

# THE IVP FOR THE KURAMOTO-SIVASHINSKY EQUATION IN LOW REGULARITY SOBOLEV SPACES\*

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We study the initial-value problem associated with a equation of the type Kuramoto-Sivashinsky. Our main results are the locally and globally well-posed in Sobolev spaces  $H^s(\mathbb{R})$ , for  $s > 0$ . It is also shown that the initial value problem is ill-posed in Sobolev spaces of negative indices. This shown, in particular, that our results of well-posedness are sharp.

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