AP* Calculus Development Committee and serves as a Question Leader at the *AP Calculus reading. Vicki has served on TI-Nspire™ authoring teams and has presented at many international, national, and regional conferences in the areas of technology, calculus, and statistics.



Tom Dick

**T³ Senior Math Advisor
Oregon State Univ.**

Corvallis, OR

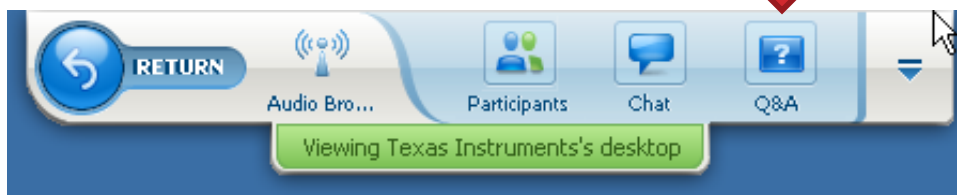
Tom Dick is a Senior Mathematics Advisor for Texas Instruments and is also Professor and current Chair of the Mathematics Department of Oregon State University. He has served on the Editorial Panels for the *Journal for Research in Mathematics Education* and the *Mathematics Teacher Educator*. He remains active in the College Board's Advanced Placement Calculus Program and has previously served as Chair of the AP Calculus Test Development Committee.

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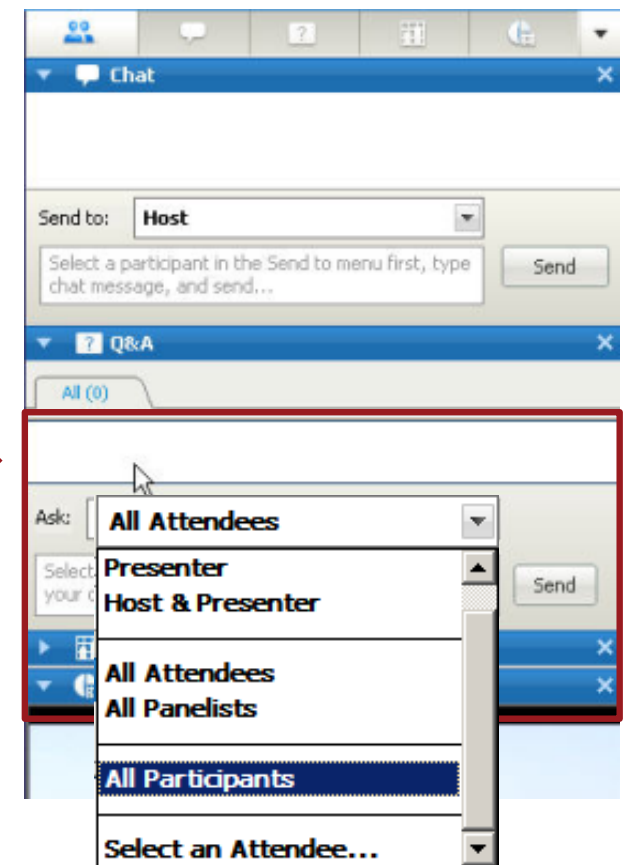
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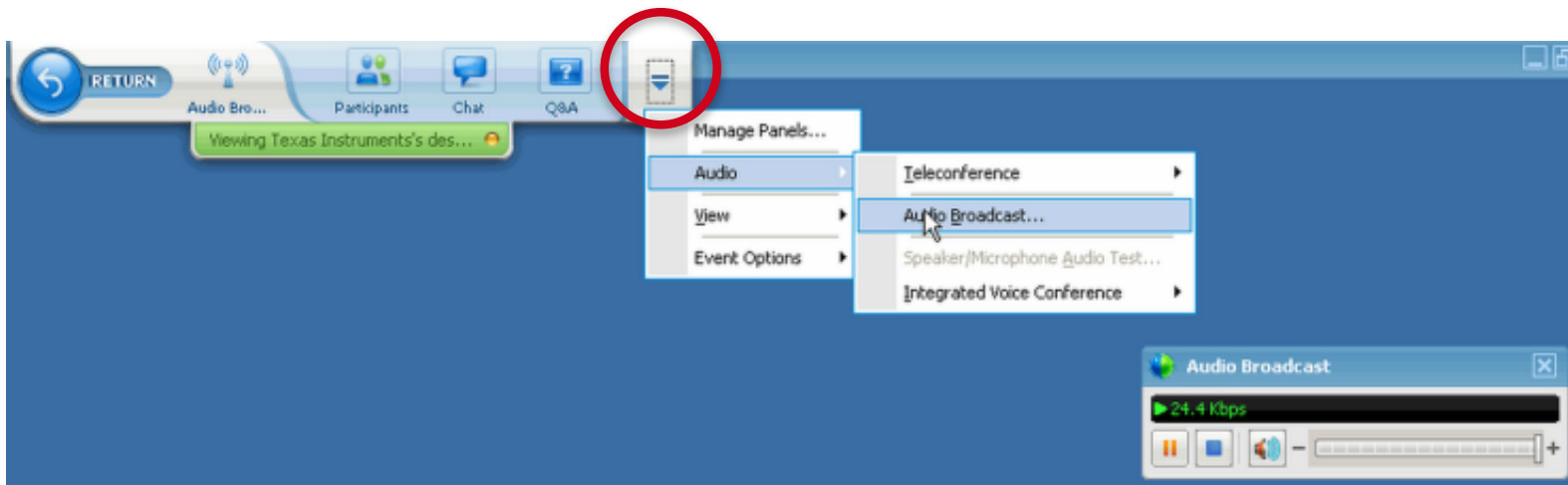
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Agenda

