Curriculum vitae

February 27, 2013

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Date of birth: September 17, 1975
Nationality: German

Current position

Oct 2011 - now	Junior Professor and Head of Emmy Noether Research Group "Lattice QCD with 2+1+1 dynamical quark flavors", Institut für Theoretische Physik, Goethe-Universität Frankfurt am Main.

Professional activities and previous employment

Oct 2011 - now	Member of HIC for FAIR Expert Group 1 "QCD Simulations, Dynamics and Medical Physics".
May 2011 - Sep 2011	Head of Emmy Noether Research Group "Lattice QCD with 2+1+1 dynamical quark flavors", Institut für Physik, Humboldt-Universität zu Berlin.
May 2007 - now	Member of European Twisted Mass Collaboration (ETMC).
May 2007 - Sep 2011	Member of Sonderforschungsbereich Transregio 9 "Computational Particle Physics".
May 2007 - Apr 2011	Postdoctoral Researcher, Institut für Physik, Humboldt-Universität zu Berlin.
Aug 2006 - Apr 2007	Postdoctoral Researcher, Institut für Theoretische Physik III, Friedrich-Alexander-Universität Erlangen-Nürnberg.

Education

Apr 2003 - Jul 2006	PhD, Institut für Theoretische Physik III, Friedrich-Alexander-Universität Erlangen-Nürnberg (thesis: "The pseudoparticle approach in SU(2) Yang-Mills theory", supervisor: Prof. Dr. Frieder Lenz, grade: 1 ≡ "sehr gut/mit Auszeichnung").
Oct 2000 - Mar 2003	Study of physics, Friedrich-Alexander-Universität Erlangen-Nürnberg (Vordiplom, grade: 1,0 ≡ "sehr gut").
Oct 1997 - Sep 2002	Study of computer sciences (Informatik), Friedrich-Alexander-Universität Erlangen-Nürnberg (Diplom, grade: 1,0 ≡ "mit Auszeichnung bestanden").

Research topics and interests

(a) Spectroscopy of mesons and baryons, investigation of their structure and interactions.

- Structure of light scalar mesons, possibly existing tetraquark states.
- Spectrum of strange and charm mesons (kaons, D and D_s mesons, charmonium).
- Spectrum and decays of B and B_s mesons and b baryons.
- Heavy-light meson-meson interactions.
- Technical aspects of lattice hadron spectroscopy.

(b) Lattice simulations of QCD with 2+1+1 flavors of dynamical twisted mass quarks.

(c) Topology on the lattice.

- Lattice definitions of topological charge.
- Simulations at fixed or frozen topology.
- Mixed action setups with chirally symmetric quarks (high quality overlap valence quarks on top of computationally cheap Wilson [twisted mass] sea quarks).

(d) Static quark-antiquark potential, confinement.

- Determination of $\Lambda_{\overline{\mathrm{MS}}}$ from the static potential.
- Non-perturbative formulation of color adjoint static potentials.
- Yang-Mills phenomenology based on topological excitations.

For details cf. the enclosed "Research proposal and interests".

Organization of international conferences and workshops

- Member of the local organizing committee of "**XXXIth International Symposium on Lattice Field Theory**", 29 July–3 August 2013, Mainz, Germany.
- Organization of "**European Twisted Mass Collaboration Meeting**", 24–26 October 2012, Frankfurt am Main, Germany.

Teaching experience

(a) Lectures

WS 2012/13	Lecture "**Quantum field theory 1 and the Standard Model of particle physics**" (4 hours lecture per week).
SS 2012	Lecture "**Quantum field theory 2**" (4 hours lecture per week).
WS 2011/12	Lecture "**Numerical methods in physics**" (3 hours lecture per week, 2×1 hour tutorial per week).
SS 2010	Lecture "**Topological objects in gauge theories**" (2 hours lecture per week, 1 hour tutorial per week).
WS 2007/08 – SS 2011	Around 15×2 hours of various standard lectures in theoretical physics, e.g. mechanics, classical electrodynamics, quantum mechanics, statistical physics (filling in for Prof. Michael Müller-Preussker at Humboldt-Universität zu Berlin).

