

Abstract

We shall discuss motivations from mathematics and physics for developing p -adic sigma models. In particular, for bosonic p -adic strings moving in a curved target spacetime, we construct the sigma model, and show that the vacuum Einstein equations of the target are a consequence of a worldsheet scaling symmetry of the quantum p -adic strings, similar to the ordinary bosonic strings case. If time permits, we shall also mention motivations from physics for considering p -adic strings mapping to p -adic targets, and/or conjectural relations to zeros of the Riemann zeta function. This is based on a recent joint work with Bogdan Stoica and Shing-Tung Yau.