

## Personal Information

Benjamin Jäger  
Department of Mathematics and Computer Science (IMADA)  
Applied Mathematics  
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## Qualifications

Physics, PhD, Johannes Gutenberg University  
2010 → 2013  
Award Date: 12. May 2014

## Employment

### Assistant Professor

Department of Mathematics and Computer Science (IMADA)  
University of Southern Denmark  
Odense M  
1. Oct 2017 → present

### Assistant Professor

Applied Mathematics  
University of Southern Denmark  
Odense M  
1. Oct 2017 → present

### Assistant Professor

Danish Institute for Advanced Study  
University of Southern Denmark  
1. Oct 2017 → present

## Research outputs

### Complex Langevin simulations and the QCD phase diagram: recent developments

Attanasio, F., Jäger, B. & Ziegler, F. P. G., 2020, In: European Physical Journal A. 56, 7 p., 251.

### Hyperons in Thermal QCD from the Lattice

Aarts, G., Allton, C., de Boni, D., Glesaaen, J., Hands, S., Jäger, B. & Skullerud, J. I., 2020, *The XVIII International Conference on Strangeness in Quark Matter (SQM 2019)*. Elia, D., Bruno, G. E., Colangelo, P. & Cosmai, L. (eds.). Springer Science+Business Media, p. 29-35 (Springer Proceedings in Physics, Vol. 250).

### Quantum Kate - a model for physics outreach

Jäger, B., Gregersen, S., Pica, C. & Sannino, F., 29. May 2019, In: P o S - Proceedings of Science. 334, 5 p.

### Hyperons in thermal QCD: A lattice view

Aarts, G., Allton, C., De Boni, D. & Jäger, B., 1. Apr 2019, In: Physical Review D. 99, 7, 9 p., 074503.

### Dynamical stabilisation of complex Langevin simulations of QCD

Attanasio, F. & Jäger, B., Jan 2019, In: European Physical Journal C. 79, 1, 11 p., 16.

### **Isvector axial form factors of the nucleon in two-flavor lattice QCD**

Stefano, C., Della Morte, M., Djukanovic, D., von Hippel, G., Hua, J., Jager, B., Junnarkar, Meyer, H., Rae, T. & Wittig, H., 2019, In: International Journal of Modern Physics A (IJMPA). 34, 2, 27 p., 1950009.

### **Hadronic spectrum calculations in the quark-gluon plasma**

Aarts, G., Allton, C., Glesaaen, J., Hands, S., Jäger, B. & Skullerud, J., 19. Dec 2018, In: P o S - Proceedings of Science. 334, 7 p.

### **Taylor expansion and the Cauchy Residue Theorem for finite-density QCD**

Forcrand, P. D. & Jäger, B., 3. Dec 2018, In: P o S - Proceedings of Science. 334, 6 p.

### **Stabilising complex Langevin simulations**

Attanasio, F. & Jäger, B., 30. Oct 2018, In: P o S - Proceedings of Science. 334, 7 p.

### **A lattice calculation of the hadronic vacuum polarization contribution to $(g-2)_\mu$**

Della Morte, M., Francis, A., Gerardin, A., Gulpers, V., Gregorio, H., von Hippel, G., Horch, H., Jager, B., Meyer, H., Nyffeler, A. & Wittig, H., 26. Mar 2018, In: E P J Web of Conferences. 175, 8 p., 06031.

### **Alternatives to the stochastic "noise vector" approach**

Forcrand, P. D. & Jaeger, B., 26. Mar 2018, In: E P J Web of Conferences. 175, 8 p., 14022.

### **Improved convergence of Complex Langevin simulations**

Attanasio, F. & Jäger, B., 26. Mar 2018, In: E P J Web of Conferences. 175, 7 p., 07039.

### **Medium effects and parity doubling of hyperons across the deconfinement phase transition**

Aarts, G., Allton, C., Boni, D. D., Hands, S., Jäger, B., Praki, C. & Skullerud, J-I., 26. Mar 2018, In: E P J Web of Conferences. 175, 8 p., 07016.

