



## 复旦大学数学科学学院 数学综合报告会

报告题目: **Sinks and sources in chemotactic aggregation**

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报告时间: 2017-11-23 星期四 14:00-15:00

报告地点: 光华东主楼 1403

摘要: There are many instances in nature where chemotaxis happens surrounded by a fluid. Several approaches considering this possibility have recently given rise to a significant number of mathematical models, coupling Keller-Segel type systems with Navier-Stokes equations. In an attempt to get some deeper insight into the role of current fluids during chemotactic aggregation, we approach the case when the fluid flow is a given sink or else a source. When having a sink and radial symmetry in the initial data, we find, after a previous deduction of a novel singular Moser-Trudinger type inequality, a new condition depending on the velocity of the fluid flow for having global existence.

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