1154-81-1838 **Antonino Travia*** (atravia@mail.usf.edu) and **Razvan Teodorescu** (razvan@usf.edu). *A Yang-Mills Approach for Conformal Invariance in Turbulence.*

The relationship between conformal symmetry and stochastic processes has been a rapidly growing field over the last twenty years. In particular, such symmetry of Schramm-Loewner Evolution (SLE) curves in the plane has found many successes with a particular application being numerical evidence for conformal invariance's presence in the turbulence of a two-dimensional incompressible fluid. We present a theoretical approach to realize this correlation using techniques from Yang-Mills theory with a non-Abelian gauge group in order to explain interactions near zero-vorticity lines as well as its correspondence with the probabilistic approach to boundary conformal field theory. (Received September 16, 2019)