DISCRETE WEIERSTRASS-TYPE REPRESENTATIONS

MASON PEMBER

The Weierstrass-Enneper representation is a useful tool for creating examples of minimal surfaces in Euclidean 3-space from holomorphic functions. Similar representations have been discovered for other special classes of surfaces such as maximal surfaces in Lorentzian 3-space and constant mean curvature 1 surfaces in hyperbolic 3-space. Analogous representations have been developed for the discrete counterparts to these smooth surfaces using a discrete notion of holomorphic functions. In this talk we shall discuss these representations and give a unified geometrical interpretation of them using transformation theory.

Politecnico di Torino
Email address: mason.pember@polito.it