(b) Supervision of students

I am currently supervising or have been supervising the following students/theses.

- PhD students:
  - Martin Kalinowski,
    "**The spectrum of strange and charm mesons from 2+1+1 flavor lattice QCD**", ongoing.
  - Arthur Dromard,
    "**Simulations at fixed and frozen topology**", ongoing.
- Master/Diploma students:
  - Joshua Berlin,
    "**Computing meson masses with Wilson and Wilson twisted mass quarks**", ongoing.
  - Christopher Czaban,
    "**Topology fixing in the Schwinger model**", ongoing.
  - Christian Wiese,
    "**Efficient computation of meson and four-quark correlation functions**", Sep 2012.
  - Attila Nagy,
    "**String breaking in $N_f = 2$ Wilson twisted mass lattice QCD**", Sep 2010.
- Bachelor students:
  - Jonas Scheunert,
    "**Implementation of the overlap operator in 1+1 dimensions**", ongoing.
  - Björn Frölich Wagenbach,
    "**Numerische Berechnung des Quark-Antiquark-Potentials zur Bestimmung der kritischen Temperatur in der SU(2) Yang-Mills-Theorie**", Sep 2012.
  - Philipp Wolf,
    "**Gluelump Massenberechnung in der SU(2) Yang-Mills-Theorie**", Sep 2012.
  - Annabelle Uenver,
    "**Numerische Bestimmung von Glueball-Massen mit SU(2) Gittereichtheorie**", Aug 2012.

- Christian Riha,
  "**Berechnung von kinematischen Faktoren in differentiellen Zerfallsraten von $B \to D^{**}$**", Dec 2011.
- Johannes Siefert,
  "**Eigenmoden des Gitter-Laplace-Operators als Hilfsmittel zur Berechnung hadronischer Korrelatoren**", Sep 2011.
- Benjamin Maier,
  "**Simulations of dyon configurations in SU(2) Yang-Mills theory**", Sep 2011.
- Christian Wiese,
  "**The spectrum of static-light baryons in twisted mass lattice QCD**", Jul 2010.
- Erhard Radatz,
  "**Der Pseudoteilchenzugang im Schwinger-Modell**", Aug 2008.

During my employment as a postdoctoral researcher at Friedrich-Alexander-Universität Erlangen-Nürnberg and Humboldt-Universität zu Berlin I have been involved in the supervision of several other students (one PhD student, six diploma students) working in the field of lattice gauge theory and/or model calculations for Yang-Mills theory based on topological objects.

(c) Seminars and workshops

WS 2012/13	Organization of a **workshop on "Unstable particles and resonances in lattice QCD"** for Bachelor, Master and PhD students at Goethe-Universität Frankfurt am Main.
WS 2012/13	Organization of the **weekly particle physics seminar "Palaver"** at Goethe-Universität Frankfurt am Main (students and postdocs from the theoretical high energy groups at Goethe-Universität Frankfurt am Main and FIAS [Frankfurt Institute for Advanced Studies] present their latest research).
SS 2012	Organization of the **weekly particle physics seminar "Palaver"** at Goethe-Universität Frankfurt am Main (students and postdocs from the theoretical high energy groups at Goethe-Universität Frankfurt am Main and FIAS [Frankfurt Institute for Advanced Studies] present their latest research).
WS 2011/12	Organization of a **workshop on "Efficient methods to compute quark propagators and hadronic correlators in lattice QCD"** for Bachelor, Master and PhD students at Goethe-Universität Frankfurt am Main.
WS 2005/06	Organization of a **workshop on "Lattice gauge theory"** for diploma and PhD students at Friedrich-Alexander-Universität Erlangen-Nürnberg.

(d) Tutorials

WS 2009/10	Advanced Theoretical Physics.
SS 2009	Introduction to Statistical Physics..
WS 2008/09	Electrodynamics and Optics.
SS 2008	Analytical Mechanics, Optics, Electromagnetism.
WS 2007/08	Introduction to classical Mechanics and Thermodynamics.
SS 2007	Introduction to Quantum Physics.

