Prof. Dr. Fakher Assaad

Date of birth:	November 3, 1964
Gender:	male
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Position:	Professor (C3)
Family status:	Married, 2 children

Academic Education

1983 – 1991	Undergraduate studies, ETH Zürich.
1988	Diploma, Physics, ETH Zürich.
1991	Doctoral degree, Physics, ETH Zürich. Supervisors: T. M. Rice and D. Würtz.

Professional Career

1991 – 1993	Postdoctoral Research Associate, Universität Würzburg.
1994 – 1995	Postdoctoral Research Associate, University of Tokyo.
1996 – 1997	Postdoctoral Research Associate, University of California at Santa Barbara.
1997 – 2000	Research Associate, Universität Stuttgart.
1998	Habilitation, Universität Stuttgart.
2001 – 2003	Heisenberg Fellow of the DFG, Max-Planck-Institut für Festkörperforschung Stuttgart.
2003 –present	Professor of Physics (C3), Universität Würzburg.

Fellowships, Awards, and Services to the Community

1991	Second prize of the Seymour Cray Switzerland Competition. Award received for *Exact Diagonalization and Monte Carlo for Strongly Correlated Fermions: Phase Diagram of the One-Dimensional t-J Model* in collaboration with M. Ogata, M.U. Luchini, S. Sorella and D. Würtz.
1995	Research fellowship from the Japan Society for the Promotion of Science (January 1995 – December 1995).
1996	Research fellowship from the Swiss National Science Foundation (February 1996 – July 1997).
2000	Heisenberg Fellowship awarded by the DFG.
2009	Co-Spokesman of the DFG Research Unit FOR1162 *Electron correlation-induced phenomena in surfaces and interfaces with tunable interactions*.
2012	Project proposal for computational resources was awarded the *John von Neumann Exzellenz-Projekt 2012* prize.
2013	Spokesman of the DFG Research Unit FOR1807, *Advanced Computational Methods for Strongly Correlated Quantum Systems*.

Selected Publications

- F. F. Assaad, T. Grover
  Simple Fermionic Model of Deconfined Phases and Phase Transitions,
  Phys. Rev. X **6**, 041049 (2016).
- F. F. Assaad, I. F. Herbut,
  Pinning the order: the nature of quantum criticality in the Hubbard model on honeycomb lattice,
  Phys. Rev. X **3**, 031010 (2013).
- F. F. Assaad, M. Bercx, M. Hohenadler,
  Quantum Spin Models from Flux Tubes in Correlated Topological Insulators,
  Phys. Rev. X **3**, 011015 (2013).
- M. Hohenadler, T. C. Lang, F. F. Assaad
  Correlation effects in quantum spin-Hall insulators: a quantum Monte Carlo study,
  Phys. Rev. Lett. **106**,100403 (2010).
- F. F. Assaad, T. C. Lang,
  Diagrammatic Determinantal methods: projective schemes and applications to the Hubbard-Holstein model
  Phys. Rev. B **76**, 035116 (2007)
- F. F. Assaad,
  Phase diagram of the half-filled two-dimensional SU(N) Hubbard-Heisenberg model: A quantum Monte Carlo study,
  Phys. Rev. B **71**, 075103 (2005).

- F. F. Assaad,
  Quantum Monte Carlo Simulations of the Half-Filled Two-Dimensional Kondo Lattice Model,
  Phys. Rev. Lett. **83**, 796 (1999).
- F. F. Assaad, M. Imada, D. J. Scalapino,
  Quantum Transition between an Antiferromagnetic Mott Insulator and $d_{x^2-y^2}$ *Superconductor in Two Dimensions*,
  Phys. Rev. Lett. **77**, 4592 (1996).
- F. F. Assaad, W. Hanke and D. J. Scalapino,
  Flux Quantization in the two-Dimensional Repulsive and Attractive Hubbard models,
  Phys. Rev. Lett. **71** , 1915 (1993).
- M. Ogata, M. U. Luchini, S. Sorella, F. F. Assaad,
  Phase diagram of the one-dimensional t-J *model*,
  Phys. Rev. Lett. **66**, 2388 (1991).