Curriculum vitae

Personal Information

FIRST NAME / SURNAME Giorgio Sangiovanni

PERMANENT ADDRESS Universität Würzburg
Institut für Theoretische Physik und Astrophysik
TP1, Campus Süd – Am Hubland, 97074 Würzburg – Germany

TEL. & EMAIL +49 (0)931 31 89100 – sangiovanni@physik.uni-wuerzburg.de

WEB https://www.physik.uni-wuerzburg.de/sangiovanni

NATIONALITY Italian

DATE OF BIRTH 2.8.1976

MARITAL STATUS Married; one daughter

Employment

DATES March 2012 - present
POSITION Professor of Theoretical Physics (W2/associate)
INSTITUTION Julius-Maximilians-Universität Würzburg

DATES September 2008 - February 2012
POSITION University assistant
INSTITUTION Institut für Festkörperphysik – TU Wien

DATES December 2004 - August 2008
POSITION Post-doc grant
INSTITUTION Max-Planck Institut für Festkörperforschung Stuttgart

Education

PHD IN PHYSICS 2005 – Università "La Sapienza", Rome – M. Capone and C. Castellani
"LAUREA" IN PHYSICS 2001 – Università "La Sapienza", Rome – C. Castellani
HIGH-SCHOOL LEAVING EXAM 1995 – "Maturità" – Liceo scientifico "L. Pasteur", Rome
MUSIC 1994 – French Horn Diploma – Conservatorio "S. Cecilia", Rome

Curriculum vitae

Competitions, shortlists and other achievements

DATE July 2011
INSTITUTION Julius-Maximilians-Universität Würzburg
POSITION W2/associate Professorship in theoretical physics
RESULT 1st in the shortlist and offer ("Ruf")

HABILITATION AS ITALIAN PROFESSOR
2017 – In the category of Full Professor of Theoretical Condensed Matter Physics

2012 – In the category of Associate Professor of Theoretical Condensed Matter Physics

PHD ENTRANCE COMPETITIONS
2001 – SISSA (Trieste) – short-listed, offer declined
2001 – Università "La Sapienza", Rome – short-listed, offer accepted

Mid-/long-term visits

PERIOD 2019 Jan-Feb
INSTITUTION/PROGRAM SIMONS FOUNDATION – CCQ, Flatiron Institute, New York, USA

PERIOD 2010 Aug-Sep
INSTITUTION/PROGRAM RIKEN, Japan – *Quantum Science of Strongly Correlated Systems* – Y. Tokura, N. Nagaosa and R. Arita

PERIOD 2010 Feb-Mar
INSTITUTION/PROGRAM UCSB-KIPT, USA – *Towards Material Design Using Strongly Correlated Electron Systems* – A. Georges, G. Kotliar and S. Savrasov

PERIOD 2005-2008
INSTITUTION/PROGRAM Forschungszentrum Jülich – frequent guest of E. Koch and S. Blügel

Curriculum vitae

Research interests

- Theory of interacting electron systems
- Topological states of matter
- Realistic calculations of materials
- Quantum magnetism
- Computational methods for strongly correlated fermions
- Electron-phonon interaction and high-T_c superconductors

Publication record

~100 publications in international journals
25 PRL, 1 Nature, 1 Science, 2 Nature Commun., 2 Nano Letters, 2 PRX, 2 npj Quantum Materials, >50 PRB (see further down for a complete list)
h-index: 42 (**Google Scholar**), 35 (ISI Web-of-Science)

Invited talks and seminars

~40 invited talks in international conferences and invited seminars (see further down for a detailed list)

Third-party funding

DFG – EXC 2147 One of the funding principal investigators of ***ct.qmat*** Dresden/Würzburg cluster *"Complexity and Topology in Quantum Matter"* – length: 7 years

DFG – SFB 1170 Principal investigator of two Projects in the SFB *"Topological and Correlated Electronics at Surfaces and Interfaces"* – length/budget: 8 years/760 k€

DFG – FOR 1346 Principal investigator for Project *"Realistic theory of electronic correlations in nanoscopic systems"* – length/budget: 3 years/136 k€

DFG – FOR 1162 Principal investigator for Project *"Orbital, spin and charge fluctuations in layered oxide heterostructures"* – length/budget: 3 years/237 k€

TU WIEN Principal investigator for the "Innovative Projekte", *"Correlated heterostructures for solar cells"* – 3 years/position for 1 PhD student

FWF *"Lise Meitner"* fellowship M1136, project title *"At the frontiers of phonons and correlated electrons"* – 2 years/143 k€

Curriculum vitae

Organization of conferences

DATE/VENUE 2020 (posponed to 2022) Amalfi (Italy)
DESCRIPTION 2. edition of the international conference *"**Lectiones Amalfitanæ**"* on electronic correlations and quantum materials
OTHER ORGANIZERS A. Toschi, M. Cuoco and A. Georges

DATE/VENUE 2018 Campello sul Clitunno (Italy)
DESCRIPTION 1. edition of the international conference *"**Lectiones Clitumnaliæ**"* on electronic correlations,
OTHER ORGANIZERS S. Andergassen and A. Toschi

DATE/VENUE 2018 Würzburg
DESCRIPTION International Conference *"**ToCoTronics2018**"* of the SFB 1170
OTHER ORGANIZERS R. Claessen, B. Trauzettel, J. Schäfer, T. Kießling and V. Hinkov

DATE/VENUE 2014 Haikou (China)
DESCRIPTION Symposium H1 at the International Conference *"Second International Conference of Young Researchers on Advanced Materials"* IUMRS-ICYRAM
OTHER ORGANIZERS X.-Q. Chen, C. Franchini, G. Profeta, A. Kolmogorov and R. Zhang

DATE/VENUE 2014 Nice (France)
DESCRIPTION International Conference *"The New Generation in Strongly Correlated Electron Systems"* NGSCES 2014
OTHER ORGANIZERS N. Bergeal, S. Kaiser and M. Schirò

Curriculum vitae

Academic activities

@UNI WÜRZBURG

Program Head of Physics Master and Bachelor (Fakultät für Physik und Astronomie, University of Würzburg)

Coordinator of the exchange program *"Amerikaprogramm für Studierende der Physik"* with four universities in the USA for the Fakultät für Physik and Astronomie of the University of Würzburg. Fundings applied to the DAAD.