WS 2006/07	Theoretical Physics I: Mechanics.
SS 2006	Introduction to Theoretical Physics.
WS 2003/04	Theoretical Physics III: Statistical Mechanics.
SS 2005	Theoretical Physics II: Quantum Mechanics I.
WS 2003/04	Theoretical Physics V: Quantum Mechanics II.
SS 2004	Theoretical Physics IV: Electrodynamics.
WS 2003/04	Theoretical Physics I: Mechanics.
SS 2003	Introduction to Theoretical Physics.

Publications

Cf. the attached "List of publications".

Invited talks and conference presentations

Presentations 2013

1. **Scalar mesons and tetraquarks from twisted mass lattice QCD**
   "Excited QCD 2013" (invited talk), 3–9 February 2013, Bjelasnica Mountain, Sarajevo, Bosnia

Presentations 2012

2. $B \to D^{**}$ **at infinite heavy mass**
   "Workshop on $B \to D^{**}$ and related issues" (invited talk), 26–28 November 2012, Paris, France

3. **Scalar mesons and tetraquarks by means of lattice QCD**
   "ETM Collaboration Meeting", 24–26 October 2012, Frankfurt am Main, Germany

4. **Scalar mesons and tetraquarks by means of lattice QCD**
   "Quark Confinement and the Hadron Spectrum X", 7–12 October 2012, Munich, Germany

5. **Definitions of a static SU(2) color triplet potential**
   "Quark Confinement and the Hadron Spectrum X", 7–12 October 2012, Munich, Germany

6. **Computergestützte diskrete stochastische Optimierung** (computer based discrete stochastic optimization)
   "11. Emmy Noether-Jahrestreffen", 13–15 July 2012, Potsdam, Germany

7. **Scalar mesons and tetraquarks by means of lattice QCD**
   "Meeting of HIC for FAIR Expert Group 1" (invited talk), 9 July 2012, Frankfurt am Main, Germany

8. **The spectrum of and forces between** B **mesons from lattice QCD**
   Invited talk at "Rheinische Friedrich-Wilhelms-Universität Bonn", 8 May 2012, Bonn, Germany

9. **The spectrum of and forces between** B **mesons from lattice QCD**
   Invited talk at "University of Nicosia", 7 March 2012, Nicosia, Cyprus

Presentations 2011

10. $\Lambda_{\overline{\mathrm{MS}}}$ **from the static potential for QCD with** $n_f = 2$ **dynamical quark flavors**
    Invited talk at the "Particle Theory Seminar" of the "Department of Mathematical Sciences (Division of Theoretical Physics)", 7 December 2011, University of Liverpool, UK

11. **The spectrum of and forces between** B **mesons from lattice QCD**
    Invited talk at "Friedrich-Schiller-Universität Jena", 17 November 2011, Jena, Germany

12. B**-Physik mit Hilfe von Gittereichtheorie** (B physics from lattice gauge theory)
    Inaugural lecture at Goethe-Universität Frankfurt am Main, 9 November 2011, Frankfurt am Main, Germany

13. **Interaction energies between static-light mesons**
    "QWG 2011 – 8th International Workshop on Heavy Quarkonium" (invited talk), 4–7 October 2011, Darmstadt, Germany

14. **Plans for meson spectroscopy**
    "ETM Collaboration Meeting", 23–25 March 2011, Bern, Switzerland

15. **Static-static-light-light tetraquarks in lattice QCD**
    "Excited QCD 2011" (invited talk), 20–25 February 2011, Les Houches, France

16. **Computation of** B **mesons and** b **baryons with lattice QCD**
    Invited talk at "Goethe-Universität Frankfurt am Main", 20 January 2011, Frankfurt am Main, Germany

Presentations 2010

17. **Status of** $N_f = 2 + 1 + 1$ **flavor twisted mass lattice QCD simulations**
    "14th Meeting of SFB/TR9 - Computational Particle Physics", 9–10 December 2010, Karlsruhe, Germany

18. $\Lambda_{\overline{\mathrm{MS}}}$ **from the static potential for** $N_f = 2$
    "ETM Collaboration Meeting", 15–17 September 2010, Barcelona, Spain

