
CURRICULUM VITAE

Jens Eisert

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Freie Universität Berlin

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- 94–95 **University of Connecticut**, as a J. W. Fulbright Fellow,
postgraduate studies in mathematics and physics
Degree: **Master of Science**, GPA: **3.88** (4.0)
Scientific work in applied mathematics/numerical analysis
- 81–90 **Wilhelm-von-Humboldt-High-School**, Ludwigshafen
Degree: **Abitur**, average mark: **1.0** (1.0)

EDITORIAL BOARD MEMBERSHIPS AND SERVICES TO THE COMMUNITY

- **Agenda on quantum computing of the German government**, coauthor with I. Bloch and T. Calarco, 2020
- **Government consulting** on quantum technologies for the German government, 2019-
- **EU's Strategic Research Agenda** on quantum technologies, coauthor, 2019
- **Physical Review Letters**, divisional editor, 2017-2020
- **EU road map for quantum information science**, lead author of the quantum simulations section, 2016
- **Quantum**, advisory board member, 2016-
- **QUTEGA committee** planning the German part of the *EU Flagship for Quantum Technologies*, member, 2016
- **Quantum Science and Technologies**, editor, 2016-
- **Quantum Information and Computation**, editor, 2011-
- **Physical Review A**, divisional editor, 2008-2010
- **Journal of Physics A**, 2012-2016
- **Quantum Information Processing**, 2012-2016
- **2010 EU road map for quantum information science**, coauthor and lead theory editor, 2010

ORGANISATIONAL SKILLS

- **Einstein Research Unit**, Perspectives of a quantum digital transformation: Near-term quantum computational devices and quantum processors on near-term quantum computing, project coordinator of an anticipated project within the Berlin University Alliance of the German Excellence Initiative, involving 19 PIs, December 2020-
- **Berlin Quantum**, founding board member of Berlin Quantum, the quantum initiative of the state of Berlin, 2023-
- **FOR 2724**, project leader of a DFG Research Unit on quantum thermodynamics, January 2019-
- **TQC 2016**, head organizer, major conference on quantum information, September 2016
- **Subproject leader** in EU projects QAP and QESSENCE
- **COST Action MP1209** "Thermodynamics in the Quantum Regime", co-author and working group leader, 2012
- **COST-conference**, first COST conference on quantum thermodynamics held in Potsdam, January 2014
- **QQQ-Meeting**, regular meeting in the Berlin-Potsdam academic landscape on quantum information, quantum optics, and quantum many-body theory (organizer and co-founder), 2015-2011
- **Summer academy of the Studienstiftung des deutschen Volkes, Görlitz 2008**, course on quantum information theory, jointly with A. Rauschenbeutel, August 2008
- **PAQ07, head of local organizing committee**, major international conference on quantum optics and quantum information, Royal Society London, September 2007
- **Summer academy of the Studienstiftung des deutschen Volkes, Rot an der Rot 2004**, course on quantum information theory, jointly with R. F. Werner, August 2004
- **Member of many conference scientific boards**
- **IQING 2002**, organizer of an international conference for PhD students and postdocs in quantum information
- **IQING 2001**, jointly with C. Simon (Oxford) and D. Jonathan (Cambridge), 2001
- **YAO '99 – Young Atom Opticians**, jointly with T. Felbinger and C. Henkel (Potsdam), 1999
- **A2-Consortium For Quantum Information**, 1998 – 2001, 2003

