Topological / Geometrical Methods and Data Structures for Real-World Data Analysis

Associate Professor François Anton
Technical University of Denmark

Date: 26 June 2013 (Wednesday)
Time: 10.30am – 11.30am
Venue: MAS Executive Classroom 1, MAS-03-06
School of Physical and Mathematical Sciences

This presentation will start by introducing interval analysis as well as continuous deformations of functions and topological spaces (homotopies). We will then present several applications of interval valued homotopies to data analysis in different fields: 3D/4D reconstruction using multi-beam echo sounder acoustic data and power and radiation emulation of hand-held devices. We will conclude this presentation with new potential applications of topological/geometric methods and data structures to data analysis.

Speaker Biography

François Anton is an Associate Professor at the Research Division of Geodesy of the National Space Institute, Technical University of Denmark (DTU). He received his Ph.D. in Computer Science from the University of British Columbia (UBC, Vancouver, Canada). He has been an Alberta Ingenuity Fund Post-doctoral Fellow at the University of Calgary, Canada. He has published more than 100 peer-reviewed publications in computing. His interests include computational geometry and topology, interval analysis, photogrammetry, computer graphics and spatio-temporal databases.

Host: Prof. Andrew Kricker, Division of Mathematical Sciences, School of Physical and Mathematical Sciences