

## Stochastic heat equations with distributional drifts

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We consider stochastic heat equations on the real line with space-time white noise and distributional drifts in negative-indexed Besov spaces. It is shown that a weak solution exists if the regularity index is at least  $-3/2$  while pathwise uniqueness holds if the regularity index is at least  $-1$ . In the particular case when the drift is a Dirac mass at a point, the equation has a unique strong solution. These results are obtained using the stochastic sewing lemma introduced by the speaker in 2018. This is a joint work with S. Athreya, O. Butkovsky and L. Mytnik.