GROUP LEADING SKILLS AND SUPPORT OF YOUNG SCIENTISTS

- **Diploma and MSc supervision:** (Present and past) J. Anders, B. Bach, I. Benthin, H. Bernigau, P. Fährmann, J. Frank, A. Friedenauer, M. Friesdorf, M. Gluza, M. Goihl, D. Gross, D. Hangleiter, M. von Hase, M. Herold, J. Hoersch, A. Kegeles, M. Kramer, S. Lahs, J. Lekscha, J. J. Meyer, A. Nietner, C. Prunkl, S. Rosset, A. Steffens, A. Studt, L. Trotta, C. Verheoven, C. Wassner, F. Wilde, H. Wilming, J. Wilkens.
- **PhD supervision:** (Present and past) G. Aguilar, S. Aimet, A. Bauer, C. Bertoni, P. Boes, F. G. S. L. Brandao (co-supervised with M. B. Plenio), A. Burchards, J. Conrad, M. Cramer, J. Denzler, P.-J. Derks, A. Feito (co-supervised with M. B. Plenio), P. Fährmann, M. Friesdorf, J. C. M. de la Fuente, J. Fuksa, J. Gertis, E. Gil-Fuster, M. Gluza, M. Goihl, C. Gogolin, D. Gross, F. Hahn, J. Haferkamp, D. Hangleiter, A. A. Mele, M. Hinsche, M. Ioannou, A. Jahn, M. Kesselring, K. Kieling, J. Kitzinger, M. Kliesch, C. Krumnow, A. Mari, J. Meyer, D. Miller, J. Naumann, J. Nauth, A. Nietner, M. Ohliger, E. Onorati, I. Roth, A. Serafini (long term visitor), A. Steffens, R. Suzuki, A. Townsend-Teague, F. Wilde, C. Wille, H. Wilming, A. Wilms.

- **Postdoctoral researchers:** (Present and past) T. Barthel, N. de Beaudrap, L. Bittel, J. Bermejo-Vega, C. Bravo-Prieto, O. Buerschaper, E. T. Campbell, M. Caro, J. Carrasco, M. Cramer, C. Dawson, E. Derbyshire, F. vom Ende, P. Faist, R. Gallego, D. Gross, T. Guaita, G. Guarinieri, R. Hübener, P. Hyllus, S. Khatiri, R. Küng, V. Lahtinen, L. Leone, A. Lund, M. Müller, A. Nagy, V. Nesme, H. Pashayan, F. Pastawski, C. Pineda, J. Roffe, K. Pregnell (co-supervised with M. B. Plenio), Y. Quek, A. Quintavalle, A. Riera, C. Riofrio, J. Roffe, R. Schadow, P. Schmoll, N. Tarantino, N. Tischler, A. H. Werner, N. Walk, J. Wallnöfer, B. Wu, D. Yang, Z. Zimboras.
- **Host of Humboldt-Bessel-award winners:** (Past) M. Aspelmeyer, T. Prosen.
- **Host of Humboldt/Marie-Curie grants:** (Present and past) F. Arzani, L. Aolita, R. DiCandia, S. Campbell (shared with C. Koch), C. Cao, F. vom Ende, R. Gallego, F. Pastawski, M. J. Kastoryano, R. Laurenza, N. Ng, A. Pappa, Y. Quek, M. Schwarz, S. J. Thomson, N. Tischler, A. Streltsov, R. Sweke, N. Walk.
- **Past group members in senior academic positions and permanent jobs in the quantum industry:** This research group, despite being a relatively young group, already has a long list of past group members who are now in **group leader positions in academia** or are **permanently employed as researchers** in the quantum industry. At least the **34 past group members** in the following list fairly qualify for this. This can be seen as an indication of taking academic support, coaching, mentoring and academic career planning very seriously.

