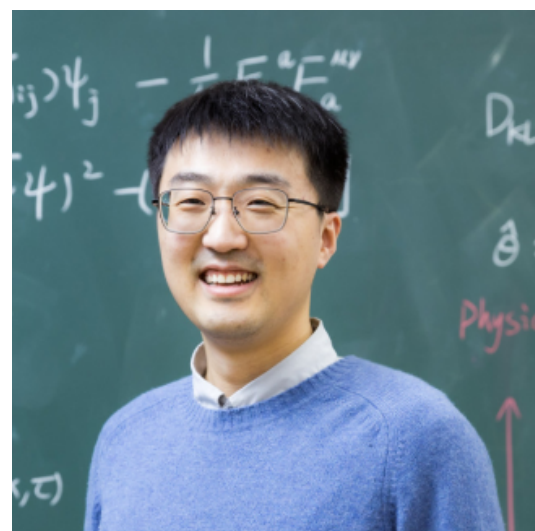




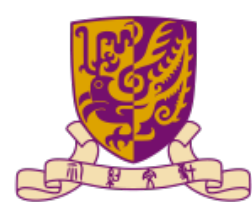
Yang-Yang Tan



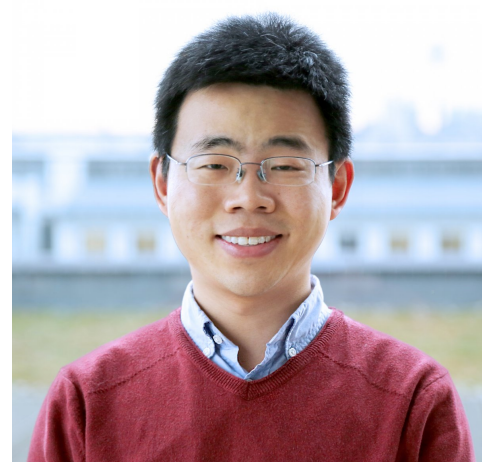
Lingxiao Wang



Swansea University
Prifysgol Abertawe



香港中文大學(深圳)
The Chinese University of Hong Kong, Shenzhen



Kai Zhou



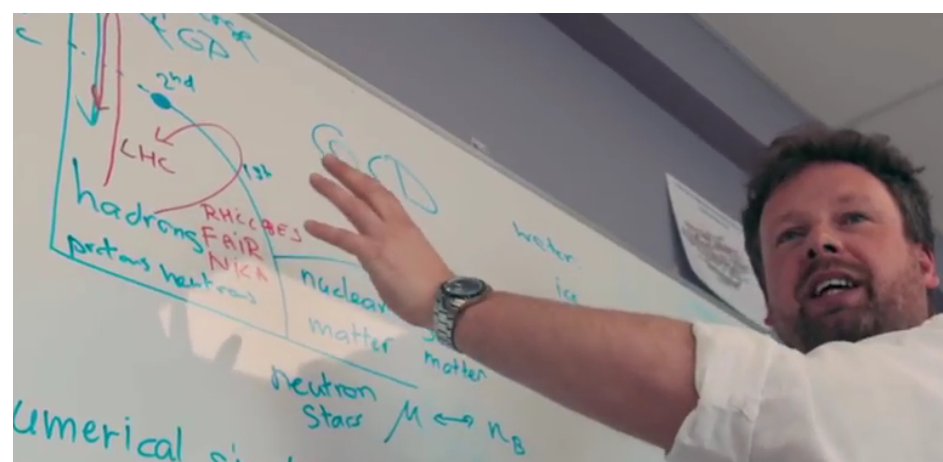
Qianteng Zhu



Wei Wang



Zheyuan Peng



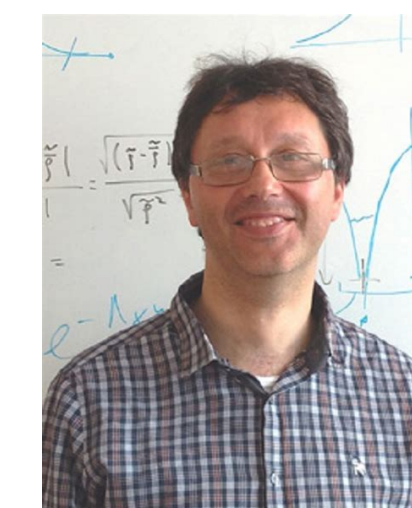
Gert Aarts
Swansea -> Bielefeld



Daa E. Habibi



Shiyang Chen



Biagio Lucini



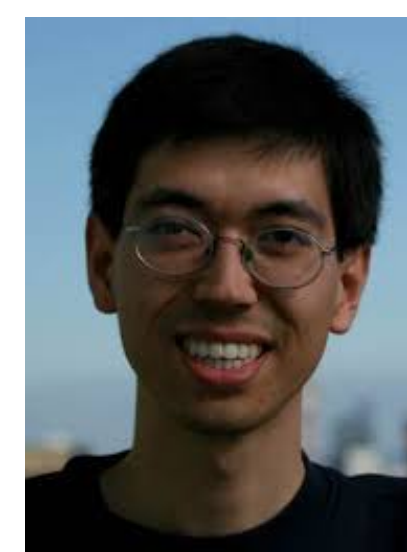
UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386



Renzo Kapust



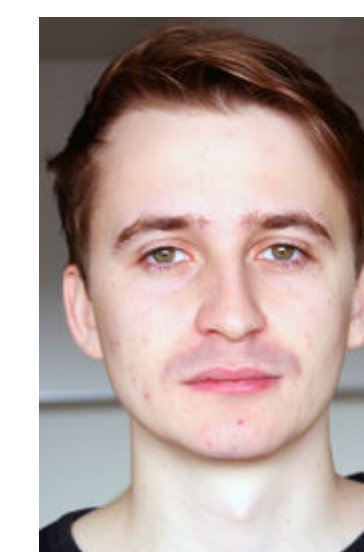
Jan M. Pawlowski



Andreas Ipp



Thomas Richard Ranner



David Müller

- ▶ Stochastic Quantization and Langevin Simulations [2023]
 - ▶ **LW**, G Aarts, K Zhou
- ▶ Statistic of Diffusion Models [2024]
 - ▶ **G Aarts, D Habibi**, LW, K Zhou
- ▶ Configurational Temperature (in Preparation)
