



Technion-Israel Institute of Technology

Computer Science Department

Center for Graphics and Geometric Computing

CGGC Seminar – PhD Talk

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Representations and applications of differential operators in geometry processing

Geometry processing deals with the design of effective discrete methods for complex problems which appear in various areas of computational science and engineering. In practice, choosing a particular discretization machinery greatly affects the formulation of the problem and the analysis and design of its computational method. Consequently, methods may differ in practical aspects such as ease of implementation and preservation of geometric features due to the choice of discretization.

In this talk, I will describe some of the results we achieved during my PhD. In particular, I will argue that in some cases rephrasing a geometrical problem in terms of linear mappings between vector spaces (operators) is beneficial when devising and implementing a discrete method. I will present a few tools that we developed and their application to challenging problems such as simulation of incompressible flows and thin films on curved domains. In addition, I will discuss the inverse problem of computing correspondences between scalar functions and its effective solution using our operator machinery.

The lecture will be held on Sunday, 26.03.2017, at 13:30, Taub 401

הזמנה זו מהווה אישור כניסה עם רכב לטכניון