



March 2013



Matters Mathematical
The Newsletter of the Pacific Northwest Section of the Mathematical Association of America

Willamette University Meeting April 12-13, 2013

April 2013 PNW MAA Meeting at Willamette University

The spring meeting of the PNW MAA is just around the corner! The Mathematics Department of Mathematics of Willamette University of Portland is excited to host the conference this year. Project NExT members can gather Thursday evening (April 11) for an informal dinner to fuel up for Friday's Project NExT meeting; the location is to be announced.

Our invited speakers are David Kung (St. Mary's College of Maryland), Liz McMahon (Lafayette College), and Frank Farris (Santa Clara University).



David Kung's talk is entitled *How Math Made Modern Music Mad Irrational*. He will discuss various musical scales in mathematical terms and demonstrate on the violin! Liz McMahon will talk about *Mathematics in the Game of SET™*. She will relate this familiar game to the study of finite affine geometries. Frank Farris' talk is *Undercover Symmetry*, in which he will discuss new types of symmetry he discovered in wallpaper patterns, and which connect unexpectedly to eigenvalues!

In addition, Dr. Kung will lead a minicourse on Mathematics for Social Justice, and Stuart Boersma and Cheryl Beaver will lead one on Cryptology (geared toward students, but faculty are welcome, too!). Both minicourses are Friday afternoon, 3-5:30 PM.

More information, including full abstracts of the talks and registration and local information (like hotels — special room rates are still available; deadline March 19; book now!) can be found at:

http://www.willamette.edu/cla/math/PNWMAA_2013/index.html

The online registration deadline is Friday, March 29 at 4PM.

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KRYPTOS³: A Series of Cryptanalysis

Challenges

April 18-22

KRYPTOS is a contest open to **undergraduate students**. The theme of the contest is centered around the breaking, or cryptanalysis, of ciphers (secret writing). Each challenge presents contestants with a brief scenario together with some ciphertext (encoded message). The goal is to discover the original English plaintext message!

Clues to help break the cipher may be contained in the actual ciphertext or in the details of the accompanying scenario.

While it is not the intent of this contest to test overly technical aspects of cryptanalysis or advanced mathematical algorithms, some familiarity with basic codemaking and codebreaking is certainly helpful. Some useful sources include:

- Challenges from [last year's contest](#)
- The [American Cryptogram Association](#)
- Wikipedia entries for [Cryptography](#) and [Cryptanalysis](#)
- *The Code Book* by Simon Singh.
- *Codes and Ciphers* by R.F. Churchhouse
- *Codes, Ciphers and Secret Writing* by Martin Gardner

Please announce this contest to your students!

We also expect to be able to offer a Cryptology minicourse to interested students at the upcoming PNW-MAA meeting which will be held the weekend before Kryptos begins. [The official meeting website](#) should have the details as they become available.

Visit: <http://www.cwu.edu/~boersmas/kryptos/> for more information -- including instructions on registering students for the contest and a one-page flyer that you can post around your department or campus.

Stuart Boersma and Cheryl Beaver

KRYPTOS is sponsored by the Pacific Northwest Section of the Mathematical Association of America together with Central Washington University and Western Oregon University.

Editor's Greetings

We are on pins and needles getting things ready here at Willamette for the section meeting. We're looking forward to hosting the section in our nearly new building!

Be sure to get registered — the meeting is coming soon.

Colin Starr, cstarr@willamette.edu

Interested in Project NExT?

Project NExT (New Experiences in Teaching) is a professional development program for new or recent graduates in the mathematical sciences (including pure and applied mathematics, statistics, operations research, and mathematics education). It addresses all aspects of an academic career: improving the teaching and learning of mathematics, engaging in research and scholarship, and participating in professional activities. It also provides the participants with a network of peers and mentors as they assume their new responsibilities.

