

MSCS MESS

Department of Mathematics, Statistics, and Computer Science
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Happy Native American Heritage Month!

This week's issue features some influential mathematicians, statisticians, and computer scientists of Native American heritage. Read further on for details on upcoming events in MSCS!

Richard Tapia

Richard Tapia began his postsecondary education at a junior college in California, before going on to eventually earn a PhD in mathematics at UCLA. Today, he is University Professor of Computational and Applied Mathematics at Rice University. In 2011, he was awarded the National Medal of Science, the top award given by the United States to researchers. Tapia's lineage is unclear, but he believes that he is descended from the Tarahumara group in Chihuahua. His research focuses on mathematical optimization. (Source: SACNAS.)



Robert Megginson

Robert Megginson is the Arthur F Thurnau Professor of Mathematics at the University of Michigan. He was raised in rural Illinois and is of Lakota heritage. Megginson earned a PhD in mathematics from the University of Illinois; while his original field of study was functional analysis, specifically Banach spaces, he has more recently gravitated toward research in math education, particularly the uplifting of underrepresented people in mathematics. He spends his summers on the Turtle Mountain Chippewa reservation, working directly with Native American students. (Source: SACNAS.)



Mary Ross

Mary Ross, of Cherokee descent, was the first Native American female engineer. She earned a bachelor's degree at Northeastern State College, followed by a master's degree in mathematics from Colorado State College. She then worked at Lockheed and Missiles and Space Company, rising up the ranks of the engineering division. Ross wrote the NASA Planetary Flight Handbook Vol. 3, which contained projections for NASA space travels up to 40 years out. Ross retired from Lockheed in 1973, then for several years after was an active advocate for increased opportunities in mathematics for women and Native Americans. (Source: Agnes Scott College.)



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Today's Research Seminar

Title: Crystal Isomorphisms and Recent Applications
Speaker: Prof. Adam Schultze
Date: **Friday, November 5**
Time: 3:30 PM
Location: RNS 204

About the talk: In this second part of Prof. Schultze's talk, we recall the two combinatorial models from last week and then construct an explicit isomorphism between them. The process of mapping from the Tableau model to the quantum alcove model leads to a method which greatly simplifies the calculation of the crystal energy function, a statistic which was classically defined recursively on the vertices of the crystal but can now be calculated locally.

About the speaker: Adam Schultze recently received his Ph.D. in mathematics from SUNY University at Albany. His research area is algebraic combinatorics, a field where abstract mathematical structures, often pertaining to certain symmetries, are broken down into discrete models.

CS Talks Next Week

The MSCS department is in the process of hiring a tenure-track computer science professor! The first candidate will be giving a colloquium on **Thursday, November 11 at 3:30pm in RNS 310**, as well as a research seminar on **Friday, November 12 at 3:30pm**, room TBD. Keep an eye out next week for posters with more information about the talks! The other candidates will be giving their talks a week later - read next week's MSCS Mess for info about those.

David McGowan, Editor
Laura Boehm Vock, Faculty Adviser
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