

# CV of Jörg Schmiedmayer

## Personal data

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Date of Birth 13.08.1960  
Place of Birth Vienna, Austria  
Nationality Austria



## Education

May 1997 Habilitation in Experimental Physics (Univ. Innsbruck)  
Dec 1987 PhD in Experimental Physics; Neutron and Nuclear Physics (TU-Wien)  
Jun 1983 Diploma in Experimental High energy Physics (TU-Wien and CERN)  
1978 – 1983 Studies of Physics at TU-Wien and Astronomy at Univ. Wien

## Career History

2013 Full member of the Austrian Academy of Sciences  
2011 Corresponding member of the Austrian Academy of Sciences  
2010 Founding member: Vienna Center for Quantum Science and Technology (VCQ)  
2010 – today Gest Professor: National Institut of Informatics (Tokyo, Japan)  
2007 – today Full Professor of Physics: Technische Universität Wien  
2002 – 2004 Gest Professor: Peking University (BeiJing, China)  
2000 – 2007 Professor (C4): Universität Heidelberg  
1997 – 2000 Assoc. Prof with tenure (Univ. Innsbruck)  
1995 – 1997 Universitätsassistent (Inst. Experimentalphysik, Univ. Innsbruck)  
1991 – 1995 Postdoctoral researcher / research fellow at MIT  
1990 – 1991 Postdoctoral researcher / research fellow at Harvard  
1987 – 1990 Universitätsassistent (Atominstitut, TU-Wien)

## Prizes / Awards (selected)

1988 Viktor Hess prize (Austrian Physical Society)  
1992 Excellence in Research and Development: Oak Ridge National Laboratory  
1996 European Optics Prize, European Optical Society (with A. Zeilinger + coll.)  
2006 Wittgenstein Prize  
2012 Wissenschaftspreis der Stadt Wien

## Fellowships

1990-1992 Erwin Schrödinger Fellowship (FWF)  
1994-1997 APART Fellowship, Austrian Academy of Science

## Research interests

Fundamentals of Quantum Science and the transformation into a quantum technology;  
Many body quantum physics, non equilibrium phenomena, the quantum classical transition;  
Quantum Information; Hybrid quantum systems

## Publications

> 200 publications in peer reviewed scientific journals

ISI citation record (as of 01.10.2016): Total citations > 9250, h-index 52

updated records are accessible at ISI researcher ID: B-4717-2008

<http://www.researcherid.com/rid/B-4717-2008>

google scholar: [https://scholar.google.com/citations?hl=en&user=fD\\_H8DgAAAAJ](https://scholar.google.com/citations?hl=en&user=fD_H8DgAAAAJ)

## 5 selected Conference Invitations

- 2013/07 Conneting photons to spins, CLEO-PR, Kyoto, Japan
- 2014/07 Does an isolated many body quantum system relax?: Precision Tests of Many-Body Physics with Ultracold Quantum Gases (KITP BeiJing)
- 2014/11 Interferometry with Trapped Atoms; QCMC 2014, Hefei, China
- 2015/03 Observation of a generalized Gibbs Ensemble; Nonequilibrium Quantum Matter, Aspen, USA
- 2016/1 High order correlations and what we can learn about the solution for many body problems from experiment, Quantum Integrable Models in and out of Equilibrium, Newton Institute, (Cambridge)

## 5 selected Conference Organizations

- 2012/08 Quantum Communication Measurement and Ccomputation (QCMC 2012), TU-Wien, Vienna, Austria
- 2012/09 KITP workshop on: Nonequilibrium dynamics and thermodynamics in closed interacting quantum systems (together with A. Polkovnikov, D. Huse, A. Silva), KITP Santa Barbara, CA, USA
- 2014/07-08 Aspen Summer progrmm on Many-Body Quantum Systems far from Equilibrium (together with M. Rigol, U. Bovensiepen and J. Freericks). Aspen center for Physics, Aspen, CO, USA
- 2015/04 Winter school on: Quantum Dynamicsof Many-Body Systems, Universitätszentrum Obergurgl (together with T. Gasenzer), Obergurgl, Austria
- 2010-2016 QuantumOptics: Bi-annual winter conference at Universitätszentrum Obergurgl: (together with HC Nägerl and H. Ritsch), Obergurgl, Austria

