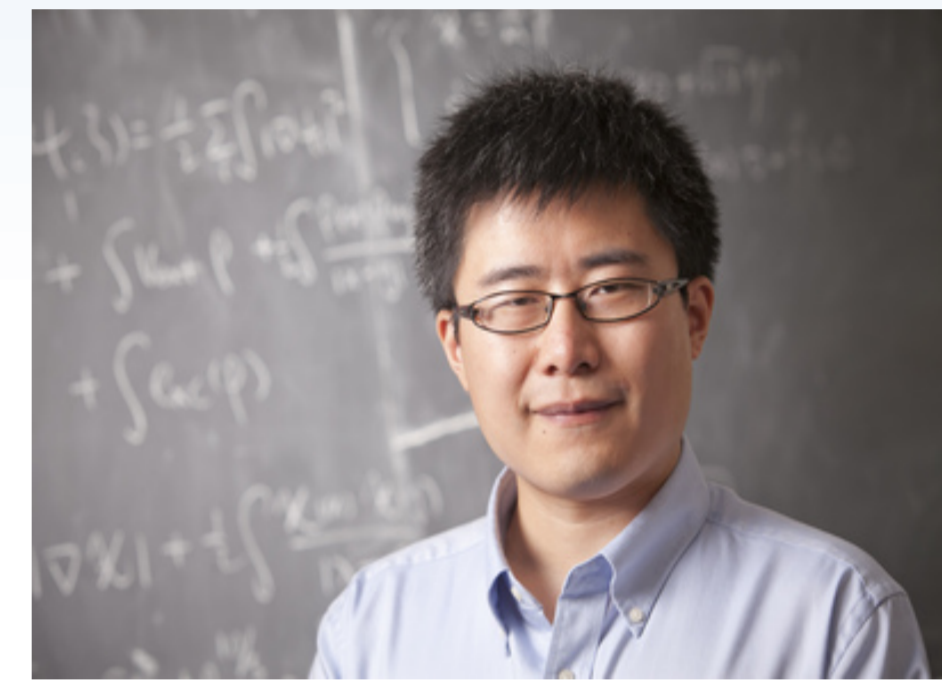




Analysis of Flow-based Generative Models

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Jianfeng Lu is a Professor of Mathematics, Physics, and Chemistry at Duke University. Before joining Duke University, he obtained his PhD in Applied Mathematics from Princeton University in 2009 and was a Courant Instructor at New York University from 2009 to 2012. He works on mathematical analysis and algorithm development for problems and challenges arising from computational physics, theoretical chemistry, materials science, high-dimensional PDEs, and machine learning. He is a fellow of AMS. His work has been recognized by a Sloan Fellowship, a NSF Career Award, the IMA Prize in Mathematics and its Applications, and the Feng Kang Prize.



Abstract: In this talk, we will discuss recent progress on mathematical analysis of flow based generative models, which is a highly successful approach for learning a probability distribution from data and generating further samples. We will talk about some recent results in convergence analysis of diffusion models and related flow-based methods. In particular, we established convergence of score-based diffusion models applying to any distribution with bounded 2nd moment, relying only on a L^2 -accurate score estimates, with polynomial dependence on all parameters and no reliance on smoothness or functional inequalities.

讲座时间:

2023. 11. 01 周三 上午10:00-11:00

会议地点: ZOOM会议室 会议ID: 354 143 7366 密码: 123456

主办单位:

中科院数学与系统科学研究院应用数学所
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