Vorsitzender (=speaker) of the Kommission für das Auslandsstudium
Member of the Fakultätsrat (Fakultät für Physik und Astronomie, University of Würzburg)

Host of a *"Humboldt Research Fellowship for Postdoctoral Researchers"* Grant (Dr. Zhicheng Zhong, 2015), funded by the A. von Humboldt Stiftung

Teaching

@UNI WÜRZBURG

- "Quantenmechanik I"
- "Quantenmechanik II"
- "Quantenmechanik III"
- "Mathematische Grundlagen der Quantenmechanik"
- "Computational Physics" for Bachelor Students
- "Theorie der Supraleitung"
- "Theoretische Festkörperphysik II"
- "Computational Materials Science"
- Oberseminar "Fortgeschrittene Themen der Theoretischen Physik"
- Oberseminar "Quantum Matter: Theorie und Experiment"
- Oberseminar "Symmetrien in der Festkörperphysik"

@TU WIEN

- lecturer of "Quantentheorie I"
- Übungen zur "Quantenfeldtheorie für Vielteilchensysteme"
- lecturer of "Computational Materials Science"
- lecturer of "Quantum Computing and Quantum Dots"
- lecturer of "Computational Materials Science"
- "Quantentheorie II Übungen"
- "Laborübungen II"

Curriculum vitae

Supervision of students

PHD P. Eck, A. Hausoel, M. Edelmann, A. Kowalski, S. Adler, N. Wagner, N. Parragh M. Wallerberger, E. Assmann, A. Valli, C. Taranto

MASTER N. Wagner, P. Eck, A. Hausoel, M. Edelmann, A. Kowalski, S. Enzner, M. Veit P. Gunacker, C. Ecker, D. Rotter, S. Hummel, N. Parragh

BACHELOR/PROJECT S. Enzner, A. Bakic, N. Wagner, A. Kowalski, S. Körber, L. Gradl S. Wolf, V. Motsch, D. Rotter, A. Girschik, C. Ecker, N. Parragh

Activity as Referee

Physical Review Letters – Physical Review B – Nature Communications – Nature Materials – Scientific Reports – ACS Nano – ERC (European Research Council) – Deutsche Forschungsgemeinschaft (DFG) – Alexander von Humboldt Stiftung

Curriculum vitae

Five selected papers

PRL 126, 206601 (2021)
[**APS**, **ARXIV**]

N. Wagner, S. Ciuchi, A. Toschi, B. Trauzettel and G. Sangiovanni

Resistivity Exponents in 3D-Dirac Semimetals From Electron-Electron Interaction

SHORT DESCRIPTION

The temperature laws of transport in Dirac liquids have to be revisited and the low-energy protection of their bandstructure breaks down in the strong-coupling limit.

NAT. COMMUN. 8, 16062 (2017)
[**NATURE**, **ARXIV**]

A. Hausoel, M. Karolak, E. Şaşıoğlu, A. Lichtenstein, K. Held, A. Katanin, A. Toschi and G. Sangiovanni

Local magnetic moments in iron and nickel at ambient and Earth's core conditions

SHORT DESCRIPTION

A new piece of the puzzle of the Earth's magnetic field: nickel-iron alloys display an unexpected non-Fermi liquid behaviour at extreme conditions.

PRL 114, 185701 (2015)
[**APS**, **ARXIV**]

A. Amaricci, J. C. Budich, M. Capone, B. Trauzettel and G. Sangiovanni

First-order character and observable signatures of topological quantum phase transitions

SHORT DESCRIPTION

A discontinuous topological transition is identified for the first time in a microscopic model as an effect of the electronic interaction treated beyond the Hartree level.

PRL 110, 078701 (2013)
[**APS**, **ARXIV**]

E. Assmann, P. Blaha, R. Laskowski, K. Held, S. Okamoto and G. Sangiovanni

Oxide heterostructures for efficient solar cells

SHORT DESCRIPTION

Prediction of novel solar cells with higher efficiency, based on layered oxide heterostructures. This paper has been selected for a Synopsis in Physics.

PRL 94, 026401 (2005)
[**APS**, **ARXIV**]

G. Sangiovanni, M. Capone, C. Castellani and M. Grilli

Electron-phonon Interaction close to a Mott transition

SHORT DESCRIPTION

One of the topics treated during my PhD. This Letter reports fundamental results for the screening of a retarded phonon-mediated interaction in correlated metals.

Curriculum vitae

Full publication list

115. N. Wagner, S. Ciuchi, A. Toschi, B. Trauzettel and G. Sangiovanni
Phys. Rev. Lett. **126**, 206601 (2021) *Resistivity Exponents in 3D-Dirac Semimetals From Electron-Electron Interaction*
[**APS**, **ARXIV**]

114. M. Ünzelmann, H. Bentmann, T. Figgemeier, P. Eck, J. N. Neu, B. Geldiyev,
Nat. Commun. **12**, 3650 (2021) F. Diekmann, S. Rohlf, J. Buck, M. Hoesch, M. Kalläne, K. Rossnagel, R. Thomale,
[**NATURE**, **ARXIV**] T. Siegrist, G. Sangiovanni, D. Di Sante, F. Reinert
Momentum-space signatures of Berry flux monopoles in a Weyl semimetal

113. A. Odobesko, D. Di Sante, A. Kowalski, S. Wilfert, F. Friedrich, R. Thomale,
Phys. Rev. B **102**, 174504 (2020) G. Sangiovanni and M. Bode
[**APS**, **ARXIV**] *Observation of tunable single-atom Yu-Shiba-Rusinov states*

112. M. Reitner, P. Chalupa, L. Del Re, D. Springer, S. Ciuchi, G. Sangiovanni and A. Toschi
Phys. Rev. Lett. **125**, 196403 (2020) *Attractive Effect of a Strong Electronic Repulsion: The Physics of Vertex Divergences*
[**APS**, **ARXIV**]

111. J. M. Pizarro, S. Adler, K. Zantout, T. Mertz, P. Barone, R. Valentí, G. Sangiovanni and
npj Quantum Mater. **5**, 79 (2020) T. Wehling
[**NATURE**] *Deconfinement of Mott localized electrons into topological and spin–orbit-coupled Dirac fermions*

110. A. Valli, M. P. Bahlke, A. Kowalski, M. Karolak, C. Hermann and G. Sangiovanni
Phys. Rev. Research **2**, 033432 *Kondo screening in Co adatoms with full Coulomb interaction*
(2020) [**APS**, **ARXIV**]

109. P. Schütz, M. Kamp, D. Di Sante, A. Lubk, B. Büchner, G. Sangiovanni, M. Sing and
Appl. Phys. Lett. **116**, 201601 R. Claessen
(2020) [**AIP**] *Electronic structure of epitaxial perovskite films in the two-dimensional limit: Role of the surface termination*

