

Oberwolfach Arbeitsgemeinschaft (ID: 2351)
Quantum field theory and stochastic PDEs

Organizers: Roland Bauerschmidt, Massimiliano Gubinelli, Martin Hairer, Hao Shen

17 December - 22 December 2023

Schedule of talks:

no.	time	title of talk	name
1	Mo 9:00-10:00 am	(1.1+1.2) Path integrals and Osterwalder–Schrader axioms	Huang–Weng
2	Mo 10:15-11:15 am	(1.3+1.4) Gaussian free field and Φ_2^4 in finite volume	Korzhenkova–Rodriguez
3	Mo 11:30-12:30 am	(2.1) Functional setting and white noise	Zanello–Bonicelli
4	Mo 4:00-5:00 pm	(2.2) Linear stochastic heat equation	Jangjigian–Wu
5	Mo 5:15-6:15 pm	(2.3) The Da Prato–Debussche argument	Morfe–Schweiger
6	Tu 9:00-10:00 am	(3.1) Global solutions and coming down from infinity, I.	R. Liu–Gabriel
7	Tu 10:15-11:15 am	(3.2) Global solutions and coming down from infinity, II.	Yi–Foldes
8	Tu 11:30-12:30 am	(3.3) Tightness via energy method	Gloria–Jahandideh
9	Tu 4:00-5:00 pm	(3.4) Integrability of Φ_2^4	Broux–Zhao
10	Tu 5:15-6:15 pm	(4.1) More applications of the Da Prato–Debussche argument	Zine–Ji
11	We 9:00-10:00 am	(4.2) Kac–Ising model	Tempelmayr–Dagallier
12	We 10:15-11:15 am	(5.1+5.2) Definition of Yang–Mills theory	Meyer–Ferdinand
13	We 11:30-12:30 am	(5.3+5.4) Langevin dynamic of the Yang–Mills model	Lin–Seong
14	We 8:00-9:00 pm	(4.6) Gaussian multiplicative chaos and the Liouville model	Hofstetter–Di
15	Th 9:00-10:00 am	(6.1) Basic concepts and reconstruction theorem	Kuzgun–Losev
16	Th 10:15-11:15 am	(6.2) Fixed point problem in the space of modelled distributions	Höfer–Cao
17	Th 11:30-12:30 am	(6.3) Stochastic quantisation of Φ_3^4	Lv–Esquivel
18	Th 4:00-5:00 pm	(6.4) Convergence of the renormalised models	Singh–Lee
19	Th 5:15-6:15 pm	(4.5) Hyperbolic stochastic quantisation	Laarne–Liang
20	Fr 9:00-10:00 am	(8.1+8.2) Polchinski equation and Stochastic control	Mohamed–Wang
21	Fr 10:15-11:15 am	(8.1+8.3) Log-Sobolev inequality	Altman–Song
22	Fr 11:30-12:30 am	(8.4) Flow equations for dynamics	Kroschinsky–Peev

Arrival day: Sunday afternoon/evening

Breakfast 8-9 am, lunch 12:30-1:30 pm, dinner 6:30-7:30 pm (In case of a public holiday such as Easter Monday, lunch/dinner take place in Hotel Hirschen and start at 1:15 pm / 6 pm respectively.)

Wednesday afternoon: traditional excursion

Departure day: Friday, before dinner-time