19. **Forces between static-light mesons**
    "XXVIIIth International Symposium on Lattice Field Theory", 14–19 June 2010, Villasimius, Sardinia, Italy

20. **Kaon and** D **meson masses with** $N_f = 2 + 1 + 1$ **twisted mass lattice QCD**
    "XXVIIIth International Symposium on Lattice Field Theory", 14–19 June 2010, Villasimius, Sardinia, Italy

21. **Forces between heavy mesons**
    "ETM Collaboration Meeting", 29–31 March 2010, Bonn, Germany

Presentations 2009

22. **The heavy-light sector of** $N_f = 2 + 1 + 1$ **twisted mass lattice QCD**
    "ETM Collaboration Meeting", 23–25 September 2009, Groningen, Netherlands

23. **Dynamical lattice calculation of the Isgur-Wise functions** $\tau_{1/2}$ **and** $\tau_{3/2}$
    "XXVIIth International Symposium on Lattice Field Theory", 25–31 July 2009, Beijing, China

Presentations 2008

24. **"Static-light meson masses from twisted mass lattice QCD" and "The 1/2 versus 3/2 puzzle"**
"11th Meeting of SFB/TR9 – Computational Particle Physics", 6–7 October 2008, Aachen, Germany

25. **The 1/2 versus 3/2 puzzle**
"ETM Collaboration Meeting", 29–30 September 2008, Glasgow, UK

26. **The adjoint potential in the pseudoparticle approach: string breaking and Casimir scaling**
"Quark Confinement and the Hadron Spectrum VIII" (invited talk), 1–6 September 2008, Mainz, Germany

27. **Static-light meson masses from twisted mass lattice QCD**
"XXVIth International Symposium on Lattice Field Theory", 14–19 July 2008, Williamsburg, Virginia, USA

28. **The static-light meson spectrum from twisted mass lattice QCD**
"18th International Workshop on Lattice Field Theory and Statistical Physics (LEILAT08)", 26–28 June 2008, Leipzig, Germany

29. **Analysis aspects for 2+1+1 flavor twisted mass lattice QCD (K meson mass, D meson mass)**
"ETM Collaboration Meeting", 9–10 May 2008, Trento, Italy

30. **Static-light mesons in twisted mass QCD**
"10th Meeting of SFB/TR9 – Computational Particle Physics", 18–19 February 2008, Karlsruhe, Germany

31. **Static-light mesons in twisted mass QCD**
Invited talk at the "Particle Theory Seminar" of the "Department of Mathematical Sciences (Division of Theoretical Physics)", 6 February 2008, University of Liverpool, UK

Presentations 2007

32. **Static-light mesons (and string breaking)**
"ETM Collaboration Meeting", 1–2 November 2007, Larnaca, Cyprus

33. **The pseudoparticle approach**
"Lattice Hadron Phenomenology Meeting" (invited talk), 9–11 October 2007, Zeuthen, Germany

34. **Fermionic fields in the pseudoparticle approach**
"XXVth International Symposium on Lattice Field Theory", 30 July–4 August 2007, Regensburg, Germany

35. **Fermions in the pseudoparticle approach**
"DPG-Tagung Heidelberg", 5–9 March 2007, Heidelberg, Germany

Presentations 2006

36. **Properties of confining gauge field configurations in the pseudoparticle approach**
"Quark Confinement and the Hadron Spectrum VII" (invited talk), 2–7 September 2006, Ponta Delgada, Portugal

37. **The SU(2) quark-antiquark potential in the pseudoparticle approach**
"DPG-Tagung Dortmund", 27–30 March 2006, Dortmund, Germany

Presentations 2005

38. **The pseudoparticle approach for solving path integrals in gauge theories**
"XXIIIrd International Symposium on Lattice Field Theory", 25–30 July 2005, Dublin, Ireland

Presentations 2003

39. **Repairing Non-Manifold Triangle Meshes Using Simulated Annealing**
"4th Israel-Korea Bi-National Conference on Geometric Modeling and Computer Graphics", 12–14 February 2003, Tel Aviv, Israel

