

**Address**

Mathematisches Institut  
Ludwig-Maximilians-Universität München  
Theresienstraße 39  
80333 München

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**ACADEMIC EXPERIENCE**

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**University Munich**

Replacement of professorship 'W3-Professur für Mathematik' since 03/2023  
( 'Vertretungsprofessur' )  
Replacement of professorship 'W2-Professur für Mathematik' 10/2022-03/2023  
( 'Vertretungsprofessur' )

**Institute of Science and Technology Austria**

Postdoc in the group of Prof. Robert Seiringer 10/2021 -10/2022  
ISTplus postdoctoral fellow 10/2019 -10/2021

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**ACADEMIC EDUCATION**

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**University of Zurich**

Zurich Graduate School in Mathematics 09/2015 - 09/2019  
PhD thesis *Mathematical properties of many-body quantum systems*  
supervised by Prof. Benjamin Schlein

**University of Munich, Technical University of Munich**

Elite Master Course *Theoretical and Mathematical Physics* 10/2013-09/2015  
Master thesis *Energy levels of dipoles in graphene*  
supervised by Prof. Heinz Siedentop (grade 1.0)

**University of Leipzig**

Bachelor of Science in Physics 10/2010-09/2013  
Bachelor thesis *Quantum energy inequalities*  
supervised by Prof. Rainer Verch (grade 1.0)

**Geschwister-Scholl-Gymnasium Taucha**

Abitur (final grade 1.0 ) 08/2002-08/2010

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**AWARDS**

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**Research in pairs program, MFO Oberwolfach**

in collaboration with Dr. Lea Bossmann (IST Austria),  
Dr. Nikolai Leopold (University of Basel)  
and Prof. Sören Petrat (Jacobs University Bremen) 2021

**ISTplus postdoctoral fellowship**

by IST Austria and the European Union's Horizon 2020  
research and innovation programme under  
the Marie Skłodowska-Curie grant agreement No. 754411 10/2019-10/2021

<b>Scholarship of German Academic Scholarship Foundation</b> (Studienstiftung des deutschen Volkes)	10/2010-09/2015
<b>Invitation to 62<sup>nd</sup> Meeting of the Nobel Laureates of Physics</b> Lindau	07/2012
<b>Manfred von Ardenne Prize</b> Prize for skilled works in physics for high-school graduates awarded by Helmholtz Zentrum Dresden Rossendorf supervised by Prof. Wolfgang Oehme (University of Leipzig) and Wolfgang Rieger Poster at <i>DPG Frühjahrstagung 2011</i> .	2010

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## RESEARCH ARTICLES

### Preprints

- [18] Limit theorems for empirical measures of interacting quantum systems in Wasserstein space  
L. Portinale, S. Rademacher, D. Virosztek  
arXiv:2312.00541
- [17] Out-of-time-ordered correlators of mean-field bosons via Bogoliubov theory  
M. Lemm, S. Rademacher  
arXiv:2312.01736
- [16] Ground state of Bose gases interacting through singular potentials  
L. Boßmann, N. Leopold, S. Petrat, S. Rademacher  
arXiv:2309.12233
- [15] Exponential bounds of the condensation for dilute Bose gases  
P.T. Nam, S. Rademacher  
arXiv:2307.10622
- [14] Large deviations for the ground state of weakly interacting bosons  
S. Rademacher  
arXiv:2301.00430
- [13] Traveling waves and the effective mass for the regularized Landau-Pekar equations  
S. Rademacher  
arXiv:2211.08198

### Publications

- [12] Dependent random variables in quantum dynamics.  
S. Rademacher  
Journal of Mathematical Physics volume 63, (8), (2022), arXiv:2112.04817
- [11] Large deviation estimates for weakly interacting bosons.  
S. Rademacher and R. Seiringer  
Journal of Statistical Physics volume 188 (9), (2022), arXiv:2112.01999
- [10] The effective mass problem for the Landau-Pekar equations.  
D. Feliciangeli, S. Rademacher and R. Seiringer  
Journal of Physics A: Mathematical and Theoretical 55, 015201 (2022), arXiv:2107.03720
- [9] A large deviation principle for many-body quantum dynamics  
K. Kirkpatrick, S. Rademacher, B. Schlein  
Annales Henri Poincaré, 22, 2595-2618 (2021), arXiv:2010.13754

