



Potential Theory Seminar

**Simion Stoilow Institute of Mathematics
of the Romanian Academy**

**Faculty of Math. and Computer Science
University of Bucharest**

SLE and PDEs

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(New York University Shanghai, China)

Tuesday, March 22nd 2022, 14:00 h, at IMAR, hall 306 – 307 “C. Bănica”

Meeting ID: meet.google.com/qsu-nygh-ycx, PIN: 294 400 435#

Abstract. In this talk I will very briefly introduce Schramm-Loewner Evolutions (SLE) theory and I will discuss some PDEs that appear naturally in this study. I will spend most of the time on a specific PDE that models a fundamental quantity in SLE theory: the density of the law of the SLE tip. I will present a series of recent results on this object based on the analysis of this PDE, obtained jointly with Yizheng Yuan and Oleg Butkovksy, as well as some open problems. I will also describe the progress of the SLE community in the study of a different PDE and describe some open problems as an invitation to the community for further discussions!