108. D. Springer, B. Kim, P. Liu, S. Khmelevskyi, S. Adler, M. Capone, G. Sangiovanni,
Phys. Rev. Lett. **125**, 166402 (2020) C. Franchini and A. Toschi
[**APS**, **ARXIV**] *Osmates on the Verge of a Hund's-Mott Transition: The Different Fates of $NaOsO_3$ and $LiOsO_3$*

107. C. Watzenböck, M. Edelmann, D. Springer, G. Sangiovanni and A. Toschi
Phys. Rev. Lett. **125**, 086402 (2020) *Characteristic Timescales of the Local Moment Dynamics in Hund's Metals*
[**APS**, **ARXIV**]

106. D. Springer, P. Chalupa, S. Ciuchi, G. Sangiovanni and A. Toschi
Phys. Rev. B **101**, 155148 (2020) *Interplay between local response and vertex divergences in many-fermion systems*
[**APS**, **ARXIV**] *with on-site attraction*

105. N. Néel, J. Kröger, M. Schüler, B. Shao, T. Wehling, A. Kowalski and G. Sangiovanni
Phys. Rev. Research **2**, 023309 *Single-Co Kondo effect in atomic Cu wires on Cu(111)*
(2020) [**APS**, **ARXIV**]

104. M. Fuchs, P. Liu, T. Schwemmer, G. Sangiovanni, R. Thomale, C. Franchini and
J. Phys. Mater. **3**, 025001 (2020) D. Di Sante
[**IOP**] *Kagome metal-organic frameworks as a platform for strongly correlated electrons*

103. M. Ünzelmann, H. Bentmann, P. Eck, T. Kißlinger, B. Geldiyev, J. Rieger, S. Moser,
Phys. Rev. Lett. **124**, 176401 (2020) R. C. Vidal, K. Kißner, L. Hammer, M. A. Schneider, T. Fauster, G. Sangiovanni,
[**APS**, **ARXIV**] D. Di Sante and F. Reinert
Orbital-Driven Rashba Effect in a Binary Honeycomb Monolayer AgTe

102. L. Crippa, A. Amaricci, N. Wagner, G. Sangiovanni, J. C. Budich and M. Capone
Phys. Rev. Research **2**, 012023(R) *Nonlocal annihilation of Weyl fermions in correlated systems*
(2020) [**APS**, **ARXIV**]

101. D. Mahler, J.-B. Mayer, P. Leubner, L. Lunczer, D. Di Sante, G. Sangiovanni,
Phys. Rev. X **9**, 031034 (2019) R. Thomale, E. Hankiewicz, H. Buhmann, C. Gould and L. W. Molenkamp
[**APS**, **ARXIV**] *Interplay of Dirac Nodes and Volkov-Pankratov Surface States in Compressively Strained HgTe*

100. J. Kaufmann, P. Gunacker, A. Kowalski, G. Sangiovanni and K. Held
Phys. Rev. B **100**, 075119 (2019) *Symmetric improved estimators for continuous-time quantum Monte Carlo*
[**APS**, **ARXIV**]

99. S. Großmann, D. Friedrich, M. Karolak, R. Kullock, E. Krauss, M. Emmerling,
Phys. Rev. Lett. **122**, 246802 (2019) G. Sangiovanni and B. Hecht
[**APS**, **ARXIV**] *Nonclassical Optical Properties of Mesoscopic Gold*

98. A. Kowalski, A. Hausoel, M. Wallerberger, P. Gunacker and G. Sangiovanni
Phys. Rev. B **99**, 155112 (2019) *State and superstate sampling in hybridization-expansion continuous-time quantum Monte Carlo*
[**APS**, **ARXIV**]

97. C.-H. Min, H. Bentmann, J. N. Neu, P. Eck, S. Moser, T. Figgemeier, M. Ünzelmann, K. Kissner, P. Lutz, R. J. Koch, C. Jozwiak, A. Bostwick, E. Rotenberg, R. Thomale, G. Sangiovanni, T. Siegrist, D. Di Sante and F. Reinert
Phys. Rev. Lett. **122**, 116402 (2019) *Orbital Fingerprint of Topological Fermi Arcs in the Weyl Semimetal TaP*
[**APS**, **ARXIV**]

96. P. Kumar Das, D. Di Sante, F. Cilento, C. Bigi, D. Kopic, D. Soranzio, A. Sterzi, J. A. Krieger, I. Vobornik, J. Fujii, T. Okuda, V. Strocov, M. B. H. Breese, F. Parmigiani, G. Rossi, S. Picozzi, R. Thomale, G. Sangiovanni, R. J. Cava and G. Panaccione
Electron. Struct. **1**, 014003 (2019) *Electronic properties of candidate type-II Weyl semimetal WTe_2. A review perspective*
[**IOP**, **ARXIV**]

95. S. Ok, L. Muechler, D. Di Sante, G. Sangiovanni, R. Thomale and T. Neupert
Phys. Rev. B **99**, 121105(R) (2019) *Custodial glide symmetry of quantum spin Hall edge modes in monolayer WTe_2*
[**APS**, **ARXIV**]

94. S. Barbarino, G. Sangiovanni, and J. C. Budich
Phys. Rev. B **99**, 075158 (2019) *First-order topological quantum phase transition in a strongly correlated ladder*
[**APS**, **ARXIV**]

93. D. Di Sante, P. Eck, M. Bauernfeind, M. Will, R. Thomale, J. Schäfer, R. Claessen and G. Sangiovanni
Phys. Rev. B **99**, 035145 (2019) *Towards topological quasifreestanding stanene via substrate engineering*
[**APS**, **ARXIV**]

92. M. Wallerberger, A. Hausoel, P. Gunacker, A. Kowalski, N. Parragh, F. Goth, K. Held and G. Sangiovanni
Comput. Phys. Comm. **235**, 388-399 (2019) [**ELSEVIER**, **ARXIV**] *w2dynamics: Local one- and two-particle quantities from dynamical mean field theory*

91. J. Kügel, M. Karolak, A. Krönlein, D. Serrate, M. Bode and G. Sangiovanni
npj Quantum Mater. **3**, 53 (2018) *Reversible magnetic switching of high-spin molecules on a giant Rashba surface*
[**NATURE**]

90. A. Amaricci, A. Valli, G. Sangiovanni, B. Trauzettel and M. Capone
Phys. Rev. B **98**, 045133 (2018) *Coexistence of metallic edge states and antiferromagnetic ordering in correlated topological insulators*
[**APS**, **ARXIV**]

89. E. Kamil, J. Berges, G. Schönhoff, M. Rösner, M. Schüler, G. Sangiovanni and T. Wehling
J. Phys.: Condens. Matter. **30**, 235601 (2018) *Electronic structure of single layer 1T-$NbSe_2$: interplay of lattice distortions, non-local exchange, and Mott–Hubbard correlations*
[**IOP**, **ARXIV**]

