



# Oberwolfach Seminar

## Stochastic Partial Differential Equations in Critical Spaces

Organizers: Antonio Agresti, Delft  
Mark Veraar, Delft  
Date (ID): 8 – 13 June 2025 (2524b)  
Deadline: 1 March 2025

Can abstract theory capture concrete behaviours and lead to a new understanding of nonlinear parabolic SPDEs?

In this seminar, we present recent developments on stochastic partial differential equations (SPDEs) in critical spaces, where ‘criticality’ refers to local scaling invariance of the equation and is captured through abstract conditions. Combining tools from PDEs, probability theory and functional analysis, the theory of critical spaces provides the optimal setting to study the well-posedness of parabolic SPDEs and has already led to new insights into stochastic versions of reaction-diffusion and fluid dynamics models. While the first steps have been made, the seminar prepares to take it to the next level.

[www.mfo.de/occasion/2524a](http://www.mfo.de/occasion/2524a)

The seminar takes place at the Mathematisches Forschungsinstitut Oberwolfach. The Institute covers board and lodging. By the support of the Carl Friedrich von Siemens Foundation travel expenses can be reimbursed up to 150 EUR in average per person (against copies of travel receipts). The number of participants is restricted to 24.

**Applications including title, ID and date** of the intended seminar, together with **one pdf-file attached** containing

- full name and university/institute address, incl. e-mail address
- short CV and publication list
- present position, university
- name of supervisor of Ph.D. thesis
- a short summary of previous work and interest

should be **sent by e-mail** via [seminars@mfo.de](mailto:seminars@mfo.de) until 1 March 2025 to:

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