 - ▶ **G Aarts, D Habibi**, A Ipp, D Müller, T Ranner, LW
- ▶ Learning Dynamics and Renormalization Group (in Preparation)
 - ▶ **Y Tan**, G Aarts, D Habibi, **LW**
- ▶ New Stochastic Quantization Scheme (in Preparation)
 - ▶ **LW**, TBA

- ▶ **2D Scalar Field Simulations [2023]**
 - ▶ **LW**, G Aarts, K Zhou
- ▶ **2D Gauge Field Simulations [2024-2025]**
 - ▶ U(1): **Q Zhu**, G Aarts, D Habibi, W Wang, K Zhou, **LW**
 - ▶ U(N)/SU(N): **Q Zhu**, G Aarts, D Habibi, A Ipp, **D Müller**, **T Ranner**, W Wang, **LW**
- ▶ **2D Pseudo Fermion Simulations (Proposal, Pending)**
 - ▶ Schwinger Model: **Q Zhu**, G Aarts, D Habibi, W Wang, **LW**
 - ▶ Gross–Neveu Model: **G Aarts**, **D Habibi**, **LW**
- ▶ **3D Scalar Field Simulations (in Preparation)**
 - ▶ **Y Tan**, G Aarts, D Habibi, B Lucini, **LW**
- ▶ **4D Gauge Field Simulations (Proposal, in Preparation)**
 - ▶ G Aarts, D Habibi, A Ipp, **D Müller**, **T Ranner**, Y Tan, W Wang, **LW**, Q Zhu

