

1125-05-1052      **Steven Klee\***, Seattle University Department of Mathematics, 901 12th Avenue, Seattle, WA  
98122. *Prime labelings of graphs with the Gaussian integers.*

A classic conjecture in graph theory asks whether it is always possible to label the vertices of a tree on  $n$  vertices using the numbers  $1, 2, \dots, n$  so that the labels on adjacent vertices are relatively prime. During the summer of 2015, some of my REU students studied an extension of this problem to the Gaussian integers, which are the complex numbers whose real and imaginary parts are both integers. In this talk, I will outline what we know, what we would like to know, and some interesting complications that arise when extending this problem to the Gaussian integers. (Received September 14, 2016)