Zoltan Zimboras (postdoctoral researcher, now permanent assistant professor at the Wigner Institute, Budapest), David Gross (PhD student and Diploma student, now permanently employed W3 professor at the University of Cologne), Dong Yang (postdoctoral researcher, now permanently employed assistant professor at the Jiliang University, China), Thomas Barthel (postdoctoral researcher, now assistant professor at Duke University), Earl Campbell (postdoctoral researcher, now permanently employed lecturer – assistant professor – at the University of Sheffield and quantum researcher at Riverlane, Cambridge), Ryan Sweke (postdoctoral researcher, now permanently employed researcher at IBM research), Alessio Serafini (long term visiting PhD student, now permanent full professor at University College London), Janet Anders (Diploma student, now permanent full W3 professor at the University of Potsdam), Michael Kastoryano, (postdoctoral researcher, now permanently employed assistant professor at the University of Copenhagen and quantum researcher at Amazon Quantum Solutions Lab, Pasadena), Fernando Brandao (PhD student, joint supervision with Martin Plenio, now permanently employed full professor at the California Institute for Technology and quantum researcher at Amazon Quantum Solutions Lab, Pasadena), Niel de Beaudrap (postdoctoral researcher, now permanently employed lecturer – assistant professor – at the University of Sussex), Martin Kliesch (PhD student and postdoctoral researcher, now full W3 professor at the University of Hamburg), Markus Mueller (postdoctoral researcher, now tenure track junior group leader – similar to assistant professor – at IQOQI, Vienna), Steven J. Thomson, (postdoctoral researcher, now permanently employed researcher at IBM research), Leandro Aolita (postdoctoral researcher and Marie-Curie Fellow, now permanently employed professor and executive director at the Quantum Research Center, Abu Dhabi), Richard Kueng (postdoctoral researcher, now tenure track assistant professor at the Johannes Kepler University of Linz), Alexander Streltsov (postdoctoral researcher, now group leader at the University of Warsaw), Albert Werner (postdoctoral researcher, now permanently employed W2 professor at the University of Augsburg), Augustine Kshetrimayum (postdoctoral researcher, now permanently employed assistant professor at the Saha Institute of Nuclear Physics, Kolkata), Christian Gogolin (PhD student and postdoctoral researcher, now permanently employed quantum researcher at Covestro), Carlos Pineda (postdoctoral researcher, now permanent assistant professor at the Universidad Nacional Autonoma de Mexico), Fernando Pastawski (postdoctoral researcher, now permanently employed quantum researcher at PsiQuantum), Konrad Kieling (postdoctoral researcher, PhD student and Diploma student, now permanently employed quantum researcher at PsiQuantum), Mark Steudtner (postdoctoral researcher, now permanently employed quantum researcher at PsiQuantum), Juani Bermejo-Vega (still part-time group member as a postdoc, tenure track as group leader to a permanent position at the University of Granada), Christopher Dawson (postdoctoral researcher, now permanently employed quantum researcher at PsiQuantum), Anna Pappa (postdoctoral researcher, now Emmy Noether junior group leader at TU Berlin), Nelly Ng (postdoctoral researcher and Humboldt Fellow, now assistant professor at NTU Singapore), Marcus Cramer (PhD student, now permanently employed quantum researcher at Q-CTRL), Christian Krumnow (PhD student and postdoctoral researcher, now group and project leader at the University of Applied Sciences), Winton Brown (postdoctoral researcher, now permanently employed quantum researcher at Northrop Grumman), Francesco Arzani (Marie Curie Fellow and postdoctoral researcher, offer for tenure track researcher position at Ecole Normale Supérieure), Andrea Mari (PhD student, now permanently employed research staff member at the Unitary Fund creating a quantum technology ecosystem), Ji-Yao Chen (postdoctoral researcher, now professor at Sun Yat-sen University), Nora Tischler (postdoctoral researcher, now assistant professor at Griffith University), Matthias Caro (still postdoctoral researcher, but with an offer for a permanent lectureship at Warwick University), Joschka Roffe (postdoctoral researcher, now tenure track lecturer at the University of Edinburgh).

LIST OF PUBLICATIONS

Jens Eisert

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PUBLICATIONS IN HIGH IMPACT JOURNALS

This list comprises all those publications that have been published in

- *Communications in Mathematical Physics*
- *Communications Physics (Nature)*
- *Nature*
- *Nature Communications*
- *Nature Photonics*
- *Nature Physics*
- *Nature PJ Quantum Information*
- *Nature Reviews Physics*
- *Physical Review Letters*
- *Physical Review X*
- *PRX Quantum*
- *Proceedings of the National Academy of Sciences*
- *Reviews of Modern Physics*
- *Reports on Progress in Physics*
- *Science Advances*