88. O. Gunnarsson, J. Merino, T. Schäfer, G. Sangiovanni, G. Rohringer and A. Toschi
Phys. Rev. B **97**, 125134 (2018) *Complementary views on electron spectra: From fluctuation diagnostics to real-space correlations*
[**APS**, **ARXIV**]

87. O. Janson, Z. Zhong, G. Sangiovanni and K. Held
Print ISBN: 978-3-319-74988-4 *Dynamical Mean Field Theory for Oxide Heterostructure's*
Electronic ISBN: 978-3-319-74989-1 Chapter in Book Spectroscopy of Complex Oxide Interfaces
[**SPRINGER**, **ARXIV**] Springer International Publishing (2018)

86. P. Schütz, D. Di Sante, L. Dudy, J. Gabel, M. Stübinger, M. Kamp, Y. Huang, M. Capone, M.-A. Husanu, V. Strocov, G. Sangiovanni, M. Sing and R. Claessen
Phys. Rev. Lett. **119**, 256404 (2017) *Dimensionality-driven metal-insulator-transition in spin-orbit coupled $SrIrO_3$*
[**APS**, **ARXIV**]

85. F. Bisti, V. Rogalev, M. Karolak, S. Paul, A. Gupta, T. Schmitt, G. Güntherodt, V. Eyert, G. Sangiovanni, G. Profeta and V. Strocov
Phys. Rev. X **7**, 041067 (2017) *Weakly-correlated nature of ferromagnetism in non-symmorphic CrO_2 revealed by bulk-sensitive soft-X-ray ARPES*
[**APS**, **ARXIV**]

84. A. Hariki, A. Hausoel, G. Sangiovanni and J. Kuneš
Phys. Rev. B **96**, 155135 (2017) *DFT+DMFT study on soft moment magnetism and covalent bonding in $SrRu_2O_6$*
[**APS**, **ARXIV**]

83. D. Di Sante, A. Hausoel, P. Barone, J. Tomczak, G. Sangiovanni and R. Thomale
Phys. Rev. B **96**, 121106(R) (2017) *Realizing double Dirac particles in the presence of electronic interactions*
[**APS**, **ARXIV**]

82. O. Gunnarsson, G. Rohringer, T. Schäfer, G. Sangiovanni, and A. Toschi
Phys. Rev. Lett. **119**, 056402 (2017) *Breakdown of traditional many-body theories for correlated electrons*
[**APS**, **ARXIV**]

81. D. Di Sante, P. Kumar Das, C. Bigi, Z. Ergönenc, N. Gürtler, J. Krieger, T. Schmitt, M. Ali, G. Rossi, R. Thomale, C. Franchini, S. Picozzi, J. Fujii, V. Strocov, G. Sangiovanni, I. Vobornik, R. J. Cava, and G. Panaccione
Phys. Rev. Lett. **119**, 026403 (2017) *Three-dimensional electronic structure of type-II Weyl semimetal WTe_2*
[**APS**, **ARXIV**]

80. A. Hausoel, M. Karolak, E. Şaşıoğlu, A. Lichtenstein, K. Held, A. Katanin, A. Toschi and G. Sangiovanni
Nat. Commun. **8**, 16062 (2017) *Local magnetic moments in iron and nickel at ambient and Earth's core conditions*
[**NATURE**, **ARXIV**]

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

78. A. Amaricci, L. Privitera, F. Petocchi, M. Capone, G. Sangiovanni and B. Trauzettel
Phys. Rev. B **95**, 205120 (2017) *Edge state reconstruction from strong correlations in quantum spin Hall insulators*
[**APS**, **ARXIV**]

77. M. Edelmann, G. Sangiovanni, M. Capone and L. de' Medici
Phys. Rev. B **95**, 205118 (2017) *Chromium analogs of iron-based superconductors*
[**APS**, **ARXIV**]

76. Z. Wang, Z. Zhong, S. McKeown Walker, Z. Ristic, J.-Z. Ma, F. Y. Bruno, S. Riccò, G. Sangiovanni, G. Eres, N. C. Plumb, L. Patthey, M. Shi, J. Mesot, F. Baumberger and M. Radovic
Nano Letters **17**, 2561 (2017) *Atomically Precise Lateral Modulation of a Two-Dimensional Electron Liquid in Anatase TiO_2 Thin Films*
[**ACS**, **ARXIV**]

75. P. Sessi, D. Di Sante, A. Szczerbakow, F. Glott, S. Wilfert, H. Schmidt, T. Bathon, P. Dziawa, M. Greiter, T. Neupert, G. Sangiovanni, T. Story, R. Thomale and M. Bode
Science **354**, 1269 (2016) *Robust spin-polarized midgap states at step edges of topological crystalline insulators*
[**SCIENCE**]

74. T. Schäfer, S. Ciuchi, M. Wallerberger, P. Thunström, O. Gunnarsson, G. Sangiovanni, G. Rohringer and A. Toschi
Phys. Rev. B **94**, 235108 (2016) *Nonperturbative landscape of the Mott-Hubbard transition: Multiple divergence lines around the critical endpoint*
[**APS**, **ARXIV**]

73. P. Gunacker, M. Wallerberger, T. Ribic, A. Hausoel, G. Sangiovanni and K. Held
Phys. Rev. B **94**, 125153 (2016) *Worm-improved estimators in continuous-time quantum Monte Carlo*
[**APS**, **ARXIV**]

72. A. Amaricci, J. C. Budich, M. Capone, B. Trauzettel and G. Sangiovanni
Phys. Rev. B **93**, 235112 (2016) *Strong correlation effects on topological quantum phase transitions in three dimensions*
[**APS**, **ARXIV**]

71. O. Gunnarsson, T. Schäfer, J. P. F. LeBlanc, J. Merino, G. Sangiovanni, G. Rohringer and A. Toschi
Phys. Rev. B **93**, 245102 (2016) *Parquet decomposition calculations of the electronic self-energy*
[**APS**, **ARXIV**]

70. M. Schüler, S. Barthel, M. Karolak, A. I. Poteryaev, A. I. Lichtenstein, M. I. Katsnelson, G. Sangiovanni and T. Wehling
Phys. Rev. B **93**, 195115 (2016) *Many-body effects on Cr(001) surfaces: An LDA+DMFT study*
[**APS**, **ARXIV**]

69. G. Li, W. Hanke, G. Sangiovanni and B. Trauzettel
Phys. Rev. B **92**, 235149 (2015) *Interacting weak topological insulators and their transition to Dirac semimetal phases*
[**APS**, **ARXIV**]

