1163-35-1213   **Ajay Chandra**, **Augustin Moinat** and **Hendrik Weber*** (`h.weber@bath.ac.uk`), Department of Mathematical Sciences, University of Bath, Bath, BA2 7AY, United Kingdom. *A priori bounds for Singular Stochastic PDEs.*

Initiated in groundbreaking works by Hairer and Gubinelli, the theory of "Singular Stochastic PDEs" has made spectacular progress over the last few years. A systematic solution theory for various interesting and previously intractable equations from Mathematical Physics is now available. Examples include the KPZ equation and the stochatic quantisation equations for the 3D Φ^4 and Yang Mills measures.

The main focus of these works so far was the systematic description of solutions on small scales, and the construction of solutions for short times. In this talk I will show how to obtain matching a priori bounds that rule out the possibility of finite time blow up in the example of the Φ^4 equation. (Received September 15, 2020)