1150-60-46 **Li-Cheng Tsai*** (lctsai.math@gmail.com). *Moments of the 2D stochastic heat equation at criticality.*

We study the stochastic heat equation in two spatial dimensions with a multiplicative white noise, as the limit of the equation driven by a noise that is mollified in space and white in time. As the mollification radius $\varepsilon \to 0$, we tune the coupling constant near the critical point, and show that the single time correlation functions converge to a limit written in terms of an explicit non-trivial semigroup. Our approach consists of two steps. First we show the convergence of the resolvent of the (tuned) two-dimensional delta Bose gas, by adapting the framework of Dimock and Rajeev (2004) to our setup of spatial mollification. Then we match this to the Laplace transform of our semigroup.

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