- [1] “Exponentially tighter bounds on limitations of quantum error mitigation”,
Y. Quek, D. Stilck Franca, S. Khatri, J. J. Meyer, J. Eisert,
Nature Physics, in press (2024),
(Lanl e-print arXiv:2210.11505).
- [2] “Unraveling long-time quantum dynamics using flow equations”,
S. J. Thomson, J. Eisert
Nature Physics, in press (2024),
(Lanl e-print arXiv:2308.13005).
- [3] “Probing coherent quantum thermodynamics using a trapped ion”,
O. Onishchenko, G. Guarnieri, P. Rosillo-Rodes, D. Pijn, J. Hilder, U. G. Poschinger, M. Perarnau-Llobet, J. Eisert,
F. Schmidt-Kaler,
Nature Communications **15**, in press (2024),
(Lanl e-print arXiv:2207.14325).
- [4] “Towards provably efficient quantum algorithms for large-scale machine-learning models”,
J. Liu, M. Liu, J.-P. Liu, Z. Ye, Y. Alexeev, J. Eisert, L. Jiang,
Nature Communications **15**, 434 (2024),
(Lanl e-print arXiv:2301.06142).
- [5] “Understanding quantum machine learning also requires rethinking generalization”,
E. Gil-Fuster, J. Eisert, C. Bravo-Prieto,
Nature Communications **15**, 2277 (2024),
(Lanl e-print arXiv:2306.13461).
- [6] “A super-polynomial quantum advantage for combinatorial optimization problems”,
N. Pirnay, V. Ulitzsch, F. Wilde, J. Eisert, J.-P. Seifert,
Science Advances **10**, eadj5170 (2024),
(Lanl e-print arXiv:2212.08678).

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- [7] “Measuring out quasi-local integrals of motion from entanglement”,
B. Lu, C. Bertoni, S. J. Thomson, J. Eisert,
Communications Physics **7**, 17 (2024),
(Lanl e-print arXiv:2301.01787).
- [8] “Noise can be helpful for variational quantum algorithms”,
J. Liu, F. Wilde, A. A. Mele, L. Jiang, J. Eisert,
Nature PJ Quantum Information, in press (2024),
(Lanl e-print arXiv:2210.06723).
- [9] “(Semi-)device independently characterizing quantum temporal correlations”,
S.-L. Chen, J. Eisert,
Physical Review Letters **132**, 220201 (2024),
(Lanl e-print arXiv:2305.19548).
- [10] “Pseudomagic quantum states”,
A. Gu, L. Leone, S. Ghosh, J. Eisert, S. Yelin, Y. Quek,
Physical Review Letters **132**, 210602 (2024),
(Lanl e-print arXiv:2308.16228).
- [11] “ReQuSim: Faithfully simulating near-term quantum repeaters”,
J. Wallnöfer, F. Hahn, F. Wiesner, N. Walk, J. Eisert,
PRX Quantum **5**, 010351 (2024),
(Lanl e-print arXiv:2212.03896).
- [12] “Analog information decoding of bosonic quantum LDPC codes”,
L. Berent, T. Hillmann, J. Eisert, R. Wille, J. Roffe,
PRX Quantum **5**, 020349 (2024),
(Lanl e-print arXiv:2311.01328).
- [13] “Anyon condensation and the color code”,
M. S. Kesselring, J. C. Magdalena de la Fuente, F. Thomsen, J. Eisert, S. D. Bartlett, B. J. Brown,
PRX Quantum **5**, 010342 (2024),
(Lanl e-print arXiv:2212.00042).
- [14] “Computational advantage of quantum random sampling”,
D. Hangleiter, J. Eisert,
Reviews of Modern Physics **95**, 035001 (2023),
(Lanl e-print arXiv:2206.04079).
- [15] “Estimating gate-set properties from random sequences”,
J. Helsen, M. Ioannou, J. Kitzinger, E. Onorati, A. H. Werner, J. Eisert, I. Roth,
Nature Communications **14**, 5039 (2023),
(Lanl e-print arXiv:2110.13178).
- [16] “Quantum photo-thermodynamics on a programmable photonic quantum processor”,
F. H. B. Somhorst, R. van der Meer, M. Correa Anguita, R. Schadow, H. J. Snijders, M. de Goede, B. Kassenberg,
P. Venderbosch, C. Taballione, J. P. Epping, H. H. van den Vlekkert, J. F. F. Bulmer, J. Lugani, I. A. Walmsley, P.
W. H. Pinkse, J. Eisert, N. Walk, J. J. Renema,
Nature Communications **14**, 3895 (2023),
(Lanl e-print arXiv:2201.00049).