68. A. Galler, C. Taranto, M. Wallerberger, M. Kaltak, G. Kresse, G. Sangiovanni, A. Toschi and K. Held
Phys. Rev. B **92**, 205132 (2015) *Screened moments and absence of ferromagnetism in FeAl*
[**APS**, **ARXIV**]

67. P. Gunacker, M. Wallerberger, E. Gull, A. Hausoel, G. Sangiovanni and K. Held
Phys. Rev. B **92**, 115102 (2015) *Continuous-time quantum Monte Carlo using worm sampling*
[**APS**, **ARXIV**]

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

65. J. Kügel, M. Karolak, A. Krönlein, J. Senkpiel, P.-J. Hsu, G. Sangiovanni, and M. Bode
Phys. Rev. B **91**, 235130 (2015) *State identification and tunable Kondo effect on MnPc on Ag(001)*
[**APS**]

64. Z. Zhong, M. Wallerberger, J. Tomczak, C. Taranto, N. Parragh, A. Toschi,
Phys. Rev. Lett. **114**, 246401 (2015) G. Sangiovanni and K. Held
[**APS**, **ARXIV**] *Electronics with correlated oxides: $SrVO_3/SrTiO_3$ as a Mott transistor*

63. O. Gunnarsson, T. Schäfer, J. P. F. LeBlanc, E. Gull, J. Merino, G. Sangiovanni,
Phys. Rev. Lett. **114**, 236402 (2015) G. Rohringer and A. Toschi
[**APS**, **ARXIV**] *Fluctuation diagnostics of the electron self-energy: Origin of the pseudogap physics*

62. A. Amaricci, J. C. Budich, M. Capone, B. Trauzettel and G. Sangiovanni
Phys. Rev. Lett. **114**, 185701 (2015) *First-order character and observable signatures of topological quantum phase*
[**APS**, **ARXIV**] *transitions*

61. A. Valli, T. Schäfer, P. Thunström, G. Rohringer, S. Andergassen, G. Sangiovanni,
Phys. Rev. B **91**, 115115 (2015) K. Held and A. Toschi
[**APS**, **ARXIV**] *Dynamical vertex approximation in its parquet implementation: Application to Hubbard nano-rings*

60. M. Karolak, M. Edelmann and G. Sangiovanni
Phys. Rev. B **91**, 075108 (2015) *Nickel-titanium double perovskite: A three-dimensional spin-1 Heisenberg*
[**APS**, **ARXIV**] *antiferromagnet*

59. M. W. Haverkort, G. Sangiovanni, P. Hansmann, A. Toschi, Y. Lu and S. Macke
EPL **108**, 57004 (2014) *Bands, resonances, edge singularities and excitons in core level spectroscopy*
[**IOP**, **ARXIV**] *investigated within the dynamical mean-field theory* – Editor's choice

58. C. Seibel, A. Nuber, H. Bentmann, M. Mulazzi, P. Blaha, G. Sangiovanni and F. Reinert
Phys. Rev. B **90**, 035136 (2014) *Quantized electronic fine structure with large anisotropy in ferromagnetic Fe films*
[**APS**, **ARXIV**]

57. J. Kügel, M. Karolak, J. Senkpiel, P.-J. Hsu, G. Sangiovanni and M. Bode
Nano Letters **14**, 3895 (2014) *Relevance of hybridization and filling of 3d orbitals for the Kondo effect in transition*
[**ACS**] *metal Phthalocyanines*

56. P. Hansmann, N. Parragh, A. Toschi, G. Sangiovanni and K. Held
New J. Phys. **16**, 033009 (2014) *Importance of d-p Coulomb interaction for high T_C cuprates and other oxides*
[**IOP**, **ARXIV**]

55. N. Parragh, G. Sangiovanni, P. Hansmann, S. Hummel, K. Held and A. Toschi
Phys. Rev. B **88**, 195116 (2013) *Effective crystal field and Fermi surface topology: A comparison of d- and dp-orbital models*
[**APS**, **ARXIV**]

54. C. Taranto, M. Kaltak, N. Parragh, G. Sangiovanni, G. Kresse, A. Toschi and K. Held
Phys. Rev. B **88**, 165119 (2013) *Comparing quasiparticle GW+DMFT and LDA+DMFT for the test bed material $SrVO_3$*
[**APS**, **ARXIV**]

53. S. Sakai, S. Blanc, M. Civelli, Y. Gallais, M. Cazayous, M.-A. Méasson, J. Wen, Z. Xu, G. Gu, G. Sangiovanni, Y. Motome, K. Held, A. Sacuto, A. Georges and M. Imada
Phys. Rev. Lett. **111**, 107001 (2013) *Raman-scattering measurements and theory of the energy-momentum spectrum for underdoped $Bi_2Sr_2CaCuO_{8+\delta}$ superconductors: Evidence of an s-wave structure for the pseudogap*
[**APS**, **ARXIV**]

52. T. Schäfer, G. Rohringer, O. Gunnarsson, S. Ciuchi, G. Sangiovanni and A. Toschi
Phys. Rev. Lett. **110**, 246405 (2013) *Divergent precursors of the Mott-Hubbard transition at the two-particle level*
[**APS**, **ARXIV**]

51. J. C. Budich, B. Trauzettel and G. Sangiovanni
Phys. Rev. B **87**, 235104 (2013) *Fluctuation-driven topological Hund insulators*
[**APS**, **ARXIV**]

50. E. Assmann, P. Blaha, R. Laskowski, K. Held, S. Okamoto and G. Sangiovanni
Phys. Rev. Lett. **110**, 078701 (2013) *Oxide heterostructures for efficient solar cells*
[**APS**, **ARXIV**] (see accompanying **Synopsis in Physics** and **2Physics** contribution)

49. P. Hansmann, A. Toschi, G. Sangiovanni, T. Saha-Dasgupta, S. Lupi, M. Marsi and K. Held
Phys. Status Solidi B **250**, 1251 (2013) *Mott–Hubbard transition in V_2O_3 revisited*
[**WILEY**, **ARXIV**]

48. D. Rotter, A. Valli, G. Sangiovanni, K. Held
Eur. Phys. J. B **86**, 68 (2013) *Double exchange model for nanoscopic clusters*
[**EPJ**, **ARXIV**]

47. N. Parragh, A. Toschi, K. Held and G. Sangiovanni
Phys. Rev. B **86**, 155158 (2012) *Conserved quantities of SU(2)-invariant interactions for correlated fermions and the advantages for quantum Monte Carlo simulations*
[**APS**, **ARXIV**]

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

45. J. Kuneš, V. Křápek, N. Parragh, G. Sangiovanni, A. Toschi and A. V. Kozhevnikov
Phys. Rev. Lett. **109**, 117206 (2012) *Spin state of negative charge-transfer material $SrCoO_3$*
[**APS**, **ARXIV**]

