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Ilya Chevyrev-"Stochastic and rough analysis"

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Stochastic analysis is an area of mathematics that aims to make rigorous sense and study properties of differential equations with random functions. Such equations appear frequently in mathematical physics, finance, and biology. Random functions are often very rough and the solution theory of stochastic differential equations falls outside the scope of classical calculus, so new tools are needed to study them. In this talk, I will describe one of the tools, called rough analysis, that has been developed in the past two decades and which has significantly extended the scope of "classical"stochastic analysis.