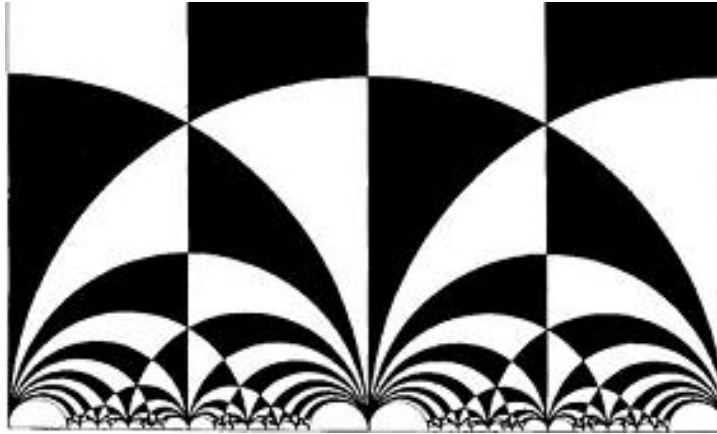


Department of Mathematics

Spring 2017 Colloquium Series



“Vector-Valued Modular Forms and the Bounded Denominator Conjecture”

Christopher Marks,
CSU, Chico

Thursday, March 2, 2017

Behavioral and Social Sciences Building Room 204, 4 pm

Modular forms are a fascinating and historic class of functions that involve themselves in many areas of mathematics, including number theory, group theory, complex analysis, Riemann surface theory, combinatorics, and more recently theoretical physics. This latter application has motivated a natural generalization of the theory to the vector-valued setting, which brings into play the powerful techniques of representation theory. In this talk, I will give an introduction to the theory of modular forms, both scalar and vector-valued, which should be suitable for those familiar with the basics of complex analysis and group theory. Then I will discuss an open problem in my area of research, the so-called Bounded Denominator Conjecture, which concerns the Fourier coefficients of vector-valued modular forms. If time permits, I will also explain how this conjecture connects to string theory in theoretical physics.

Christopher Marks is a native of Chico, CA and obtained a B.A. degree in Mathematics from CSU, Chico in 1999. He subsequently obtained a Masters in Pure Math from CSU, Sacramento and a PhD in Mathematics from UC Santa Cruz in 2009. After postdoctoral positions at the Max Planck Institute for Mathematics in Bonn, Germany and at the University of Alberta, he was hired as an Assistant Professor at Chico State in 2014.

To view this poster online, go to <http://www.humboldt.edu/math/news-and-events/math-colloquium>

We cordially invite you to the Pre-Colloquium Tea on the third floor of the BSS building at 3:30 pm on Thursday.