

Meeting: 1002, Pittsburgh, Pennsylvania, SS 4A, Special Session on Partial Differential Equations and Applications

1002-68-199 **Xianfeng Gu*** (gu@cs.sunysb.edu), 1707 A Quentin Place, Coram, NY 11727. *Computational Conformal Geometry and Its Applications.*

Riemann surface theory is a rich and abstract field in pure mathematics. Recent developments in computer science makes it practical to compute conformal structures of real surfaces.

This talk will introduce the concepts and methods in computational conformal geometry and its applications in computer graphics, computer vision and medical imaging.

The major applications include manifold spline in geometric modeling, conformal brain mapping, shape anylasis and geometry video. Some open problems in computational conformal geometry will be addressed. (Received September 14, 2004)