

Xue-Mei Li

Talks before (2019), during (2020-2021), after pandemic lockdowns (2022-March 23)

Public Engagement Talks

NOISE, TIME, AND SCALES, IN THEMATIC EINSTEIN FORUM LECTURE SERIES 26.01.2023

[HTTPS://MATHPLUS.DE/TOPIC-DEVELOPMENT-LAB/TEF-WINTER-2022-23/LECTURE-SERIES/](https://mathplus.de/topic-development-lab/tef-winter-2022-23/lecture-series/)

Recent Talks

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| 1. Workshop on Mathematical Physics In Les Diablerets' 2023
<i>What is Fractional Averaging?</i> | 19-24 Feb
2023 |
| 2. Analysis Seminar, Mathematics Department, Birmingham University
<i>What is Fractional Averaging?</i> | 6 Feb 2023 |
| 3. Seminar, Mathematics, Southeast University, Nanjing (online)
<i>Multi-scale stochastic systems with fractional Brownian motions</i> | 8 Dec 2022 |
| 4. Tokyo Probability Seminar
<i>Progress in multi-scale dynamics</i> | 5 Dec 2022 |
| 5. Conference on Stochastic Analysis and Related Topics, Osaka Univesity
<i>Hessian estimates of the logarithmic heat kernel</i> | 2-4 Dec 2022 |
| 6. Celebrating Aida's 60th birthday, Osaka
<i>Aida, a perspective</i> | 3 Dec. 2022 |
| 7. South China University of Technology, Guanzhou (online)
<i>What is fractional averaging?</i> | 25 Nov. 2022 |
| 8. Non-local operators, probability and singularities (online)
<i>Hessian estimates of the logarithmic heat kernel</i> | 15 Nov. 2022 |
| 9. Modern Topics in Probability, a Conference in Honor of Mark Freidlin (given on line)
<i>Fractional averaging and fractional dynamics</i> | 18 Oct. 2022 |

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| <p>10. One world probability seminar (online)
 <i>Toward an effective theory for non-Markovian multi-scale stochastic systems</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">13 Oct 2022</div> |
| <p>11. Open Japanese-German Conference, Munster
 <i>Ergodic Theorems with auto-correlated noise</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">22 Sept 2022</div> |
| <p>12. Mathematics of geophysical fluid dynamic models of intermediate complexity, Reading
 <i>Multi-scale stochastic systems, fractional averaging, and dynamics</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">9 Sept 2022</div> |
| <p>13. New interfaces of Stochastic Analysis and Rough Paths, Banff (online)
 <i>Non-Markovian Multi-scale stochastic systems</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Sept 2022</div> |
| <p>14. Workshop on Stochastic and Rough Analysis Berlin
 <i>Problem arising from two scale stochastic equations with auto-correlated noise</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">22-26 Aug
2022</div> |
| <p>15. Durham Symposium on Stochastic Dynamics, Nonlinear Probability, and Ergodicity
 <i>Multi-scale stochastic systems with fractional Brownian motions</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">22 Aug 2022</div> |
| <p>16. Plenary lecture, at XXV Brazilian School of Probability
 <i>Multi-scale stochastic systems with fractional Brownian motions.</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">7-13 Aug
2022</div> |
| <p>17. Workshop Unifying concepts in PDEs with randomness, CRM, Montreal
 <i>Two scale slow/fast non-Markovian system</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">16-27 May
2022</div> |
| <p>18. CNRS-ICL meeting, Imperial College London
 <i>Differential Equations in Fast Moving Environment with auto-correlation</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">July 8 2022</div> |
| <p>19. Webinar on stochastic analysis 2022, Beijing IT and Chinese Academy of Sciences
 <i>A Continuous Spectrum of Effective Motions</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">22 April 2022</div> |
| <p>20. Seminar, Shandong University, Qingdao(online)
 <i>Multi-scale stochastic equations with fractional noise</i></p> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">6 April 2022</div> |

21. **Cardiff Mathematics Colloquium, Cardiff**

8 Dec 2021

Two scale stochastic equations with fractional noise

Pandemic – First in person talk

1. **Probability and Statistics Seminar, Boston University (online)**

11 Nov. 2021

A new perspective on functional CLT and two scale dynamics

2. **SDEs on Manifolds and Stratified Spaces, Oberwolfach (online)**

08 Oct. 2021

Do I have something to say?