References

- **Prof. Owe Philipsen**
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List of publications

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February 27, 2013

Publications 2013

1. **Scalar mesons and tetraquarks from twisted mass lattice QCD**
   M. Wagner *et al.* [ETM Collaboration]
   Submitted to Acta Phys. Polon. Supp., February 2013
   arXiv:1302.3389 [hep-lat] (http://arxiv.org/abs/1302.3389)

Publications 2012

2. **Application of Ewald's method for efficient summation of dyon long-range potentials**
   B. Maier, F. Bruckmann, S. Dinter, E. -M. Ilgenfritz, M. Müller-Preussker and M. Wagner
   Submitted to PoS **CONFINEMENT10**, December 2012
   arXiv:1212.5557 [hep-ph] (http://arxiv.org/abs/1212.5557)

3. **Scalar mesons and tetraquarks by means of lattice QCD**
   M. Wagner *et al.* [ETM Collaboration]
   Submitted to PoS **CONFINEMENT10**, December 2012
   arXiv:1212.1648 [hep-lat] (http://arxiv.org/abs/1212.1648)

4. **Lattice investigation of the scalar mesons $a_0(980)$ and κ using four-quark operators**
   C. Alexandrou *et al.* [ETM Collaboration]
   Submitted to JHEP, December 2012
   arXiv:1212.1418 [hep-lat] (http://arxiv.org/abs/1212.1418)

5. **Strange and charm meson masses from twisted mass lattice QCD**
   M. Kalinowski and M. Wagner [ETM Collaboration]
   Submitted to PoS **CONFINEMENT10**, December 2012
   arXiv:1212.0403 [hep-lat] (http://arxiv.org/abs/1212.0403)

6. **Lattice investigation of the tetraquark candidates $a_0(980)$ and κ**
   J. O. Daldrop *et al.* [ETM Collaboration]
   PoS **LATTICE2012**, 161 (2012)
   arXiv:1211.5002 [hep-lat] (http://arxiv.org/abs/1211.5002)

7. **Definitions of a static SU(2) color triplet potential**
   M. Wagner and O. Philipsen
   Submitted to PoS **CONFINEMENT10**, November 2012
   arXiv:1211.2165 [hep-lat] (http://arxiv.org/abs/1211.2165)

8. **Lattice QCD signal for a bottom-bottom tetraquark**
   P. Bicudo and M. Wagner
   Submitted to Phys. Rev. D, February 2013
   arXiv:1209.6274 [hep-ph] (http://arxiv.org/abs/1209.6274)

Publications 2011

9. **Confining dyon gas with finite-volume effects under control**
   F. Bruckmann, S. Dinter, E. -M. Ilgenfritz, B. Maier, M. Müller-Preussker and M. Wagner
   Phys. Rev. D **85**, 034502 (2012)
   arXiv:1111.3158 [hep-ph] (http://arxiv.org/abs/1111.3158)

10. **$\Lambda_{\overline{\rm MS}}$ from the static potential for QCD with $n_f = 2$ dynamical quark flavors**
    K. Jansen, F. Karbstein, A. Nagy and M. Wagner [ETM Collaboration]
    JHEP **1201**, 025 (2012)
    arXiv:1110.6859 [hep-ph] (http://arxiv.org/abs/1110.6859)

11. **Lattice QCD determination of m_b, f_B and f_{B_s} with twisted mass Wilson fermions**
    P. Dimopoulos *et al.* [ETM Collaboration]
    JHEP **1201**, 046 (2012)
    arXiv:1107.1441 [hep-lat] (http://arxiv.org/abs/1107.1441)

12. **The static-light baryon spectrum from twisted mass lattice QCD**
    M. Wagner and C. Wiese [ETM Collaboration]
    JHEP **1107**, 016 (2011)
    arXiv:1104.4921 [hep-lat] (http://arxiv.org/abs/1104.4921)

