Carnegie Mellon University
Graphics Group
Presents

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Functional Representation of Deformable Surfaces for Geometry Processing

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Creating and understanding deformations of surfaces are recurring themes in geometry processing. As smooth surfaces can be represented in many ways from point clouds to triangle meshes, one of the challenges is being able to compare or deform consistently discrete shapes independently of their representation. A possible answer is choosing a flexible representation of deformable surfaces that can easily be transported from one structure to another. Toward this goal, the functional map framework proposes to represent maps between surfaces and, to further extents, deformation of surfaces as operators acting on functions. The major advantage of such point of view is to deflect challenging problems, such as shape matching and deformation transfer, toward functional analysis whose discretization has been well studied in various cases. In this talk I will expose the latest advance to use this framework for shape editing and geometry processing.

Etienne Corman is currently a PhD student at the Ecole Polytechnique in Paris. While pursuing his Master's Degree, he spent three months as a research assistant in Hong-Kong working optimization algorithm. Determine to travel around the world, he started working on geometry processing and conveniently collaborated with great researchers at Stanford and MIT.

Host: Keenan Crane To meet with Etienne please contact: Christina Contreras, at Christina@cs.cmu.edu
*Light Refreshments will be provided