

SSHE-MA
Annual Conference
East Stroudsburg University of PA

Presentation Abstracts

Friday, March 26, 2004

Presentation #1 3:00—3:25 Stroud 401
Presenter: **Lyn I Phy**, Kutztown University of PA

Title: Restrictions of BK Spaces

Brief Description: Given a BK space X , a restriction of X is a particular quotient space that preserves certain properties of X . This talk discusses such properties, some of which are accessible to undergraduate analysis studies.

Presentation #2 3:00—3:25 Stroud 403
Presenter: **Edward Hogan**, East Stroudsburg University of PA

Title: Educating and Being Educated in Nineteen-Century America: The case of Benjamin Peirce

Brief Description: Peirce was the leading mathematician in the United States during the middle of the 19th century. This paper discusses his education and his work as a professor at Harvard.

Presentation #3 3:30—4:20 Stroud 401
Presenter: **Andrzej M. Zarach**, East Stroudsburg University of PA

Title: Stereographic Projection and Basic Algebra

Brief Description: This is a lecture presented in a Multivariable Calculus class. A parameterization $x = x(s, t)$, $y = y(s, t)$, $z = z(s, t)$ where $-\infty < s, t < +\infty$ of the unit sphere $x^2 + y^2 + z^2 = 1$ is described. Then the following problem is added. Suppose that (s, t) moves along a circle with the center at (a, b) and the radius r . At the same time (x, y, z) moves along some curve on the unit sphere. Describe the curve on the unit sphere. A complete answer is given and proven by means of simple algebra.

Presentation #4 3:30—3:55 Stroud 403
Presenter: **John B. Polhill**, Bloomsburg University of PA

Title: **The First-Year College Experience for Mathematics Majors**

Brief Description: The freshman year can be very difficult for college students. I will discuss a 1-credit course offered at Bloomsburg University to encourage and support freshman mathematics majors.

Presentation #5 4:00—4:50 Stroud 403
Presenter: **John H. Riley**, Bloomsburg University of PA

Title: **Some Analysis of the PSSA**

Brief Description: The PSSA is very important to Pennsylvania education. In this talk, I describe the distribution of PSSA current scores, what the NO Child Left Behind act requires and the actual scores of the tests (the scores reported are scaled scores.)

Presentation #6 4:30—4:55 Stroud 401
Presenter: **Kevin K. Ferland**, Bloomsburg University of PA

Title: **What is Discrete Mathematics?**

Brief Description: Almost every college has a course on discrete mathematics. However there is a wide spectrum of topics and emphasis. The range of topics will be discussed, and then my own opinion of what is important will be given. The fun will then erupt as others are invited to share their opinions.

Presentation #7 5:00—5:25 Stroud 401
Presenter: **Francis J. Vasko**, Kutztown University of PA

Title: **Does Marilyn Know Her Game Theory?**

Brief Description: This presentation demonstrates that Marilyn (Ask Marilyn Parade magazine column) gave the incorrect answer to a game theory question. Also, the correct answer to this question is discussed. (The detail can be found in attached paper.)

Discussion #8 5:00—5:50 Stroud 403
Leader: **Stephen Gendler**, Clarion University of PA
Title: **Mathematics General Education: What is it? What should it be?**

Presentation #9 5:30—5:55 Stroud 401
Presenter: **Linda Iseri**, Mansfield University of PA

Title: **Object and Process: Two sides of the same coin (concept)**

Brief Description: In this talk, I will present the notion that most mathematical concepts can be viewed from two different perspectives. Included will be ways to recognize how your students are thinking about important concepts and implication for instruction.

Presentation #10 8:00—9:00 Beers Lecture Hall
Featured Speaker: **Dr. Michael Moody**, University (see program schedule for details)

Saturday, March 27, 2004

Presentation #11 9:00—9:25 Stroud 401
Presenter: **Yevgeniy Galperin**, East Stroudsburg University of PA

Title: **Embeddings into Modulation Spaces**

Brief Description: We discuss the basic theory of modulation spaces of time-frequency analysis and describe a class of uncertainty principles in the form of compact embeddings of Fourier-Lebesgue spaces into modulation spaces. These embeddings prove practical, sufficient conditions for a function to belong to a modulation space.

Presentation #12 9:00—9:25 Stroud 403
Presenter: **Donna A. Dietz**, Mansfield University of PA

Title: **3D Manipulatives for Undergraduate Geometry Classes**

Brief Description: This presentation will cover the use of some basic 3D manipulatives, such as balloons and paper polyhedra, which can enhance undergraduate exploration of non-Euclidean geometry. Students' intuition of non-Euclidean spaces is strengthened,

and their enjoyment of the subject is augmented by teamwork in a laboratory-style setting. Copies of sample labs and manipulatives will be available at the presentation.

Presentation #13 9:30—9:55 Stroud 401
Presenter: **Phillip J. Mazurowski**, Clarion University of PA

Title: **Searching for Pythagorean Triples** (Student Presentation)

Brief Description: A look at the presence of Pythagorean Triples in complex numbers and circles. Also investigate consecutive Pythagorean Triples, how they are generated, and how they are related to Fibonacci's sequence.

Presentation #14 9:30—10:20 Stroud 403
Presenter: **Elaine Carbone**, Clarion University of PA

Title: **An Update and a Call for a Partnership in Preparing Master Mathematics Teachers**

Brief Description: During the SSHE-MA meeting at IUP last spring, the proposed Master's program at Clarion University was discussed. This year Clarion now has an official Masters in Education with a concentration in secondary mathematics. An update on the program will be presented followed by a discussion of how other universities might become a partner with Clarion in considering a state or regional graduate program.

Presentation #15 10:00—10:25 Stroud 401
Presenter: **Megan Holben/Michelle Smith**, Bloomsburg University of PA

Title: **Smooth Riding** (Student Presentation)

Brief Description: We will discuss our solution to the 2004 MCM Problem B: A Faster Quick Pass System. The aim is to give amusement park visitors the option to not wait in a regular line and to instead given a later time when boarding is guaranteed to be faster. How should the later time be assigned?

Presentation #16 10:30—12:15 Stroud 402
Featured Speaker: **Dr. David W. Henderson**, Cornell University (see program schedule for description)