

CLE(4) and the Gaussian Free Field

Jason P. Miller (Stanford University)

We will discuss various connections between CLE(4) [conformal loop ensemble] and the discrete and continuum Gaussian free fields. Specifically, we will show that certain level sets of the discrete free field converge to CLE(4) in the limit, that CLE(4) can be realized as a functional of the continuum free field, and conversely that the continuum free field can be constructed naturally as a functional of CLE(4). This is joint work with Scott Sheffield.