13. **Static-static-light-light tetraquarks in lattice QCD**
    M. Wagner [ETM Collaboration]
    Acta Phys. Polon. Supp. **4**, 747 (2011)
    arXiv:1103.5147 [hep-lat] (http://arxiv.org/abs/1103.5147)

14. **Light hadrons from $N_f = 2 + 1 + 1$ dynamical twisted mass fermions**
    R. Baron *et al.* [ETM Collaboration]
    PoS **LATTICE2010**, 123 (2010)
    arXiv:1101.0518 [hep-lat] (http://arxiv.org/abs/1101.0518)

Publications 2010

15. **Kaon and D meson masses with $N_f = 2 + 1 + 1$ twisted mass lattice QCD**
    R. Baron *et al.* [ETM Collaboration]
    PoS **LATTICE2010**, 119 (2010)
    arXiv:1009.2074 [hep-lat] (http://arxiv.org/abs/1009.2074)

16. **Forces between static-light mesons**
    M. Wagner [ETM Collaboration]
    PoS **LATTICE2010**, 162 (2010)
    arXiv:1008.1538 [hep-lat] (http://arxiv.org/abs/1008.1538)

17. **The spectrum of static-light baryons in twisted mass lattice QCD**
M. Wagner and C. Wiese [ETM Collaboration]
PoS **LATTICE2010**, 130 (2010)
arXiv:1008.0653 [hep-lat] (http://arxiv.org/abs/1008.0653)

18. **Computing K and D meson masses with $N_f = 2 + 1 + 1$ twisted mass lattice QCD**
R. Baron *et al.* [ETM Collaboration]
Comput. Phys. Commun. **182**, 299 (2011)
arXiv:1005.2042 [hep-lat] (http://arxiv.org/abs/1005.2042)

19. **Light hadrons from lattice QCD with light (u, d), strange and charm dynamical quarks**
R. Baron *et al.* [ETM Collaboration]
JHEP **1006**, 111 (2010)
arXiv:1004.5284 [hep-lat] (http://arxiv.org/abs/1004.5284)

20. **The continuum limit of the static-light meson spectrum**
C. Michael, A. Shindler and M. Wagner [ETM Collaboration]
JHEP **1008**, 009 (2010)
arXiv:1004.4235 [hep-lat] (http://arxiv.org/abs/1004.4235)

Publications 2009

21. **First results of ETMC simulations with $N_f = 2 + 1 + 1$ maximally twisted mass fermions**
R. Baron *et al.* [ETM Collaboration]
PoS **LATTICE2009**, 104 (2009)
arXiv:0911.5244 [hep-lat] (http://arxiv.org/abs/0911.5244)

22. **f_B and f_{B_s} with maximally twisted Wilson fermions**
B. Blossier *et al.* [ETM Collaboration]
PoS **LATTICE2009**, 151 (2009)
arXiv:0911.3757 [hep-lat] (http://arxiv.org/abs/0911.3757)

23. **Dynamical lattice computation of the Isgur-Wise functions $\tau_{1/2}$ and $\tau_{3/2}$**
B. Blossier, M. Wagner and O. Pene [ETM Collaboration]
PoS **LATTICE2009**, 253 (2009)
arXiv:0909.0858 [hep-lat] (http://arxiv.org/abs/0909.0858)

24. **Comparing topological charge definitions using topology fixing actions**
F. Bruckmann, F. Gruber, K. Jansen, M. Marinkovic, C. Urbach and M. Wagner
Eur. Phys. J. A **43**, 303 (2010)
arXiv:0905.2849 [hep-lat] (http://arxiv.org/abs/0905.2849)

25. **Cautionary remarks on the moduli space metric for multi-dyon simulations**
F. Bruckmann, S. Dinter, E. M. Ilgenfritz, M. Müller-Preussker and M. Wagner
Phys. Rev. D **79**, 116007 (2009)
arXiv:0903.3075 [hep-ph] (http://arxiv.org/abs/0903.3075)

26. **Lattice calculation of the Isgur-Wise functions $\tau_{1/2}$ and $\tau_{3/2}$ with dynamical quarks**
B. Blossier, M. Wagner and O. Pene [ETM Collaboration]
JHEP **0906**, 022 (2009)
arXiv:0903.2298 [hep-lat] (http://arxiv.org/abs/0903.2298)

