Angelo Valli

Curriculum Vitae

Employment

10/2016 to 07/2018: **Erwin Schrödinger Fellow** at SISSA
10/2014 to 09/2016: **Post-doc** at CNR-IOM
07/2013 to 09/2014: **Post-doc** at Vienna University of Technology
03/2009 to 06/2013: **Ph.D.** at Vienna University of Technology

Funding & Grants

10/2016 to 07/2018: **FWF Erwin Schrödinger Fellowship**

- host institute: SISSA
- title: "Driving and controlling nanoscale electron correlations"
- project n.: **J 3890-N36**
- status/amount: principal investigator/66.550 €
- website: FWF Project Database

Bibliometrics

Publications: 13 (including 1 Nano Lett., 3 PRL, 1 EPJ-ST)
h-index: 7 (ISI Web of Science), 7 (Google Scholar)

Dissemination

Presentations at International Conferences

- 1 invited talk, 7 invited seminars, 17 contributed talks, 9 posters

Academic Experience

Teaching at Vienna University of Technology

- 2010/2011: **Tutor** for "Übungen zur Quantenmechanik II"

Co-supervision activity

- Co-supervision at SISSA (with M. Capone)
  - **Ph.D.:** K. Baumann
  - **Ph.D.:** M. Angeli
- Co-supervision at Vienna University of Technology (with K. Held)
  - **Diplomarbeit:** D. Rotter
  - **Projektarbeit:** D. Rotter, V. Motsch, S. Wolf
  - **Bachelorarbeit:** M. Pickem

EDUCATION

06/2013: **Ph.D. in Physics** (with distinction)
- institute: Vienna University of Technology
- topic: "Electronic correlations at the nanoscale"
- supervisor: K. Held

02/2009: **M.Sc. in Physics** (110/110 *cum laude*)
- institute: "Sapienza" University of Rome
- topic: "Symmetry of a secondary component of the order parameter in high-temperature cuprate superconductors"
- supervisors: C. Di Castro & M. Capone

10/2006: **B.Sc. in Physics** (110/110 *cum laude*)
- institute: "Sapienza" University of Rome
- topic: "Equilibrium of compact stars"
- supervisor: O. Benhar

ORGANIZATION

Organization of Conferences/Meetings/Events
- 04/2014: SFB "Young Researcher Meeting" in Vienna

PEER REVIEW

Referee for international scientific journals
- since 2018: ACS Nano
- since 2014: Phys. Rev. B
- since 2013: Phys. Rev. Lett.

OUTREACH

List of Outreach Activities
- 2018: SISSA 4 Schools (guide and activity for students)
- 2017: Talk at Trieste NEXT: http://www.triestenext.it/
- 2017: **Training Course:** "Creative Science Communication" at SISSA

LANGUAGES

Written and Spoken language skills
- **Italian:** mothertongue
- **English** fluent
- **German:** coversational
- **Hungarian:** elementary

Full List of Publications

14. A. Amaricci, A. Valli, G. Sangiovanni, B. Trauzettel, and M. Capone
Coexistence of metallic edge states and anti-ferromagnetic ordering in correlated topological insulators arXiv:1805.03999 (2018).

13. A. Valli, A. Amaricci, V. Brosco, and M. Capone
Quantum Interference assisted spin filtering in graphene nanoflakes
Nano Lett., **2018**, 18 (3), pp 21582164.

12. M. Schüler, S. Barthel, T. Wehling, M. Karolak, A. Valli, and G. Sangiovanni,
Realistic theory of electronic correlations in nanoscopic systems
Eur. Phys. J. Special Topics **226**, 2615-2640 (2017)

11. A. Valli, A. Amaricci, A. Toschi, T. Saha-Dasgupta, K. Held, and M. Capone,
Effective magnetic correlations in hole-doped graphene nanoflakes
Phys. Rev. B **94**, 245146 (2016)

10. A. Valli, H. Das, G. Sangiovanni, T. Saha-Dasgupta, and K. Held,
Tunable site- and orbital-selective Mott transition and quantum confinement effects in $La_{0.5}Ca_{0.5}MnO_3$ nanoclusters
Phys. Rev. B **92**, 115143 (2015)

9. A. Valli, T. Schäfer, P. Thunström, G. Rohringer, S. Andergassen, G. Sangiovanni, K. Held, and A. Toschi,
Dynamical vertex approximation in its parquet implementation: Application to Hubbard nanorings
Phys. Rev. B **91**, 115115 (2015)

8. D. Rotter, A. Valli, G. Sangiovanni, and K. Held
Double Exchange model for nanoscopic clusters
Eur. Phys. J. B **86**, 68 (2013)

7. A. Valli, G. Sangiovanni, A. Toschi, and K. Held
Correlation effects in transport properties of interacting nanostructures
Phys. Rev. B **86**, 115418 (2012)

6. G. Rohringer, A. Valli, and A. Toschi
Local electronic correlation at the two-particle level
Phys. Rev. B **86**, 125114 (2012)

5. H. Das, G. Sangiovanni, A. Valli, K. Held, and T. Saha-Dasgupta
Das et al. Reply
Phys. Rev. Lett. **108**, 129702 (2012)

4. H. Das, G. Sangiovanni, A. Valli, K. Held, and T. Saha-Dasgupta
Size control of charge-orbital order in half-doped manganite $La_{0.5}Ca_{0.5}MnO_3$
Phys. Rev. Lett. **107**, 197202 (2011)

3. O. Gunnarsson, G. Sangiovanni, A. Valli, M. W. Haverkort
Fourier transformation and response functions
Phys. Rev. B **82**, 233104 (2010)

2. A. Valli, M. Capone, G. Sangiovanni, and C. Di Castro
Possibile secondary component of the order parameter observed in London penetration depth measurements
Phys. Rev. B **82**, 132504 (2010)

1. A. Valli, G. Sangiovanni, O. Gunnarsson, A. Toschi, and K. Held,
Dynamical Vertex Approximation for Nanoscopic Systems
Phys. Rev. Lett. **104**, 246402 (2010)