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Arnulf Jentzen, Diyora Salimova, Timo Welti

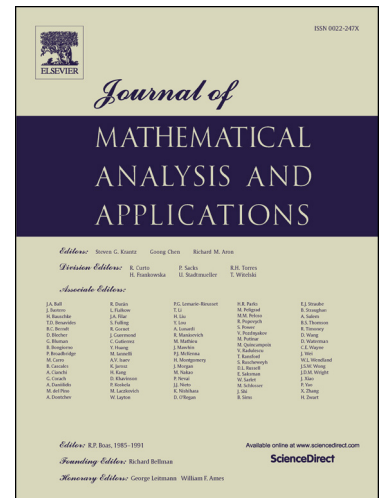
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# Strong convergence for explicit space-time discrete numerical approximation methods for stochastic Burgers equations

Arnulf Jentzen, Diyora Salimova, and Timo Welti

ETH Zürich (Switzerland)

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## Abstract

In this paper we propose and analyze explicit space-time discrete numerical approximations for additive space-time white noise driven stochastic partial differential equations (SPDEs) with non-globally monotone nonlinearities such as the stochastic Burgers equation with space-time white noise. The main result of this paper proves that the proposed explicit space-time discrete approximation method converges strongly to the solution process of the stochastic Burgers equation with space-time white noise. To the best of our knowledge, the main result of this work is the first result in the literature which establishes strong convergence for a space-time discrete approximation method in the case of the stochastic Burgers equations with space-time white noise.

Keywords: Strong convergence; stochastic Burgers equation; numerical approximation; stochastic partial differential equation; SPDE

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