

NGCSU Spend Spring Break Presenting Math Research at Brigham Young University

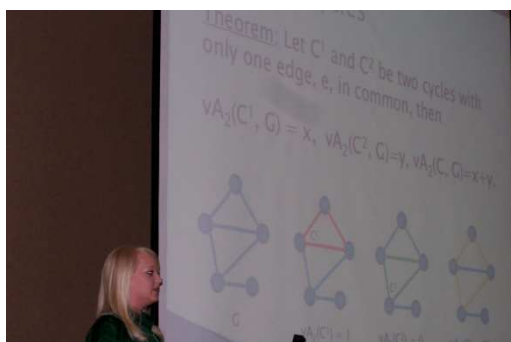


1 Amanda, Dusti, Lauren and Josh on BYU campus.

On Friday, March 20, 2009 four NGCSU students, Joshua Crunkleton, Dusti Nisbet, Amanda Peck and Lauren Prill, presented their research in mathematics at the 2009 CURM (Center for Undergraduate Research in Mathematics) spring research conference and MAA Intermountain Sectional meeting both held at Brigham Young University in Provo, Utah. Nisbet and Crunkleton, who worked under the advisement of Dr. Brad Bailey, presented their research in a talk entitled “Cutting Numbers and Vertex Attrition of Simple Connected Graphs”. Peck and Prill,

who worked under the advisement of Dr. John Holliday, presented their research in a talk entitled “Clustering Coefficients of Graphs and a New Model for the Clustering Coefficient”.

In addition to presenting their own research, the students had a lot to do during the conference. They attended three very informative and entertaining invited addresses, including one on Sudoku puzzles and another on symmetry and art in mathematics.



3 Dusti explains a theorem about vertex attrition.



2 Josh, Dusti and Amanda with other students at the "Y".

The address on symmetry and art was given by Joe Gallian, a prominent mathematician and a former MAA president. The students also attended a panel on graduate school and enjoyed presentations on a myriad of topics from mathematical biology, applied math, knot theory, and more. Indeed the students were busy, but they still found time for a little fun. During their one of their longer breaks, the students choose to join a group of students on a hike up to the “Y”, a large stone and concrete Y placed on the side of a mountain near Provo. The hike to the “Y” was just one of several opportunities the students had to

interact with other undergraduates engaged in research at institutions across the country.



4 The students pose with Joe Gallian.



5 Lauren explains clustering coefficients.



6 Amanda gives details of an application of her research to ecology. 7 Josh defines cutting numbers.



The Nisbet, Crunkleton, Peck and Prill began their work at the beginning of Fall Semester 2008 and in January 2009, the two groups presented posters at the MAA Undergraduate Poster Session at the Joint Mathematics meeting of the MAA and AMS in Washington DC. The poster created and presented by Nisbet and Crunkleton won a prize for that event. The research of the four students was supported by a mini-grant through CURM that was obtained by Dr. Bailey and Dr. Holliday. The Center for Undergraduate Research in Mathematics was founded by Dr.

Michael Dorff of Brigham Young University and is supported both by BYU and the National Science Foundation. The purpose of CURM is to support undergraduate research in mathematics and thereby encourage students to pursue advanced degrees and careers in mathematics and other STEM areas.



8 Dusti, Josh, Lauren and Amanda at the conference.

Having attended the two conferences, the students will now continue their work by submitting a paper both to CURM and to a journal for publication, and will present their findings during NGCSU's Honors Conference. The four

students have represented the University very well in their hard work and their travels.