

Program (CEST)

Sunday, 30 April 2023

17:00 – 21:00 ARRIVAL and REGISTRATION

18:30 *BUFFET SUPPER*

Monday, 01 May 2023

08:00 *BREAKFAST*

Method Developments

09:00 – 10:00	Bertrand Delamotte	Introduction to Out of Equilibrium FRG
10:00 – 10:45	Jan M Pawłowski	Complex Flows for Complex Problems
10:45 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:00	Discussion	
12:00 – 12:45	Nicolás Wschebor	The Use of Conformal Invariance in the Non-Perturbative Renormalisation Group Framework
12:45 – 13:00	Conference Photo (outside at the main entrance)	
13:00 – 14:45	<i>LUNCH BREAK</i>	
14:45 – 15:30	Eduardo Grossi	Dissipation Rate in Local Potential Approximation
15:30 – 16:00	<i>COFFEE BREAK</i>	
16:00 – 16:45	Nicolas Wink	Computational Fluid Dynamics and the fRG
16:45 – 17:30	Discussion	

Program (CEST)

17:30 – 17:50	Andrey Katanin	Local 2PI Vertex Approximation in 1PI Functional Renormalization Group Approach: From Graphene Nanoflakes to 3D Magnets
17:50 – 18:10	Laura Batini	Dissipation Rate in Local Potential Approximation
18:10 – 18:30	Friederike Ihssen	Optimal RG-flows and Flowing Fields
18:30 – 18:50	Tim Stötzel	Real Scalar Field Shear Viscosity using the Functional Renormalization Group
19:00	<i>DINNER</i>	

Program (CEST)

Tuesday, 02 May 2023

08:00 *BREAKFAST*

Active Matter and Biophysics

09:00 – 10:00 Hugues Chaté **Active matter: still an exciting and largely virgin playground for RG approaches**

10:00 – 10:45 Adam Kline **Multi-relevance: Coexisting but Distinct Notions of Scale**

10:45 – 11:30 *COFFEE BREAK*

11:30 – 12:00 **Discussion**

12:00 – 12:45 Matthieu Tissier **Phase Transitions in Active Matter**

12:45 – 14:45 *LUNCH BREAK*

Information Theory and Measurement

14:45 – 15:30 Sebastian Diehl **Measurement Induced Phase Transitions: From Theory to Observability**

15 :30 – 16 :00 *COFFEE BREAK*

16:00 – 16:45 Stefan Floerchinger **Functional Renormalization and Information Geometry**

16:45 – 17:15 **Discussion**

17:15 – 17:35 Patrick Jentsch **Exact Scaling Exponents in Active Matter: Do they exist?**

17:35 – 17:55 Gregory Johnson **Universality of the Yang Lee Edge Singularity from FRG**

17:55 – 18:15 Romain Daviet /
Carl Philipp Zelle **Universality at Critical Exceptional Points of Nonequilibrium $O(N)$ Models**

18:15 – 18:45 **Flash Talks 1**

18:45 – 19:00 Stefan Jorda **About the Wilhelm und Else Heraeus Foundation**

19:00 *DINNER*

Program (CEST)

Wednesday, 03 May 2023

08:00 *BREAKFAST*

Neural Networks, Deep Learning, Cellular Automata

- | | | |
|---------------|---------------------|--|
| 09:00 – 09:45 | Braden Brinkman | Non-perturbative Renormalization Group Analysis of Spiking Neuron Networks |
| 09:45 – 10:30 | Adam Rançon | Inference and the Inverse Problem from a Field Theory and Renormalisation Group Perspective |
| 10:30 – 11:00 | <i>COFFEE BREAK</i> | |
| 11:00 – 11:45 | Christof Wetterich | Probabilistic Cellular Automata for Fermionic Quantum Field Theories |
| 11:45 – 12:25 | Discussion | |
| 12:25 – 12:45 | Ari Pakman | Non-perturbative Renormalization Group in Finite Dimensions |
| 12:45 – 14:45 | <i>LUNCH BREAK</i> | |
| 15:30 – 16:00 | <i>COFFEE BREAK</i> | |

Method Development

- | | | |
|---------------|--|--|
| 16:00 – 16:45 | Holger Gies | Relativistic Luttinger Fermions and their Renormalization Flow |
| 16:45 – 17:30 | Gilles Tarjus | Spontaneous versus Explicit Replica Symmetry Breaking in the Theory of Disordered Systems |
| 17:30 – 17:50 | Andrey Fedorenko | Non-Anderson Disorder-driven Quantum Transition in Nodal Semimetals |
| 17:50 – 18:10 | Markus B. Fröb | Constructing CFTs from AdS Flows |
| 18:10 – 19:00 | Bertrand Delamotte | Introduction to Out of Equilibrium FRG |
| 19:00 | <i>HERAEUS DINNER at the Physikzentrum
(cold & warm buffet, with complimentary drinks)</i> | |

Program (CET)

Thursday, 04 May 2023

08:00 *BREAKFAST*

Non-equilibrium Time Evolution

09:00 – 09:45 Jürgen Berges **Stability Properties of Nonthermal Fixed Points from Functional Methods**

09:45 – 10:30 Léonie Canet **The Unpredicted Scaling of the One-dimensional Kardar-Parisi-Zhang Equation**

10:30 – 11:15 *COFFEE BREAK*

11:15 – 11:45 **Discussion**

11:45 – 12:05 Viktoria Noel **Far from Equilibrium Universality and Non-thermal Fixed Points with fRG**

12:05 – 12:25 Aleksandr Mikheev **A Functional Renormalization Group Approach to Non-thermal Fixed Points in an Ultracold Bose Gas**

12:25 – 12:45 Côme Fontaine **Functional Renormalisation Group Approach to Shell Models of Turbulence**

12:45 – 14:45 *LUNCH BREAK*

Method Development

14:45 – 15:45 Alessandro Toschi **Merging Dynamical Mean-field Theory and Functional Renormalization Group for Correlated Electrons: A Stepping-stone for Mastering the Nonperturbative Regime in Two Dimensions**

15:45 – 16:15 *COFFEE BREAK*

16:15 – 17:00 Walter Metzner **Antiferromagnetism and d-Wave Pairing in the Strongly Interacting Two-dimensional Hubbard Model from the Functional Renormalization Group**

Program (CET)

17:00 – 18:30	Flash Talks 2
18:30	<i>DINNER</i>
19:30	Poster Session

Program (CET)

Friday, 05 May 2023

08:00 *BREAKFAST*

Cosmology

09:00 – 09:45	Nikolaos Tetradis	Effective Theory of Large Scale Structure
09:45 – 10:30	Urs Wiedemann	RG-flow of the Effective Action of Cosmological Large-scale Structures
10:30 – 11:15	<i>COFFEE BREAK</i>	
11:15 – 12:00	Discussion	

Method Development

12:00 – 12:45	Nicolas Dupuis	Flowing Bosonization in the Nonperturbative Functional Renormalization-group Approach
12:45	<i>LUNCH</i>	

End of Seminar / Departure