- [8] Persistence of the spectral gap for the Landau–Pekar equations  
D. Feliciangeli, S. Rademacher, R. Seiringer  
Letters in Mathematical Physics, 111 (19), (2021), arXiv:2009.06430
- [7] Landau-Pekar equations and quantum fluctuations for the dynamics of a strongly coupled polaron  
N. Leopold, D. Mitrouskas, S. Rademacher, B. Schlein and R. Seiringer  
Pure and Applied Analysis 3-4, 653–676 (2021), arXiv:2005.02098
- [6] Central limit theorem for Bose gases interacting through singular potentials  
S. Rademacher  
Letters in Mathematical Physics, 110,2143- 2174 (2020), arXiv:1908.11672
- [5] The Landau–Pekar equations: Adiabatic theorem and accuracy  
N. Leopold, S. Rademacher, B. Schlein, R. Seiringer  
Analysis & PDE, 14,2079- 2100 (2021), arXiv:1904.12532
- [4] Central limit theorem for Bose–Einstein condensates  
S. Rademacher, B. Schlein  
Journal of Mathematical Physics, 60 (7), 071902 (2019), arXiv:1903.00365
- [3] From Hartree dynamics to the relativistic Vlasov equation  
E. Dietler, S. Rademacher, B. Schlein  
Journal of Statistical Physics, 172 (2), p. 1345-1364, (2018), arXiv: arXiv:1709.02711
- [2] Mean field evolution of fermions with Coulomb interaction  
M. Porta, S. Rademacher, C. Saffirio, B. Schlein  
Journal of Statistical Physics, 166 (6), 1345-1364 (2017) , arXiv:1608.05268
- [1] Accumulation rate of bound states of dipoles in graphene  
S. Rademacher and H. Siedentop  
Journal of Mathematical Physics, 57, 042105 (2016), arXiv:1507.02155

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#### ARTICLES FOR A GENERAL AUDIENCE

- [i] **Numbers speak louder than words: A first approach to an evidence based discussion on under-represented groups in mathematical physics**  
S. Cenatiempo and S. Rademacher  
IAMP (International Association of Mathematical Physics) news bulletin, April 2022  
<http://www.iamp.org/bulletins/Bulletin-Apr2022-print.pdf>
- [ii] **Voices of women in mathematical physics: A series of five interviews**  
G. Basti, C. Boccato, L. Bossmann, S. Cenatiempo, E. Giacomelli, G. Marcelli and S. Rademacher  
IAMP (International Association of Mathematical Physics) news bulletin, April 2022  
<http://www.iamp.org/bulletins/Bulletin-Apr2022-print.pdf>

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#### TALKS AT CONFERENCES

<b>Mathematics of Many-body Fermionic Systems</b> , MFO Oberwolfach Invited Speaker	11/ 2023
<b>Many-Body Quantum Systems</b> , MFO Oberwolfach Invited Speaker	09/ 2023
<b>Analysis of Relativistic Quantum Systems</b> , CIRM, Marseille Invited Speaker	01/ 2023

<b>DMV Jahrestagung</b> , Berlin Invited Speaker in the session <i>Complex quantum systems</i>	09/ 2022
<b>AMS-SMF-EMS joint international meeting</b> , Grenoble Invited Speaker	07/ 2022
<b>Mathematical results of many-body quantum systems</b> , conference in Herrsching Invited Speaker	06/ 2022
<b>ICMP</b> (International Congress on Mathematical Physics), Geneva Contributed talk, Poster in the human rights session	08/2021
<b>Nonlinear Dynamics in Quantum Mechanics</b> , online Minisymposium at Bremen Invited talk	10/2020
<b>The Analysis of Complex Quantum Systems: Large Coulomb Systems and Related Matters</b> , CIRM, Marseille. Invited talk	10/2019
<b>Many-Body Quantum Systems</b> , MFO, Oberwolfach. Invited talk	09/2019
<b>Mathematical Challenges in Quantum Mechanics</b> , Rome. Contributed talk	02/2018