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- [17] “A single T-gate makes distribution learning hard”,
M. Hinsche, M. Ioannou, A. Nietner, J. Haferkamp, Y. Quek, D. Hangleiter, J.-P. Seifert, J. Eisert, R. Sweke,
Physical Review Letters **130**, 240602 (2023),
(Lanl e-print arXiv:2207.03140).
- [18] “Classical surrogates for quantum learning models”,
F. J. Schreiber, J. Eisert, J. J. Meyer,
Physical Review Letters **131**, 100803 (2023),
(Lanl e-print arXiv:2206.11740).
- [19] “Exploiting symmetry in variational quantum machine learning”,
J. J. Meyer, M. Mularski, E. Gil-Fuster, A. A. Mele, F. Arzani, A. Wilms, J. Eisert,
PRX Quantum **4**, 010328 (2023),
(Lanl e-print arXiv:2205.06217).
- [20] “Time-energy uncertainty relation for noisy quantum metrology”,
P. Faist, M. P. Woods, V. V. Albert, J. M. Renes, J. Eisert, J. Preskill,
PRX Quantum **4**, 040336 (2023),
(Lanl e-print arXiv:2207.13707).
- [21] “Experimental observation of curved light-cones in a quantum field simulator”,
M. Tajik, M. Gluza, N. Sebe, P. Schüttelkopf, F. Cataldini, J. Sabino, F. Møller, S.-C. Ji, S. Erne, G. Guarnieri, S. Sotiriadis, J. Eisert, J. Schmiedmayer,
Proceedings of the National Academy of Sciences **120**, e2301287120 (2023),
(Lanl e-print arXiv:2209.09132).
- [22] “Efficient unitary designs with a system-size independent number of non-Clifford gates”,
J. Haferkamp, F. Montealegre-Mora, M. Heinrich, J. Eisert, D. Gross, I. Roth,
Communications in Mathematical Physics **397**, 995 (2023),
(Lanl e-print arXiv:2002.09524).
- [23] “Linear growth of quantum circuit complexity”,
J. Haferkamp, P. Faist, N. B. T. Kothakonda, J. Eisert, N. Yunger Halpern,
Nature Physics **18**, 528 (2022),
(Lanl e-print arXiv:2106.05305).
- [24] “A general framework for randomized benchmarking”,
J. Helsen, I. Roth, E. Onorati, A. H. Werner, J. Eisert,
PRX Quantum **3**, 020357 (2022),
(Lanl e-print arXiv:2010.07974).
- [25] “Quantum computational supremacy via high-dimensional Gaussian boson sampling”,
A. Deshpande, A. Mehta, T. Vincent, N. Quesada, M. Hinsche, M. Ioannou, L. Madsen, J. Lavoie, H. Qi, J. Eisert,
D. Hangleiter, B. Fefferman, I. Dhand,
Science Advances **8**, eabi7894 (2022),
(Lanl e-print arXiv:2102.12474).
- [26] “Simulating quantum repeater strategies for multiple satellites”,
J. Wallnöfer, F. Hahn, M. Gündogan, J. S. Sidhu, F. Krüger, N. Walk, J. Eisert, J. Wolters,
Communications Physics **5**, 169 (2022),
(Lanl e-print arXiv:2110.15806).