- Welcome & introductions
- A Lesson to Introduce the Chain Rule using CAS
 - TI-Nspire CAS “Chain_Rule”
 - TI-Nspire CAS “Chain, Chain, Chain”
- Using Math Boxes and the Lists and Spreadsheet Application
 - Using TI-Nspire CAS for dynamic visualization – “beyond black box/white box”
 - Investigating derivatives and antiderivatives – numerical, graphical, and symbolic connections
- AP Questions
 - The four approved calculator operations
 - How CAS is handled when writing AP questions.
- Online Resources
- *Webinar Giveaway: complimentary registration for the T³ International Conference*

Expected Outcomes:

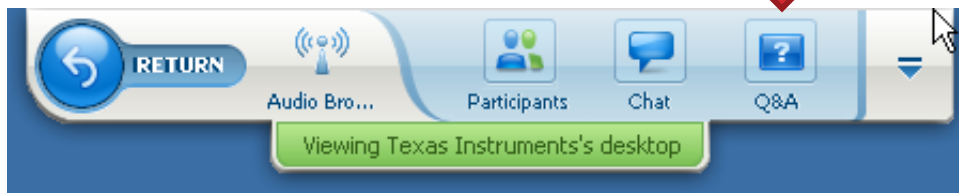
- **Use CAS** to discover the Chain Rule by observing patterns.
- **Investigate** the use of Math Boxes and the spreadsheet for dynamic visualization and to make representational connections
- **Learn** how AP* questions are written to utilize the four approved operations and to avoid a CAS advantage.