44. A. Toschi, R. Arita, P. Hansmann, G. Sangiovanni and K. Held
Phys. Rev. B **86**, 064411 (2012) *Quantum dynamical screening of the local magnetic moment in Fe-based superconductors*
[**APS**, **ARXIV**]

43. G. Sangiovanni, P. Wissgott, F. Assaad, A. Toschi and K. Held
Phys. Rev. B **86**, 035123 (2012) *Enhancement of the effective disorder potential and thermopower in Na_xCoO_2 through electron-phonon coupling*
[**APS**, **ARXIV**]

42. Z. Zhong, P. Wissgott, K. Held and G. Sangiovanni
EPL **99**, 37011 (2012) *Microscopic understanding of the orbital splitting and its tuning at oxide interfaces*
[**IOP**, **ARXIV**]

41. B. Mansart, E. Papalazarou, M. Fuglsang Jensen, V. Brouet, L. Petaccia, L. de' Medici, G. Sangiovanni, F. Rullier-Albenque, A. Forget, D. Colson and M. Marsi
Phys. Rev. B **85**, 144508 (2012) *Opening of the superconducting gap in the hole pockets of $Ba(Fe_{1-x}Co_x)_2As_2$ as seen via angle-resolved photoelectron spectroscopy*
[**APS**, **ARXIV**]

40. P. Hansmann, M. W. Haverkort, A. Toschi, G. Sangiovanni, F. Rodolakis, J.-P. Rueff, M. Marsi and K. Held
Phys. Rev. B **85**, 115136 (2012) *Atomic and itinerant effects at the transition-metal x-ray absorption K pre-edge exemplified in the case of V_2O_3*
[**APS**, **ARXIV**]

39. C. Taranto, G. Sangiovanni, K. Held, M. Capone, A. Georges and A. Toschi
Phys. Rev. B **85**, 085124 (2012) *Signatures of antiferromagnetic long-range order in the optical spectrum of strongly correlated electron systems* – Editors' suggestion
[**APS**, **ARXIV**]

38. S. Sakai, G. Sangiovanni, M. Civelli, Y. Motome, K. Held and M. Imada
Phys. Rev. B **85**, 035102 (2012) *Cluster-size dependence in cellular dynamical mean-field theory*
[**APS**, **ARXIV**]

37. F. Rodolakis, J.-P. Rueff, M. Sikora, I. Alliot, J.-P. Itié, F. Baudelet, S. Ravy, P. Wzietek, P. Hansmann, A. Toschi, M. W. Haverkort, G. Sangiovanni, K. Held, P. Metcalf and M. Marsi
Phys. Rev. B **84**, 245113 (2011) *Evolution of the electronic structure of a Mott system across its phase diagram: X-ray absorption spectroscopy study of* $(V_{1-x}Cr_x)_2O_3$
[**APS**, **ARXIV**]

36. H. Das, G. Sangiovanni, A. Valli, K. Held and T. Saha-Dasgupta
Phys. Rev. Lett. **107**, 197202 (2011) *Size control of charge-orbital order in half-doped manganite* $La_{0.5}Ca_{0.5}MnO_3$
[**APS**, **ARXIV**] [see also **Reply** to **Comment**: Phys. Rev. Lett. **108**, 129702 (2012)]

35. G. Sangiovanni and O. Gunnarsson
Phys. Rev. B **84**, 100505(R) (2011) *Isotope effect in the pseudogap state of high-temperature copper oxide superconductors*
[**APS**, **ARXIV**]

34. P. Wissgott, A. Toschi, G. Sangiovanni and K. Held
Phys. Rev. B **84**, 085129 (2011) *Effects of electronic correlations and disorder on the thermopower of* Na_xCoO_2
[**APS**, **ARXIV**]

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

32. J. Bauer and G. Sangiovanni
Phys. Rev. B **82**, 184535 (2010) *Low-energy kink in the nodal dispersion of copper oxide superconductors: Insights from dynamical mean-field theory*
[**APS**, **ARXIV**]

31. S. Lupi, L. Baldassarre, B. Mansart, A. Perucchi, A. Barinov, P. Dudin, E. Papalazarou, F. Rodolakis, J.-P. Rueff, J.-P. Itié, S. Ravy, D. Nicoletti, P. Postorino, P. Hansmann, N. Parragh, A. Toschi, T. Saha-Dasgupta, O. K. Andersen, G. Sangiovanni, K. Held and M. Marsi
A microscopic view on the Mott transition in chromium-doped V_2O_3
Nat. Commun. **1**, 105 (2010) [**NATURE**, **ARXIV**]

30. O. Gunnarsson, M. W. Haverkort and G. Sangiovanni
Analytical continuation of imaginary axis data for optical conductivity
Phys. Rev. B **82**, 165215 (2010) [**APS**, **ARXIV**]

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

28. D. Nicoletti, O. Limaj, P. Calvani, G. Rohringer, A. Toschi, G. Sangiovanni, M. Capone, K. Held, S. Ono, Y. Ando and S. Lupi
High-temperature optical spectral weight and Fermi-liquid renormalization in Bi-based cuprate superconductors
Phys. Rev. Lett. **105**, 077002 (2010) [**APS**, **ARXIV**]

27. A. Valli, G. Sangiovanni, O. Gunnarsson, A. Toschi and K. Held
Dynamical vertex approximation for nanoscopic systems
Phys. Rev. Lett. **104**, 246402 (2010) [**APS**, **ARXIV**]

26. P. Hansmann, R. Arita, A. Toschi, S. Sakai, G. Sangiovanni and K. Held
Dichotomy between large local and small ordered magnetic moments in Iron-based superconductors
Phys. Rev. Lett. **104**, 197002 (2010) [**APS**, **ARXIV**]

25. O. Gunnarsson, M. W. Haverkort and G. Sangiovanni
Analytic continuation of imaginary axis data using maximum entropy
Phys. Rev. B **81**, 155107 (2010) [**APS**, **ARXIV**]

24. F. Rodolakis, P. Hansmann, J.-P. Rueff, A. Toschi, M. W. Haverkort, G. Sangiovanni, A. Tanaka, T. Saha-Dasgupta, O. K. Andersen, K. Held, M. Sikora, I. Alliot, J.-P. Itié, F. Baudelet , P. Wzietek, P. Metcalf and M. Marsi
Inequivalent routes across the Mott transition in V_2O_3 explored by X-ray absorption
Phys. Rev. Lett. **104**, 047401 (2010) [**APS**, **ARXIV**]

