



复旦大学数学科学学院 数学综合报告会

报告题目: The effective boundary condition on a porous wall

报告人: Professor Igor Pazanin (University of Zagreb, Croatia)

时间: 2022-01-13 星期四 21:00 - 22:00

地点: ZOOM Id: 836 7313 8944; Passcode: 808818

报告摘要:

The aim of this talk is to present the derivation of the new effective boundary condition for the fluid flow in a domain with porous boundary. Starting from the Stokes system in a domain with an array of small holes on the boundary and using the homogenization and the boundary layers, we find an effective law in the form of generalized Darcy law. If the pores geometry is isotropic, then the condition splits in Beavers-Joseph type condition for the tangential flow and the standard Darcy condition for the normal flow. In the second part of the talk, we study the roughness-induced effects on the proposed Darcy-type boundary condition.

The talk is based on the joint work with Eduard Marusic-Paloka.

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