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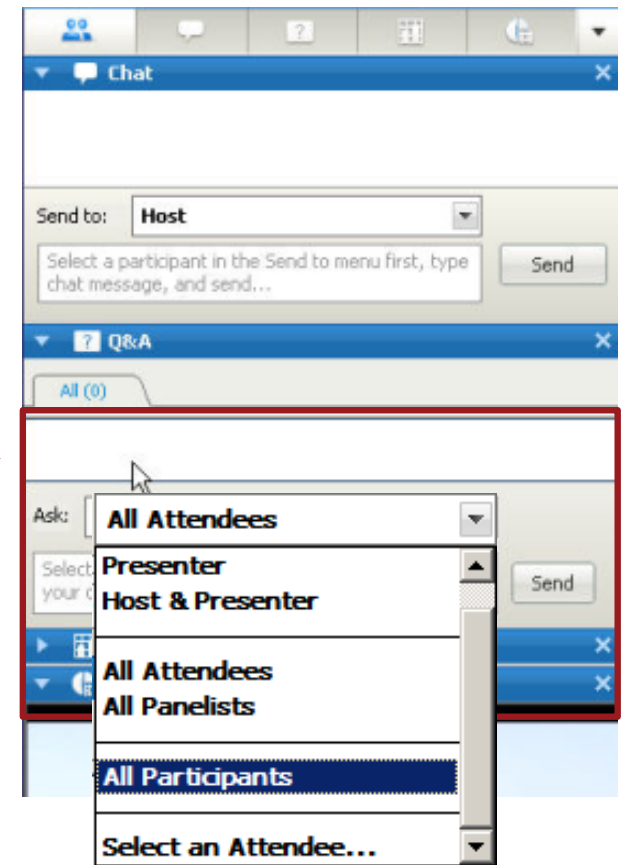
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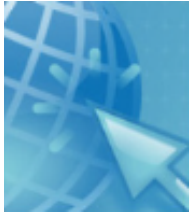
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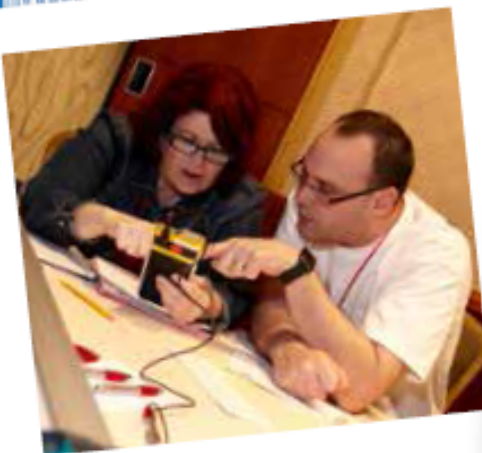
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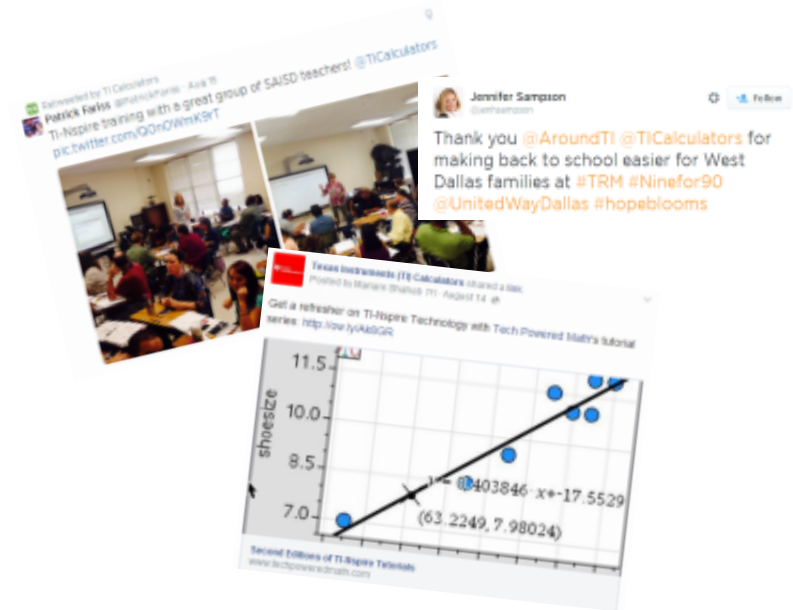
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Presented by: Todd Morstein and Tom Reardon. See archive at <http://education.ti.com/tiwebinars>

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