



深圳北理莫斯科大学

УНИВЕРСИТЕТ МГУ-ППИ В ШЭНЬЧЖЭНЕ

SHENZHEN MSU-BIT UNIVERSITY

应用数学讲座

Научный Семинар по Прикладной Математике

Research Seminar on Applied Mathematics

Руководитель: Доцент Чжан Е

主持人: 张晔 (副教授, 深圳北理莫斯科大学)

报告 (一)

报告人 / Докладчик / Speaker:

Dr. Guozhi Dong, Humboldt University of Berlin, Germany

题目 / Название / Title:

“Quantitative magnetic resonance imaging: From fingerprinting to learning-informed physics-based models”

时间 / Время / Time:

2019年10月9日, 下午6点半至8点 / 9 Oct. 2019, 18:30-20:00 p.m.

地点 / Место / Venue: 1教113/ Building 1, Room 113

摘要 / Аннотация / Abstract:

Magnetic Resonance Fingerprinting is put into the context of optimization and inverse problems. As the associated Bloch manifold is non-convex, and the accuracy of MRF algorithms is limited by the discretization size of the dictionary, a physically-oriented method for qMRI is proposed. Differently to conventional two-step models, our model is dictionary-free and described by a single nonlinear equation. This non-linear equation is efficiently solved via robust Newton type methods. Finally, I will connect these with our more recent work on learning-informed models which can have larger flexibility in dealing with more general quantitative imaging problems. Numerical tests end the talk. This is a joint work with Michael Hintermueller and Kostas Papafitsoros.

访问学者以及需要做报告的学者请联系 张晔 副教授 / Всем желающим выступить с докладами на семинаре просьба обращаться к Чжану Е ye.zhang@smbu.edu.cn