Publications 2008

27. **The adjoint potential in the pseudoparticle approach: string breaking and Casimir scaling**
C. Szasz and M. Wagner
PoS **CONFINEMENT8**, 059 (2008)
arXiv:0810.4689 [hep-ph] (http://arxiv.org/abs/0810.4689)

28. **Status of ETMC simulations with $N_f = 2 + 1 + 1$ twisted mass fermions**
R. Baron *et al.* [ETM Collaboration]
PoS **LATTICE2008**, 094 (2008)
arXiv:0810.3807 [hep-lat] (http://arxiv.org/abs/0810.3807)

29. **The static-light meson spectrum from twisted mass lattice QCD**
K. Jansen, C. Michael, A. Shindler and M. Wagner [ETM Collaboration]
JHEP **0812**, 058 (2008)
arXiv:0810.1843 [hep-lat] (http://arxiv.org/abs/0810.1843)

30. **Static-light meson masses from twisted mass lattice QCD**
K. Jansen, C. Michael, A. Shindler and M. Wagner [ETM Collaboration]
PoS **LATTICE2008**, 122 (2008)
arXiv:0808.2121 [hep-lat] (http://arxiv.org/abs/0808.2121)

31. **Adjoint string breaking in the pseudoparticle approach**
C. Szasz and M. Wagner
Phys. Rev. D **78**, 036006 (2008)
arXiv:0806.1977 [hep-ph] (http://arxiv.org/abs/0806.1977)

Publications 2007

32. **Fermionic fields in the pseudoparticle approach**
M. Wagner
PoS **LATTICE2007**, 339 (2007)
arXiv:0708.2359 [hep-lat] (http://arxiv.org/abs/0708.2359)

33. **Fermions in the pseudoparticle approach**
M. Wagner
Phys. Rev. D **76**, 076002 (2007)
arXiv:0704.3023 [hep-lat] (http://arxiv.org/abs/0704.3023)

Publications 2006

34. **Properties of confining gauge field configurations in the pseudoparticle approach**
M. Wagner
AIP Conf. Proc. **892**, 231 (2007)
arXiv:hep-ph/0610291 (http://arxiv.org/abs/hep-ph/0610291)

35. **Classes of confining gauge field configurations**
M. Wagner
Phys. Rev. D **75**, 016004 (2007)
arXiv:hep-ph/0608090 (http://arxiv.org/abs/hep-ph/0608090)

36. **The pseudoparticle approach in SU(2) Yang-Mills theory**
    M. Wagner
    Ph.D. Thesis, Institute for Theoretical Physics III, University of Erlangen (2006)

Publications 2005

37. **The pseudoparticle approach for solving path integrals in gauge theories**
    M. Wagner and F. Lenz
    PoS **LATTICE2005**, 315 (2006)
    arXiv:hep-lat/0510083 (`http://arxiv.org/abs/hep-lat/0510083`)

Publications 2003

38. **Repairing non-manifold triangle meshes using simulated annealing**
    M. Wagner, U. Labsik and G. Greiner
    Int. J. Shape Model. **9**, No. 2, 137-153 (2003)

39. **Repairing non-manifold triangle meshes using simulated annealing**
    M. Wagner, U. Labsik and G. Greiner
    Proceedings of the "4th Israel-Korea Bi-National Conference on Geometric Modeling and Computer Graphics" (2003)

40. **C^2 continuous surface reconstruction with piecewise polynomial patches**
    M. Wagner, K. Hormann and G. Greiner
    Technical Report, Institute for Computer Science 9, University of Erlangen (2003)

Publications 2002

41. **Rekonstruktion glatter Oberflächen mit getrimmten B-Spline-Flächen**
    M. Wagner
    Diplomarbeit, Institute for Computer Science 9, University of Erlangen (2002)

Publications 2001

42. **Rekonstruktion von Oberflächen aus Punktewolken**
    M. Wagner
    Studienarbeit, Institute for Computer Science 9, University of Erlangen (2001)