3. **Seminar at FuDan University (online)**

21 June 2021

Second order stochastic variation and integral kernels

4. **Young researchers between geometry and stochastic analysis (online)**

16-18 June
2021

mini course

5. **Stochastic differential geometry and mathematical physics, Rennes (online)**

7-11 June
2021

Second order variation and the logarithmic heat kernel

6. **Workshop on stochastic dynamics, Xian (online)**

21 Dec 2020

Averages fractional dynamics

7. **New directions in rough path theory, Oberwolfach (online)**

6-12 Dec
2020

Rough homogenization

8. **Probability Seminar, University of Edinburgh (online)**

12 Nov 2020

A trip to the non-Markovian county

9. **Analysis seminar, Cardiff university (online)**

4 May 2020

Fractional noise and central limit theorem

2019 — First lockdown

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| 1. Probability and Mathematical Finance Seminar, York University
<i>Fractional noise and central limit theorem</i> | 24 Feb 2020 |
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| 2. Master Lectures on the history of contemporary mathematics, Tsinghua Sanya International Mathematics Forum
<i>Scales and Noise</i> | 16-20 Dec
2019 |
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| 3. Workshop on Problems of roughness, geometry and random fluctuations, Bonn
<i>Intertwined structures and Perturbation</i> | 8-11 Dec.
2019 |
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| 4. Singular SPDEs and Related Topics, Hausdorff Institute, Bonn
<i>Homogenization: long range dependent noise</i> | 20-22 Oct
2019 |
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| 5. Matematicas 1969-2019, University de la Laguna
<i>Randomness, Noise, elimination, and incorporation</i> | 15 Oct 2019 |
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| 6. Dynamics, Equations and Applications AGH University of Science and Technology, Krakow
<i>Averaging dynamics driven by fractional Noise</i> | 16-20 Sept
2019) |
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| 7. Recent trends in Stochastic Analysis and PDEs, Chester University
<i>Two scale system with memories</i> | 5-6 Sept 2019 |
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| 8. Beijing Normal University
<i>Averaging dynamics driven by fBM's</i> | 13 June 2019 |
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| 9. Applied mathematics institute, Beijing
<i>Averaging dynamics driven by fBM's</i> | 12 June 2019 |
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| 10. Plenary Lecture, The 8th International Congress of Chinese Mathematicians of 2019
<i>Stochastic Dynamics, Geometry, and Analysis</i> | 10 June 2019 |
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| 11. LMS Women in Mathematics, Kent
<i>Perturbations, Stochastic Equations, and Averaging</i> | 24 May 2019 |

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| 12. 5th Cambridge student chapter SIAM-IMA
<i>Perturbation, noise, and averaged dynamics</i> | 2 May 2019 |
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| 13. East Midlands Stochastic Analysis Seminars, Oxford
<i>A new stochastic variation</i> | 25 April 2019 |
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| 14. Oberwolfach mini workshop
<i>Heat kernel estimates, comparison and second variation, and an open question</i> | 8-12 April
2019 |
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| 15. New Directions in Stochastic Analysis: Rough Paths, SPDEs and Related Topics, On the occasion of Professor Terry Lyons' 65th Birthday
<i>Averaging dynamics driven by fBM's</i> | 8-12 2019 |
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| 16. Conference on random transformations and invariance, Verona, Italy
<i>Breaking and creating symmetries</i> | 25-28 Mar
2019 |
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| 17. Dynamical systems Seminar, Loughborough
<i>Averaging with Non-Markovian Stochastic Systems</i> | 30 Jan 2019 |