### **Baryons in the plasma: in-medium effects and parity doubling**

Aarts, G., Allton, C., Boni, D. D., Hands, S., Jäger, B., Praki, C. & Skullerud, J-I., 2. Feb 2018, In: E P J Web of Conferences. 171, 4 p., 14005.

### **Light baryons below and above the deconfinement transition: medium effects and parity doubling**

Aarts, G., Allton, C., Boni, D. D., Hands, S., Jäger, B., Praki, C. & Skullerud, J-I., 27. Mar 2017, In: Journal of High Energy Physics (JHEP). 2017, 34

### **Parity doubling of nucleons, Delta and Omega baryons across the deconfinement phase transition**

Aarts, G., Allton, C., Boni, D. D., Hands, S., Jäger, B., Praki, C. & Skullerud, J-I., 22. Mar 2017, In: E P J Web of Conferences. 137, 8 p., 07004.

### **Anomalous magnetic moment of the muon, a hybrid approach**

Dominguez, C. A., Horch, H., Jäger, B., Nasrallah, N. F., Schilcher, K., Spiesberger, H. & Wittig, H., 2017, In: Physical Review D. 96, 7, 8 p., 074016.

### **The hadronic vacuum polarization contribution to the muon $g - 2$ from lattice QCD**

Della Morte, M., Francis, A., Gulpers, V., Gregorio, H., von Hippel, G., Hanno, H., Jager, B., Meyer, H., Nyffeler, A. & Wittig, H., 2017, In: JHEP. 2017, 44 p., 20.

### **Testing dynamic stabilisation in complex Langevin simulations**

Attanasio, F. & Jäger, B., 28. Oct 2016, In: P o S - Proceedings of Science.

**Parity doubling of nucleons and Delta baryons across the deconfinement phase transition**

Aarts, G., Allton, C., Boni, D. D., Hands, S., Jaeger, B., Praki, C. & Skullerud, J-I., 24. Oct 2016, In: P o S - Proceedings of Science. 256

**Results on the heavy-dense QCD phase diagram using complex Langevin**

Aarts, G., Attanasio, F., Jäger, B. & Sexty, D., 14. Oct 2016, In: P o S - Proceedings of Science. 256

**The QCD phase diagram in the limit of heavy quarks using complex Langevin dynamics**

Aarts, G., Attanasio, F., Jäger, B. & Sexty, D., Sep 2016, In: Journal of High Energy Physics (Online). 9, 87.

**Complex Langevin in Lattice QCD: dynamic stabilisation and the phase diagram**

Aarts, G., Attanasio, F., Jäger, B. & Sexty, D., 19. Jul 2016, In: Acta Physica Polonica B Proceedings Supplement. 9, 3

**Finite Temperature Lattice QCD: Baryons in the Quark-Gluon Plasma**

Aarts, G., Allton, C., Boni, D. D., Hands, S., Jäger, B., Praki, C. & Skullerud, J-I., 18. Jul 2016, In: Acta Physica Polonica B Proceedings Supplement. 9, 3, p. 441-446

**Charge transport and vector meson dissociation across the thermal phase transition in lattice QCD with two light quark flavors**

Brandt, B. B., Francis, A., Jäger, B. & Meyer, H. B., 1. Mar 2016, In: Physical Review D. 93, 5, 054510.

**Study of the hadronic contributions to the running of the QED coupling and the weak mixing angle**

Francis, A., Gülpers, V., Herdoiza, G., Horch, H., Jäger, B., Meyer, H. B. & Wittig, H., 15. Nov 2015, In: P o S - Proceedings of Science.

**Insights into the heavy dense QCD phase diagram using Complex Langevin simulations**

Aarts, G., Attanasio, F., Jäger, B., Seiler, E., Sexty, D. & Stamatescu, I-O., 30. Oct 2015, In: P o S - Proceedings of Science.

**Towards the heavy dense QCD phase diagram using Complex Langevin simulations**

Aarts, G., Attanasio, F., Jäger, B., Seiler, E., Sexty, D. & Stamatescu, I-O., 30. Oct 2015, In: P o S - Proceedings of Science.