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- [27] “Entanglement estimation in tensor network states via sampling”,
N. Feldman, A. Kshetrimayum, J. Eisert, M. Goldstein,
PRX Quantum **3**, 030312 (2022),
(Lanl e-print arXiv:2202.04089).
- [28] “Transparent reporting of research-related greenhouse gas emissions through the scientific CO₂nduct initiative”,
R. Sweke, P. Boes, N. H. Y. Ng, C. Sparaciari, J. Eisert, M. Goihl,
Communications Physics **5**, 150 (2022),
(Lanl e-print arXiv:2206.00857).
- [29] “Entangling power and quantum circuit complexity”,
J. Eisert,
Physical Review Letters **127**, 020501 (2021),
(Lanl e-print arXiv:2104.03332).
- [30] “Decay and recurrence of non-Gaussian correlations in a quantum many-body system”,
T. Schweigler, M. Gluza, M. Tajik, S. Sotiriadis, F. Cataldini, S.-C. Ji, F. S. Møller, J. Sabino, B. Rauer, J. Eisert, J. Schmiedmayer,
Nature Physics **17**, 559 (2021),
(Lanl e-print arXiv:2003.01808).
- [31] “Recovering quantum correlations in optical lattices from interaction quenches”,
M. Gluza, J. Eisert,
Physical Review Letters **127**, 090503 (2021),
(Lanl e-print arXiv:2005.09000).
- [32] “Sharing classical secrets with continuous-variable entanglement: Composable security and network coding advantage”,
N. Walk, J. Eisert,
PRX Quantum **2**, 040339 (2021),
(Lanl e-print arXiv:2104.10659).
- [33] “Emergent statistical mechanics from properties of disordered random matrix product states”,
J. Haferkamp, C. Bertoni, I. Roth, J. Eisert,
PRX Quantum **2**, 040308 (2021),
(Lanl e-print arXiv:2103.02634).
- [34] “Quantum field thermal machines”,
M. Gluza, J. Sabino, N. H. Y. Ng, G. Vitagliano, M. Pezzutto, Y. Omar, I. Mazets, M. Huber, J. Schmiedmayer, J. Eisert,
PRX Quantum **2**, 030310 (2021),
(Lanl e-print arXiv:2006.01177).
- [35] “A variational toolbox for quantum multi-parameter estimation”,
J. J. Meyer, J. Borregaard, J. Eisert,
Nature PJ Quantum Information **7**, 89 (2021),
(Lanl e-print arXiv:2006.06303).
- [36] “Bounding the resources for thermalizing many-body localized systems”,
C. Sparaciari, M. Goihl, P. Boes, J. Eisert, N. H. Y. Ng,
Communications Physics (Nature) **4**, 3 (2021),
(Lanl e-print arXiv:1912.04920).

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- [37] “Easing the Monte Carlo sign problem”,
D. Hangleiter, I. Roth, D. Nagaj, J. Eisert,
Science Advances **6**, eabb8341 (2020),
(Lanl e-print arXiv:1906.02309).
- [38] “Dynamical structure factors of dynamical quantum simulators”,
M. L. Baez, M. Goihl, J. Haferkamp, J. Bermejo-Vega, M. Gluza, J. Eisert,
Proceedings of the National Academy of Sciences **117**, 26123-26134 (2020),
(Lanl e-print arXiv:1912.06076).
- [39] “Quantum certification and benchmarking”,
J. Eisert, D. Hangleiter, N. Walk, I. Roth, D. Markham, R. Parekh, U. Chabaud, E. Kashefi,
Nature Reviews Physics **2**, 382-390 (2020),
(Lanl e-print arXiv:1910.06343).
- [40] “Closing gaps of a quantum advantage with short-time Hamiltonian dynamics”,
J. Haferkamp, D. Hangleiter, A. Bouland, B. Fefferman, J. Eisert, J. Bermejo-Vega,
Physical Review Letters **125**, 250501 (2020),
(Lanl e-print arXiv:1908.08069).
- [41] “Floquet engineering topological many-body localized systems”,
K. S. C. Decker, C. Karrasch, J. Eisert, D. M. Kennes,
Physical Review Letters **124**, 190601 (2020),
(Lanl e-print arXiv:1911.01269).
- [42] “Rates of multi-partite entanglement transformations and applications in quantum networks”,
A. Streltsov, C. Meignant, J. Eisert,
Physical Review Letters **125**, 080502 (2020),
(Lanl e-print arXiv:1709.09693).
- [43] “Quantum read-out for cold atomic quantum simulators”,
M. Gluza, T. Schweigler, B. Rauer, C. Krumnow, J. Schmiedmayer, J. Eisert,
Communications Physics (Nature) **3**, 12 (2020),
(Lanl e-print arXiv:1807.04567).
- [44] “Holography and criticality in matchgate tensor networks”,
A. Jahn, M. Gluza, F. Pastawski, J. Eisert,
Science Advances **5**, eaaw0092 (2019),
(Lanl e-print arXiv:1711.03109).
- [45] “Randomized benchmarking for individual quantum gates”,
E. Onorati, A. H. Werner, J. Eisert,
Physical Review Letters **123**, 060501 (2019),
(Lanl e-print arXiv:1811.11775).
- [46] “Sample complexity of device-independently certified quantum supremacy”,
D. Hangleiter, M. Kliesch, J. Eisert, C. Gogolin,
Physical Review Letters **122**, 210502 (2019),
(Lanl e-print arXiv:1812.01023).

