

学术报告

Novel Convex Optimization Methods to Medical Image Registration and Reconstruction

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Venue: Room 112, Center for Applied Mathematics

Abstract: Many problems of medical image analysis are challenging due to the associated complex optimization formulations and constraints, extremely big image data being processed, poor imaging quality, missing data etc. On the other hand, it is highly desired to process and analyze the acquired imaging data, for example image registration and reconstruction etc., in an automated and efficient numerical way, which motivated vast active studies during the last 30 years, in a rather broad sense. This talk targets to present an overview of modern dual optimization theory, which delivers an advanced unified framework of mathematical analysis and high-performance numerical schemes along with a wide spectrum of applications. We focus on the optimization problems arising from the most interesting studies: registration and reconstruction, and present both analysis and high-performance numerical solutions in a unified manner in terms of dual optimization.

欢迎大家参加！