23. G. Sangiovanni and O. Gunnarsson
J. of Electron Spectroscopy and Related Phenomena **181**, 20 (2010) [**ELSEVIR**]
Why standard estimates of electron-phonon coupling in cuprates do not work

22. A. Perucchi, C. Marini, M. Valentini, P. Postorino, R. Sopracase, P. Dore, P. Hansmann, O. Jepsen, G. Sangiovanni, A. Toschi, K. Held, D. Topwal, D. D. Sarma and S. Lupi
Phys. Rev. B **80**, 073101 (2009) [**APS**, **ARXIV**]
Pressure and alloying effects on the metal to insulator transition in $NiS_{2-x}Se_x$ studied by infrared spectroscopy

21. A. Toschi, P. Hansmann, G. Sangiovanni, T. Saha-Dasgupta, O. K. Andersen and K. Held
J. Phys.: Conf. Ser. **200**, 012208 (2009) [**IOP**]
Spectral properties of the Mott Hubbard insulator $(Cr_{0.011}V_{0.989})_2O_3$ calculated by LDA + DMFT

20. F. Rodolakis, P. Hansmann, J.-P. Rueff, A. Toschi, M. W. Haverkort, G. Sangiovanni, K. Held, M. Sikora, A. Congeduti , J.-P. Itié, F. Baudelet , P. Metcalf and M. Marsi
J. Phys.: Conf. Ser. **190**, 012092 (2009) [**IOP**]
Electronic correlations in V_2O_3 studied with K-edge X-ray absorption spectroscopy

19. D. Reznik, G. Sangiovanni, O. Gunnarsson and T. P. Devereaux
Nature **455**, E6 (2008) [**NATURE**, **ARXIV**]
Photoemission kinks and phonons in cuprates

18. E. Koch, G. Sangiovanni and O. Gunnarsson
Phys. Rev. B **78**, 115102 (2008) [**APS**, **ARXIV**]
Sum-rules and bath-parametrization for quantum cluster theories

17. G. Sangiovanni and O. Gunnarsson
J. Phys.: Conf. Ser. **108**, 012012 (2008) [**IOP**]
Electron-phonon interaction in strongly correlated electron systems: relevance of antiferromagnetic correlations

16. L. Baldassarre, A. Perucchi, D. Nicoletti, A. Toschi, G. Sangiovanni, K. Held, M. Capone, M. Ortolani, L. Malavasi, M. Marsi, P. Metcalf, P. Postorino and S. Lupi
Phys. Rev. B **77**, 113107 (2008) [**APS**, **ARXIV**]
Quasiparticle evolution and pseudogap formation in V_2O_3: An infrared spectroscopy study

15. O. Rösch, G. Sangiovanni and O. Gunnarsson
Phys. Rev. B **75**, 035119 (2007) *Sum rules and vertex corrections for electron-phonon interactions*
[**APS**, **ARXIV**]

14. O. Gunnarsson, G. Sangiovanni, O. Rösch, E. Koch, C. Castellani and M. Capone
Physica C **460-462**, 263 (2007) *Polaron formation in cuprates*
[**ELSEVIR**]

13. S. Ciuchi, G. Sangiovanni and M.Capone
Physica C **460-462**, 1157 (2007) *Detecting pairing and polarization crossovers in systems with retarded interactions*
[**ELSEVIR**]

12. G. Sangiovanni, O. Gunnarsson, E. Koch, C. Castellani and M. Capone
Phys. Rev. Lett. **97**, 046404 (2006) *Electron-phonon interaction and antiferromagnetic correlations*
[**APS**, **ARXIV**]

11. G. Sangiovanni, M. Capone and C. Castellani
Phys. Rev. B **73**, 165123 (2006) *Relevance of phonon dynamics in strongly correlated systems coupled to phonons: Dynamical mean-field theory analysis*
[**APS**, **ARXIV**]

10. G. Sangiovanni, A. Toschi, E. Koch, K. Held, M. Capone, C. Castellani, O. Gunnarsson, S.-K. Mo, J. W. Allen, H.-D. Kim, A. Sekiyama, A. Yamasaki, S. Suga and P. Metcalf
Phys. Rev. B **73**, 205121 (2006) *Static versus dynamical mean field theory of Mott antiferromagnets*
[**APS**, **ARXIV**]

9. S. Ciuchi, G. Sangiovanni and M. Capone
Phys. Rev. B **73**, 245114 (2006) *Pairing and polarization in electron-boson systems with retarded interactions via dynamical mean-field theory*
[**APS**, **ARXIV**]

8. G. Sangiovanni, M. Capone, C. Castellani and M. Grilli
Phys. Rev. Lett. **94**, 026401 (2005) *Electron-phonon interaction close to a Mott transition*
[**APS**, **ARXIV**]

7. C. E. Creffield, G. Sangiovanni and M. Capone
Eur. Phys. J. B **44**, 175 (2005) *Phonon softening and dispersion in the 1D Holstein model of spinless fermions*
[**EPJ**, **ARXIV**]

6. M. Capone, S. Ciuchi and G. Sangiovanni
Physica B **359-361**, 813 (2005) *Polaron crossover and bipolaronic metal-insulator transition in the half-filled Holstein model*
[**ELSEVIR**]

5. M. Capone, G. Sangiovanni, C. Castellani and M. Grilli
Physica B **359-361**, 636 (2005) *Electron-phonon interaction in proximity of a Mott transition*
[**ELSEVIR**]

4. M. Capone, G. Sangiovanni, C. Castellani, C. Di Castro and M. Grilli
Phys. Rev. Lett. **92**, 106401 (2004) *Phase separation close to the density-driven Mott transition in the Hubbard-Holstein model*
[**APS**, **ARXIV**]

3. M. Capone and G. Sangiovanni,
Journal of Magnetism and Magnetic Materials **272-276**, Supplement 1, E301 (2004) *The effects of the electron–phonon interaction on a Mott insulator*
[**ELSEVIR**]

2. G. Sangiovanni, M. Capone and S. Caprara
Int. J. Mod. Phys. B **17**, 614 (2003) *Time reversal breaking superconducting state in the phase diagram of the cuprates*
[**WSCI**, **ARXIV**]

1. G. Sangiovanni, M. Capone, S. Caprara, C. Castellani, C. Di Castro and M. Grilli
Phys. Rev. B **67**, 174507 (2003) *Doping-driven transition to a time-reversal breaking state in the phase diagram of the cuprates*
[**APS**, **ARXIV**]

Curriculum vitae

List of invited contributions

2021 – CECAM, Bremen — **invited talk** (online) at the Psi-k Workshop *"Correlated synthetic quantum matter: theory meets experiment"*