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- [47] “A tensor network annealing algorithm for two-dimensional thermal states”,
A. Kshetrimayum, M. Rizzi, J. Eisert, R. Orus,
Physical Review Letters **122**, 070502 (2019),
(Lanl e-print arXiv:1809.08258).
- [48] “Entanglement-ergodic quantum systems equilibrate exponentially well”,
H. Wilming, M. Goihl, I. Roth, J. Eisert,
Physical Review Letters **123**, 200604 (2019),
(Lanl e-print arXiv:1802.02052).
- [49] “Von Neumann entropy from unitarity”,
P. Boes, J. Eisert, R. Gallego, M. P. Mueller, H. Wilming,
Physical Review Letters **122**, 210402 (2019),
(Lanl e-print arXiv:1807.08773).
- [50] “Single-shot holographic compression from the area law”,
H. Wilming, J. Eisert,
Physical Review Letters **122**, 190501 (2019),
(Lanl e-print arXiv:1809.10156).
- [51] “Quantum network routing and local complementation”,
F. Hahn, A. Pappa, J. Eisert,
Nature PJ Quantum Information **5**, 76 (2019)
(Lanl e-print arXiv:1805.04559).
- [52] “Recovering quantum gates from few average gate fidelities”,
I. Roth, R. Kueng, S. Kimmel, Y.-K. Liu, D. Gross, J. Eisert, M. Kliesch,
Physical Review Letters **121**, 170502 (2018),
(Lanl e-print arXiv:1803.00572).
- [53] “Catalytic quantum randomness”,
P. Boes, H. Wilming, R. Gallego, J. Eisert,
Physical Review X **8**, 041016 (2018),
(Lanl e-print arXiv:1804.03027).
- [54] “Statistical ensembles without typicality”,
P. Boes, H. Wilming, J. Eisert, R. Gallego,
Nature Communications **9**, 1022 (2018),
(Lanl e-print arXiv:1707.08218).
- [55] “Fidelity witnesses for fermionic quantum simulations”,
M. Gluza, M. Kliesch, J. Eisert, L. Aolita,
Physical Review Letters **120**, 190501 (2018),
(Lanl e-print arXiv:1703.03152).
- [56] “Strong coupling corrections in quantum thermodynamics”,
M. Perarnau-Llobet, H. Wilming, A. Riera, R. Gallego, J. Eisert,
Physical Review Letters **12**, 120602 (2018),
(Lanl e-print arXiv:1704.05864).

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- [57] “Architectures for quantum simulation showing a quantum speedup”,
J. Bermejo-Vega, D. Hangleiter, M. Schwarz, R. Raussendorf, J. Eisert,
Physical Review X **8**, 021010 (2018),
(Lanl e-print arXiv:1703.00466).
- [58] “Towards holography via quantum source-channel codes”,
F. Pastawski, J. Eisert, H. Wilming,
Physical Review Letters **119**, 020501 (2017),
(Lanl e-print arXiv:1611.07528).
- [59] “Experimental quantum compressed sensing for a seven-qubit system”,
C. A. Riofrio, D. Gross, S. T. Flammia, T. Monz, D. Nigg, R. Blatt, J. Eisert,
Nature Communications **8**, 15305 (2017),
(Lanl e-print arXiv:1608.02263).
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