ST. NORBERT COLLEGE
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Twenty-Eighth Annual

Pi Mu Epsilon

Regional Undergraduate Math Conference

November 1-2, 2013

Featured Speaker: Annalisa Crannell

Franklin and Marshall College

Annalisa Crannell

Annalisa Crannell is a Professor of Mathematics at Franklin & Marshall College and recipient of the MAA's most prestigious teaching award (the 2008 Deborah and Franklin Tepper Haimo Award). Her early research was in topological dynamical systems (also known as "Chaos Theory"), but she has become active in working with mathematicians and artists on Projective Geometry applied to Perspective Art.   Together with mathematician/artist Marc Frantz, she is the author of Viewpoints: Mathematical Perspective and Fractal Geometry in Art. She especially enjoys talking to non-mathematicians who haven't (yet) learned where the most beautiful aspects of the subject lie.

Math and Art: The Good, the Bad, and the Pretty

How do we fit a three-dimensional world onto a two-dimensional canvas? Answering this question will change the way you look at the world, literally: we'll learn where to stand as we view a painting so it pops off that two-dimensional canvas seemingly out into our three-dimensional space. In this talk, we'll explore the mathematics behind perspective paintings, which starts with simple rules and will lead us into really lovely, really tricky puzzles. Why do artists use vanishing points? What's the difference between 1-point and 3-point perspective? Why don't your vacation pictures don't look as good as the mountains you photographed? Dust off those old similar triangles, and get ready to put them to new use in looking at art!

In the Shadow of Desargues

Those of us who teach projective geometry often nod to perspective art as the spark from which projective geometry caught fire and grew. This talk looks directly at projective geometry as a tool to illuminate the workings of perspective artists. We will particularly shine the light on at Desargues' triangle theorem (which says that any pair of triangles that is perspective from a point is perspective from a line), together with an even simpler theorem (you have to see it to believe it!). Given any convoluted, complicated polygonal object, these theorems allow us to draw that object together with something that is related to it--- its shadow, reflection, or other rigid symmetries---and we'll show how this works. (If you enjoy doodling or sketching, bring your pencil, a good eraser, and a straightedge.)

Again this year:
Face Off! The Mathematics Game Show

What is it? Face Off is a mathematics quiz show with questions from the broad realm of mathematics. And we mean broad! Teams of 2-4 students representing their schools compete to answer these questions. For more information, visit the Face Off website.

http://www.uwosh.edu/faculty_staff/szydliks/faceoff.htm

Face Off Organizers: Dr. Ken Price (pricek@uwosh.edu, (920)424-1057),
                                       Dr. Steve Szydlik (szydliks@uwosh.edu, (920)424-7346)

Please contact one of the **Face Off** organizers if you would like to enter a team. Any (undergraduate) student who has taken or is enrolled in Calculus I is eligible to join a Face Off team representing their school. If a school doesn't have enough interested students, contact the organizers anyway – we can combine students to form hybrid teams. Space will be limited, so form a team soon and let us know that you'd like to play Face Off!

TENTATIVE SCHEDULE

FRIDAY, NOVEMBER 1, 2013

5:00 p.m.   Cookies and Registration in Cofrin Hall
5:30 p.m.   Student Talks

7:30 p.m   **Annalisa Crannell**   "Math and Art: The Good, the Bad, and the Pretty"

8:30 p.m.   Face Off! The Mathematics Game Show

Pizza Social to follow immediately.

SATURDAY, NOVEMBER 2, 2013

8:30 a.m.   Conference Registration and Continental Breakfast in Cofrin Hall
9:00 a.m.   Student Talks

11:00 a.m**.**   **Annalisa Crannell** "In the Shadow of Desargues"

This conference is free and open to anyone interested in undergraduate mathematics. Any full-time student who has not yet earned a master's degree is welcome to give a student talk.

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ACCOMMODATIONS

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Kress Inn	SNC campus--across the street from Cofrin Hall A block of rooms at the Kress Inn is being held at $72.95 each until at least October 14. Mention the math conference!	(800) 221-5070 or (920) 403-5100
Sleep Inn	1600 Lawrence Dr., De Pere	(920) 338-8800
Comfort Inn	2841 Ramada Way, Green Bay	(920) 498-2060
Country Inn & Suites	2945 Allied St., Green Bay	(920) 336-6600
Exel Inn	2870 Ramada Way, Green Bay	(920) 499-3599
Fairfield Inn	2850 S. Oneida St., Green Bay	(920) 497-1010

St. Norbert College has received a $2,600 grant from the MAA and the NSF for the purpose of enhancing our undergraduate research conference in mathematics. Student attendees (through their faculty sponsors) will receive 37 cents per mile for the round-trip travel to SNC (up to a total of 800 miles per school). There is typically a limit of one mileage grant per school.   If there is money left over at the application deadline (October 28) the unallocated money will be be used to increase the mileage amount

All travel money will be set aside in the order in which student speakers pre-register.
All travel support will be paid (through the MAA) after the conference. Please save relevant receipts!

In order to apply for travel support, please sign the form near the bottom of the next page or submit the form via e-mail.

Please encourage your students to speak. The more student speakers we have this year, the more likely we are to receive funding again next year.

PRE-REGISTRATION FORM

School Affiliation _____   Contact Person _____

Address _____   Phone Number _____

_____   E-Mail _____

Attending:

Name	Housing?*	Gender	Fri/Sat/Both	Pizza?	Speaking?
_____	____	____	____	____	____
_____	____	____	____	____	____
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*A limited number of students from schools will be able to stay overnight in an SNC dorm. Please bring sleeping bags and pillows – you might be sleeping on the floor!

We welcome student presentations on any topic and any undergraduate mathematics level. Sources could include: class projects, interesting solutions to problems, REU results, senior projects, or anything else that might appeal to undergraduate math students.

Name of Speaker: _____

Title of Talk: _____

Length of Talk (check one): ___ 15 minutes (preferred)   ___ 30 minutes   (if necessary)

Time Preference (check one): ___ Friday night ;   ___ Saturday morning ;   ___ No preference

Brief Abstract:

Our institution is applying for **travel support**: _____   (Signature of Faculty Sponsor)

(See previous page for more information.)

Duplicate this form as necessary and mail to: John Frohliger

(or, preferably, respond by e-mail)   St. Norbert College

100 Grant Street

De Pere, WI 54115

DEADLINE: October 28, 2013, at 3:00 De Pere time (Central time)!

Any questions? Contact: John Frohliger (920) 403-1339; FAX: (920) 403-4098; e-mail: john.frohliger@snc.edu