- ▶ **Metropolis-Adjusted-Annealed Langevin [2024]**
 - ▶ **Q Zhu, G Aarts, D Habibi, W Wang, K Zhou, LW**
- ▶ **Physics-Informed Renormalization Group for Lattice Simulations [2025]**
 - ▶ **R Kapust, J Pawlowski**
 - ▶ **R Kapust, J Pawlowski, K Zhou, TBA (Proposal)**
- ▶ **Energy-Based Diffusion Models for Sign-Problem [2025]**
 - ▶ **G Aarts, D Habibi, LW, K Zhou**
- ▶ **Physics-Conditioned Sampler for Critical Slowing Down (Proposal, in Preparation)**
 - ▶ **Z Peng, G Aarts, B Lucini, Y Tan, W Wang, LW, Q Zhu**
- ▶ **Renormalization Group Denoising Diffusion Sampler (Proposal)**
 - ▶ **Y Tan, LW, TBA**

- ▶ Renormalization Group and Diffusion Model Correspondence (Proposal)
 - ▶ **K Zhou**, TBA.
- ▶ Data-Free Diffusion Models (Proposal, in Preparation)
 - ▶ **G Aarts, B Lucini, S Chen, M Qian, K Zhou**, TBA
- ▶ Energy-Based Renormalization Group Diffusion Models (in Preparation)
 - ▶ **J Li, LW** and some outside colleagues
- ▶ TBA

1 meeting/biweek (~1 hr, Zoom or hybrid)

1-2 short talks + open discussion

< 1 hour

Optional: paper / method highlight

Every Friday 4pm(JST)=9am(EU)=8am(UK)

Irregular Work Meeting

Element Team

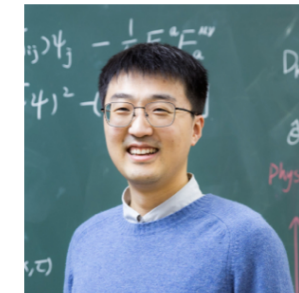
#DM-QFT

Local Meeting

Small(1-2 days) meeting/year



Yang-Yang Tan



Lingxiao Wang



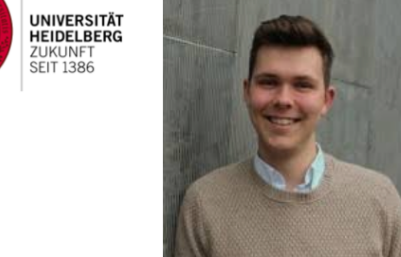
Qianteng Zhu



Wei Wang



Zheyuan Peng



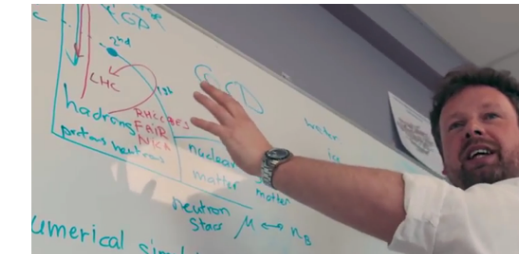
Renzo Kapust



Jan M. Pawlowski



Swansea University
Prifysgol Abertawe



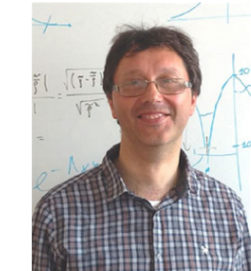
Gert Aarts
Swansea -> Bielefeld



Diaa E. Habibi



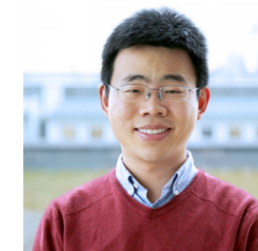
Shiyang Chen



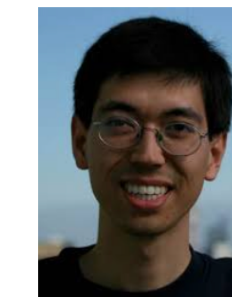
Biagio Lucini



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The Chinese University of Hong Kong, Shenzhen



Kai Zhou



Andreas Ipp



Thomas Richard Ranner



David Müller

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