UNIVERSITY OF MACAU
FACULTY OF SCIENCE AND TECHNOLOGY
DEPARTMENT of
COMPUTER AND INFORMATION SCIENCE

Ref: FST/SEM/00032/2013

"Computation and Applications of Centroidal Voronoi Tessellations"

by

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Date: 03/04/2013 (WEDNESDAY)
Time: 4:00PM – 5:00PM
Venue: J319 (University of Macau)

Abstract

Centroidal Voronoi Tessellation (CVT) has been receiving much research interest due to its widespread applications in science and engineering. After a brief review of related concepts and previous works, I shall discuss our recent results on the computation and applications of CVT: 1) A quasi-Newton method for computing CVT; 2) CVT for high quality mesh generation; 3) Modeling constant mean curvature surfaces using CVT. If time permits, I shall also present a comparative study on CVT and ODT--optimal Delaunay triangulation, which is a new, promising alternative to CVT for tetrahedral mesh generation.

Biography

Wenping Wang is Professor and Head of Computer Science Department at The University of Hong Kong. He received his B.Sc. and M.Eng from Shandong University (1983, 1986) and Ph.D. from University of Alberta (1992), all in computer science. His research covers computer graphics, visualization, and geometric computing. He has recently focused on mesh generation and surface modeling for architectural design. He is journal associate editor of Computer Aided Geometric Design (CAGD), Computer Graphics Forum (CGF), Computers & Graphics (CAG), and IEEE Transactions on Visualization and Computer Graphics (TVCG, 2008-2012). He also serves as program co-chair of several international conferences, including Pacific Graphics (PG) 2003, ACM Symposium on Physical and Solid Modeling (SPM) 2006, and International Conference on Shape Modeling (SMI) 2009, and conference chair of PG 2012, ACM SPM 2013 and SIGGRAPH Asia 2013.

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