



Belyi Maps for Trees of a Given Passport

Naiomi T. Cameron

Lewis & Clark College

ncameron@lclark.edu

Dessin is short for *dessin d'enfant*, which is French for “child's drawing.” Introduced in the late 1990's by A. Grothendieck, a dessin can be described as a connected bicolored graph where the edges around every vertex are cyclically ordered. Grothendieck proposed that dessins can be realized by Belyi maps, which are meromorphic functions from a Riemann surface to the extended complex plane having at most three critical values. In this talk, I will discuss the origins, outcomes, and future of a summer undergraduate research project which was designed to determine Belyi maps that realize certain classes of bicolored trees embedded on the complex sphere.

Biography

Naiomi Cameron was born in Washington, DC and raised in Providence, RI. She received her BS (1995) and PhD (2002) in mathematics from Howard University. Her PhD thesis in combinatorics was titled: “Random Walks, Trees and Extensions of Riordan Group Techniques.” Currently, she is an Associate Professor of Mathematics at Lewis & Clark College, where she has been since 2006. Her research interests fall into areas of enumerative and algebraic combinatorics and number theory, including the theory of the Riordan group, lattice path enumeration, combinatorial identities, permutation patterns and statistics, and the theory of dessins.