2020 – Simons Foundation, Aspen — **invited talk** (online) at the Winter conference *"Quantum Matter: Computation Meets Experiments"*

2019 – University of Frankfurt — seminar "*First-order topological phase transitions induced by electronic correlation*", **invited** by R. Valentí

2019 – TU Ilmenau — Faculty Colloquium "*Many-body physics in quantum impurities and high-spin molecules* ", **invited** by J. Kröger

2019 – ESPCI, Paris — **invited talk** at the international conference *"ParisEdge2019"*

2019 – Microsoft Station Q, UCSB — seminar "*First-order topological phase transitions induced by electronic correlation*", **invited** by A. Antipov

2019 – University of Tokyo — **invited talk** at the workshop *"Frontiers of Correlated Electron Sciences"*

2018 – CNR, Bologna — **invited talk** at the conference *"Materials.it 2018/Topology and Electronic Correlation in Magnetism and Superconductivity"*

2018 – DIPC, San Sebastian — **invited talk** at the Workshop *"Theoretical methods in molecular spintronics"*

2018 – Sapienza University of Rome — **invited talk** at the *"International Workshop on Electronic Structure of Superconductors and Novel Materials"*

2018 – CNR-SPIN Salerno, Amalfi — **invited talk** at the workshop "*OSS 2018*"

2018 – University of l'Aquila — seminar "*Local magnetic moments in Iron and Nickel at ambient and Earth's core conditions*", **invited** by G. Profeta and S. Ciuchi

2018 – University of Tübingen — Faculty Colloquium "*Local magnetic moments in Iron and Nickel at ambient and Earth's core conditions*", **invited** by S. Andergassen

Curriculum vitae

2017 – TU Graz	seminar "*Edge reconstruction in correlated quantum spin Hall insulators*", **invited** by M. Aichhorn
2017 – ICTP/SISSA, Trieste	**invited talk** at the conference "*FisMat 2017*"
2017 – University of Michigan Ann Arbor	seminar *"Edge reconstruction in correlated quantum spin Hall insulators"*, **invited** by E. Gull
2016 – EPFL Lausanne	**invited talk** at the CECAM Workshop *"Computational methods towards engineering novel correlated materials"*
2016 – ESI Vienna	**invited talk** at the ESI Workshop *"Synergies between Mathematical and Computational Approaches to Quantum Many-Body Physics"*
2016 – Institute of Physics Prague	seminar *"First-Order Character and Observable Signatures of Topological Quantum Phase Transitions"*, **invited** by J. Kuneš
2016 – Salerno	**invited talk** at the Workshop "*Unveiling complex phenomena in Functional OXides"*
2015 – LMU Munich	**invited talk** at the CECAM Workshop *"Computational Many-Body physics in the era of artificial gauge fields"*
2015 – SISSA Trieste	seminar *"Interaction-induced topological phase transitions. A model study and perspectives for real materials",* **invited** by M. Capone
2015 – University of Würzburg Kloster Kreuzberg	**invited talk** at the "Wanderseminar", organized by F. Reinert.
2015 – Max-Planck Institute Stuttgart	**invited talk** at the Workshop "*Realistic calculations for correlated electrons*", organized by P. Hansmann and S. Andergassen.
2014 – Max-Planck Institute Stuttgart	**invited seminar** *"Electronic correlation physics in oxide heterostructures",* within the TRR 80 Collaborative Research Center led by D. Vollhardt.
2013 – TU Vienna Baumschlagerberg	**invited talk** at the ERC Workshop "*Ab Initio Dynamical Vertex Approximation*", organized by K. Held.

Curriculum vitae

2013 – Sestri Levante	**invited talk** at the International Conference *"The New Generation in Strongly Correlated Electron Systems"* NGSCES 2013.
2013 – SFB-Vicom Vienna	**invited lecture** at at the Summer School *"Band Structure Meets Many Body Theory"*
2012 – J. Gutenberg-University Mainz	**invited** Theoriekolloquium *"Signature of antiferromagnetic long-range order in the optical spectrum of strongly correlated electron systems".*
2011 – Max-Planck Institute Ringberg	**invited talk** at the meeting "*Electronic Structure of Novel Materials*".
2011 – Monastery Seeon Bavaria	**invited talk** at the workshop "*Strong Correlation from First Principles".*
2011 – University of Sherbrooke Canada	seminar *"Dynamical Vertex Approximation for nanoscopic systems",* **invited** by André-Marie Tremblay.
2010 – Villa Orlandi Anacapri	**invited talk** at the meeting *"Emerging Trends in Advanced Correlated Materials",* organized by M. Capone, V. Cataudella and G. De Filippis
2010 – Tokyo University, Dep. of Applied Physics	seminar *"Dynamical Vertex Approximation for nanoscopic systems",* **invited** by Prof. Imada
2010 – RIKEN Wako, Japan	**invited talk** at *"Advanced First Principles Calculations and Many Body Effects in Correlated Electrons"*, organized by Y. Tokura, N. Nagaosa and R. Arita
2010 – East China Normal University, Shanghai	seminar *"Dynamical Mean Field Theory: introduction and applications",* **invited** by Dr. Wenhui Xie
2010 – Stanford University Stanford	seminar *"Many-body calculations of electron-phonon properties in superconductors",* **invited** by Prof. Tom Devereaux
2009 – TU Graz	seminar *"Photoemission kinks and phonons in cuprates"*, **invited** by Prof. E. Arrigoni
2008 – Max-Planck Institut Stuttgart	*Directors' meeting talk (Vortrag anlässlich der Arbeitsbesprechung) "Quasiparticle evolution and pseudogap formation in V_2O_3"*

Curriculum vitae

2007 – AIST Tsukuba	**invited talk** at the Int. Symposium on Lattice Effects in Cuprate High Temperature Superconductors *"LEHTSC 2007"*, organized by H. Oyanagi and H. Eisaki
2007 – Tokyo University, Dep. of Applied Physics	seminar *"Electron-phonon interaction in strongly correlated electron systems"*, **invited** by Prof. Imada
2007 – Tokyo University, ISSP, Kashiwa	seminar *"Electron-phonon interaction and antiferromagnetic correlations"*, **invited** by Prof. Takada
2007 – Tokyo University, Department of Physics	seminar *"Electron-phonon interaction in strongly correlated electron systems"*, **invited** by Prof. Aoki
2006 – Sestri Levante INFM	**invited talk** at the 13th national congress on high-temperature superconductivity *"SATT13"*, organized by C. Ferdeghini, M. Putti and A. Siri
2004 – Rome Università "Roma Tre"	theory seminar *"Interazione elettrone-fonone vicino ad una transizione di Mott"*, **invited** by Prof. R. Raimondi