1. What are the requirements for the national program?

Applicants for the national program must have a Ph.D. in the mathematical sciences and be in the first two years of a full-time college/university teaching position. For more information, visit <http://archives.math.utk.edu/projnext>

2. What are the requirements for the PNW Project NExT section?

Applicants for the PNW section must have a Ph.D. or a master's degree in the mathematical sciences and be within the first four years of full-time teaching at a college, university, or community college in the PNW. For more information, visit <http://www.math.umt.edu/pnwnext/> or contact Jenny McNulty at McNulty@mso.umt.edu.

3. How often do we meet?

Participants in the national program meet at two consecutive MathFests and at the intervening Joint Meetings of the AMS and MAA. Participants in the section NExT meet at two consecutive PNW MAA meetings.

4. When can I apply?

This year's deadline is April 12, right in the middle of our conference!. For more information, please visit the websites listed above.

Upcoming Events and Conferences

Upcoming Meetings and Events:

2013 KRYPTOS (see p. 2)
2013 PNWMAA in Salem, Oregon
<http://sections.maa.org/pnw/events/> (section)
http://www.maa.org/subpage_4.html (national)

Salem meeting website:

http://www.willamette.edu/cla/math/PNWMAA_2013/index.html

Events at Salem PNW MAA meeting at Willamette University

Friday, April 20

- Minicourses:
 David Kung, “Closer to Fair: Social Justice in Mathematics, Mathematics for Social Justice”
 Cheryl Beaver and Stuart Boersma, “Cryptology”
- Project NExT sessions
- Friday evening lecture and reception
- Friday evening student gathering

Saturday, April 21

- Invited and contributed talks
- Special sessions
- Banquet
- Invited Lecture

PNW NExT Section Fellows

The deadline for applying to be a PNW Project NExT Fellow has been extended to March 15, so there is still time to apply! Please contact Jenny McNulty, McNulty@mso.umt.edu.

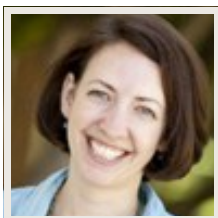
SECTION NEWS

Alaska

The Mathematical Sciences Department of the University of Alaska Anchorage will be hiring a one year Visiting Assistant Professor. The search is under way, and should be concluded this month. This position is a replacement for Dr. Hilary Davies, who is retiring from our department after this summer after many years of service.



Oregon



Kathryn Nyman of **Willamette University** received tenure this spring. Congratulations, Kathryn!

Kathryn Nyman Willamette is also proud to host the 2013 PNW MAA Section meeting in Salem, Oregon.

Willamette also has some sad news to report. Professor Emeritus **Steve Prothero** died Friday, March 1 after a protracted battle with cancer. Steve taught in the math department and served as golf coach at Willamette for nearly half a century and left an indelible mark on the department. His team spirit, humor, and institutional memory will all be missed.

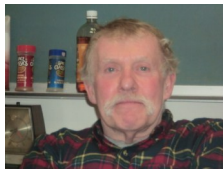
Washington

The mathematics department at **Central Washington University (CWU)** welcomes Jim Miller as its newest faculty member. Previously, Jim taught math and science at Cle – Elum/ Roslyn high school for 35 years. Mr. Miller earned bachelor degrees in math



Jim Miller

and science from the University of Washington and he also has a MAT degree from CWU. Jim commutes to Ellensburg from his 100 acre farm in Cle – Elum where he and his wife grow hay and raise horses.



Rick Hilliard

The CWU mathematics department would also like to announce the retirements of **Rick**

Hilliard and **Dan Curtis**. Rick Hilliard has taught at CWU since 1987. Rick will move to Ryderwood, WA this June where he plans to do some fishing, hunting and traveling. Dan Curtis came to CWU in 2002. Before Dan arrived in Ellensburg he taught at Kanas State University for 20 years and then he worked for 10 years at Boeing as an Engineer.

Dan and his wife will be moving to Florida this summer where he plans to get back into bicycling.



Dan Curtis