## 5 selected Memberships

- Since 1983 Austrian Physical Society (ÖPG) and American Physical Society (APS)
- 2013 Fellow of the American Physical Society (APS)
- 2013 Full member of the Austrian Academy of Sciences
- 2009-2014 EMMI program committee (GSI-Darmstadt)
- Since 2013 ERC advanced grant slection panel

## Referee activity:

Nature, Science, Rev.Mod.Phys., PRL, PRX, PRA, NJP, DFG, EPSRC, EU, ERC ...

## List of 10 selected important publications in the last 10 years

- [1] *Non-equilibrium coherence dynamics in one-dimensional Bose gases*  
S. Hofferberth, I. Lesanovsky, B. Fischer, T. Schumm, J. Schmiedmayer  
Nature **449**, 324 (2007); doi:10.1038/nature06149
- [2] *Long-Range Order in Electronic Transport through Disordered Metal Films*  
S. Aigner, L. Della Pietra, Y. Japha, O. Entin-Wohlman, T. David, R. Salem, R. Folman,  
J. Schmiedmayer  
Science **319**, 1226 (2008); doi:10.1126/science.1152458
- [3] *Probing quantum and thermal noise in an interacting many-body system*  
S. Hofferberth, I. Lesanovsky, T. Schumm, A. Imambekov, V. Gritsev, E. Demler,  
J. Schmiedmayer  
Nature Physics **4**, 489-495 (2008), doi:10.1038/nphys941;
- [4] *Experimental demonstration of a BDCZ quantum repeater node*  
Z-S Yuan, Y-A Chen, B Zhao, S Chen, J Schmiedmayer, J-W Pan  
Nature **454**, 1098-1101 (2008), doi:10.1038/nature07241;
- [5] *Cavity QED with magnetically coupled collective spin states*  
R. Amsüss, Ch. Koller, T. Nöbauer, S. Putz, S. Rotter, K. Sandner, S. Schneider,  
M. Schramböck, G. Steinhauser, H. Ritsch, J. Schmiedmayer, J. Majer  
Phys. Rev. Lett. **107**, 060502 (2011); doi:10.1103/PhysRevLett.107.060502
- [6] *Relaxation Dynamics and Pre-thermalization in a Quantum System*  
M. Gring, T. Langen, M. Kuhnert, T. Kitagawa, M. Schreitl, I. Mazets, D. Smith, E. Demmler,  
J. Schmiedmayer  
Science **337**, 1318 (2012) doi:10.1126/science.1224953
- [7] *Local emergence of thermal correlations in an isolated quantum many-body system*  
T. Langen, R. Geiger, M. Kuhnert, B. Rauer, J. Schmiedmayer  
Nature Physics **9**, 640-643 (2013) doi:10.1038/nphys2739
- [8] *Photonic architecture for scalable quantum information processing in NV-diamond*  
Kae Nemoto, Michael Trupke, Simon J. Devitt, Ashley M. Stephens, Kathrin Buczak, Tobias  
Nobauer, Mark S. Everitt, Jorg Schmiedmayer, William J. Munro  
Phys. Rev. X **4**, 031022 (2014) doi:10.1103/PhysRevX.4.031022
- [9] *Protecting a Spin Ensemble against Decoherence in the Strong-Coupling Regime of Cavity QED*  
S. Putz, D.O. Krimer, R Amsüss, A Valookaran, T Nöbauer, J Schmiedmayer, S Rotter, J Majer  
Nature Physics **10**, 720-724 (2014) doi:10.1038/nphys3050
- [10] *Experimental Observation of a Generalized Gibbs Ensemble*  
T. Langen, S. Erne, R. Geiger, B. Rauer, T. Schweigler, M. Kuhnert, W. Rohringer,  
I. E. Mazets, T. Gasenzer, J. Schmiedmayer  
Science **348**, 207 (2015) doi:10.1126/science.1257026