**Probing parity doubling in nucleons at high temperature**

Aarts, G., Allton, C., Hands, S., Jäger, B., Praki, C. & Skullerud, J-I., 14. Oct 2015, In: P o S - Proceedings of Science.

**Study of the anomalous magnetic moment of the muon computed from the Adler function**

Morte, M. D., Francis, A., Herdoiza, G., Horch, H., Jäger, B., Jüttner, A., Meyer, H. & Wittig, H., 21. May 2015, In: P o S - Proceedings of Science. 214

**Computing the Adler function from the vacuum polarization function**

Horch, H., Morte, M. D., Herdoiza, G., Jäger, B., Jüttner, A. & Wittig, H., 27. Nov 2013, In: P o S - Proceedings of Science. 7 p.

**A high-statistics study of the nucleon EM form factors, axial charge and quark momentum fraction**

Jäger, B., Rae, T. D., Capitani, S., Morte, M. D., Djukanovic, D., Hippel, G. V., Knippschild, B., Meyer, H. B. & Wittig, H., 22. Nov 2013, In: P o S - Proceedings of Science. 13 p.

**Excited state systematics in extracting nucleon electromagnetic form factors**

Capitani, S., Morte, M. D., Hippel, G. V., Jäger, B., Knippschild, B., Meyer, H. B., Rae, T. D. & Wittig, H., 6. Nov 2012, In: PoS LAT.

**Improved interpolating fields for hadrons at non-vanishing momentum**

Morte, M. D., Jäger, B., Rae, T. D. & Wittig, H., 6. Nov 2012, In: Proceedings of Science.

### **Lattice calculations of the leading hadronic contribution to $(g-2)_\mu$**

Morte, M. D., Jäger, B., Jüttner, A. & Wittig, H., 6. Nov 2012, In: P o S - Proceedings of Science.

### **Improved interpolating fields for hadrons at non-zero momentum**

Morte, M. D., Jaeger, B., Rae, T. & Wittig, H., 1. Aug 2012, In: The European Physical Journal A: Hadrons and Nuclei.

### **The nucleon axial charge from lattice QCD with controlled errors**

Capitani, S., Morte, M. D., Hippel, G. V., Jäger, B., Jüttner, A., Knippschild, B., Meyer, H. B. & Wittig, H., 1. May 2012, In: Physical Review D.

### **Towards a precise lattice determination of the leading hadronic contribution to $(g-2)_\mu$**

Morte, M. D., Jäger, B., Jüttner, A. & Wittig, H., 13. Dec 2011, In: Journal of High Energy Physics (JHEP).

### **Lattice Determination of the Anomalous Magnetic Moment of the Muon**

Morte, M. D., Jäger, B., Jüttner, A. & Wittig, H., 9. Nov 2011, In: P o S - Proceedings of Science.

### **The leading hadronic vacuum polarisation on the lattice**

Morte, M. D., Jager, B., Juttner, A. & Wittig, H., 2011, In: AIP CONFERENCE PROCEEDINGS. 1343, 1, 337.

### **Wilson fermions at fine lattice spacings: scale setting, pion form factors and $(g-2)_\mu$**

Brandt, B. B., Capitani, S., Morte, M. D., Djukanovic, D., Hippel, G. V., Jäger, B., Jüttner, A., Knippschild, B. & Wittig, H., 12. Oct 2010, In: PoS LATTICE.

## **Teaching and supervision**

### **FF501- Førsteårsprojekt**

Benjamin Jäger

01/02/2019 → 31/05/2019

### **FF501- Førsteårsprojekt**

Benjamin Jäger & John Bulava

01/02/2018 → 31/05/2018

### **MM557 - Partial Differential Equations and Complex Analysis**

Benjamin Jäger

01/02/2018 → 31/05/2018

### **MM557 - Partial Differential Equations and Complex Analysis**

Benjamin Jäger

01/02/2019 → 31/05/2019

### **MM560 - Introduction to Programming**

Benjamin Jäger & Ralf Zimmermann

01/02/2019 → 31/05/2019

### **MM560: Introduktion til programmering**

Ralf Zimmermann & Benjamin Jäger

01/02/2019 → 31/05/2019