#### TALKS IN SEMINARS

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<b>Seminar der AG Wirtschaftsmathematik &amp; Stochastik</b> online Seminar at University Leipzig	01/ 2023
<b>Oberseminar Mathematische Physik</b> Oberseminar at LMU Munich	11/ 2022
<b>Mathematical Physics Seminar</b> , online Seminar at University of Texas, Austin	11/2021
<b>Math Seminar KIAS</b> , online seminar at Korea Institute for Advanced Studies	03/2021
<b>Seminar der AG Angewandte Analysis</b> online seminar at MPI for MiS, Leipzig	11/2020
<b>Munich-Aarhus-Santiago Mathematical Physics Seminar</b> , online seminar	10/2020
<b>Tübingen - Zürich Meeting in Mathematical Physics</b> Seminar in Tübingen	07/2019
<b>Mathematical Physics and Analysis Seminar</b> Oberseminar at ISTA Austria	02/2019

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**ORGANIZATION OF CONFERENCES**


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- Workshop for young researchers in analysis and mathematical physics at LMU** 10/2023  
 member of scientific committee together with Dr. Sylvain Ervedoza (Université de Bordeaux),  
 Dr. Christèle Etchegaray (Inria Bordeaux Sud-Ouest), Prof. Arnaud Triay (LMU)
- Mini-Symposium at annual DMV Meeting 2023** 25/09/ 2022-28/09/2023  
 TU Illmenau  
 joint organization with Prof. Siedentop (LMU Munich)
- School 'Optimal transport on Quantum Structures'** 19/09/ 2022-23/09/2022
- Workshop 'Optimal transport on Quantum Structures'** 26/09/ 2022-30/09/2022  
 Erdős Conference Center, Alfréd Rényi Institute of Mathematics, Budapest  
 joint organization with Prof. Jan Maas (IST Austria), Dr. Tamás Tiktos (Rényi Institute Budapest),  
 and Dr. Dániel Viosztek (IST Austria).

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**ORGANIZATION OF SEMINARS**


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- TUM-LMU Young Researcher Seminar** starting 10/2022  
 Research seminar on topics in mathematical physics  
 jointly organized between research groups at LMU and TU Munich  
 joint organization with Dr. Amanda Young (TU Munich)
- GAuS Seminar** since 11/2020  
 German Austrian Swiss seminar in analysis and PDE  
 Online seminar on topics in mathematical physics, analysis and PDE  
 joint organization with Dr. Christoph Kehle (ITS ETH Zurich, Switzerland)  
 and Dr. Konstantin Merz (TU Braunschweig, Germany)
- Looney Seminar** since 07/2020  
 informal seminar among postdocs and PhD students  
 Online seminar on topics in mathematical physics  
 joint organization with Dr. Daniele Dimonte (University Basel, Switzerland)  
 and Dr. Alessandro Olgiati (University Zurich)

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**TEACHING EXPERIENCE**


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- University of Munich**  
 Lecturer for "Stochastik" fall semester 2023/24  
 Lecturer for "Mathematik für Naturwissenschaftler:innen II" spring semester 2023  
 Tutor for "Analysis 2 für Statistik" spring semester 2022/23  
 Lecturer for "Mathematik für Naturwissenschaftler:innen I" fall semester 2022/23  
 Tutor for "Numerik" fall semester 2022/23
- University of Zurich** 2015-2019  
 Tutor for Analysis 1,2, Functional Analysis and *Study Center*
- University of Munich, Student employee** 2013-2015  
 Tutor for Analysis 1,2

**University Leipzig, Student Employee**

2012-2013

Corrector for homework in Theoretical Mechanics, Theoretical Electrodynamics

**VOLUNTARY MENTORING EXPERIENCE**

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**Association of women in mathematical physics**

founding member of association of women in mathematical physics

since 2022

Organization of different measures to support female researchers  
(networking events, informative meetings and articles, seminars etc.)**Mentoring program for female refugees**founding member of the organization SEET (Support Education, Empower Together) Zürich,  
a study support program for female refugees founded in 2018Organization of funding and of the mentoring program  
(including workshops, coachings and network events )

since 2018

Mentor for a female Sudanese physicist

since 2020

**Mentor for children from socially disadvantaged families**

Arche Kinderbegleitung Zürich

2016-2019

Kinder und Jugendhilfe Arche München

2013-2015

**REFEREE ACTIVITY**

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Referee reports for *Communications in Mathematical Physics*, *Journal of Statistical Physics*, *Journal of Mathematical Physics* and *SIAM Journal on Mathematical Analysis*.**LANGUAGES**

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German (native), English (fluent), French (good)

Simone Rademacher

July 2023.