#	Presenter	Title	Authors
7	Robert Salzmann	Symmetric distinguishability as a quantum resource	Robert Salzmann, Nilanjana Datta, Gilad Gour, Xin Wang and Mark M. Wilde
9	Sam McArdle	Exploiting fermion number in factorized decompositions of the electronic structure Hamiltonian	Sam McArdle, Earl Campbell and Yuan Su
10	Aikaterini Gratsea	Storage capacity and learning capability of quantum neural networks	Aikaterini Gratsea, Albert Alloy, Valentin Kasper, Andreu Riera-Campeny, Maciej Lewenstein and Anna Sanpera
13	Jeong San Kim	Locking and unlocking nonlocality without entanglement by postmeasurement information	Donghoon Ha and Jeong San Kim
19	Jeong San Kim	Quantum nonlocality without entanglement depending on nonzero prior probabilities in optimal unambiguous discrimination	Donghoon Ha and Jeong San Kim
26	Shiv Shankar	Bosonic Random Walk Neural Networks for Graph Learning	Shiv Shankar and Don Towsley
27	Dorian Rudolph	On polynomially many queries to NP or QMA oracles	Dorian Rudolph and Sevag Gharibian
36	Edward H. Chen	Calibrated decoders for experimental quantum error correction	Edward Chen, Theodore Yoder, Youngseok Kim, Neereja Sundaresan, Srikanth Srinivasan, Muyuan Li, Antonio Córcoles, Andrew Cross and Maika Takita
37	Julia Amoros-Binefa	Noisy atomic magnetometry in real time	Julia Amoros Binefa and Jan Kolodynski
43	Theerapat Tansuwannont	Achieving fault tolerance on capped color codes with few ancillas	Theerapat Tansuwannont and Debbie Leung
48	Andreas Bluhm	Position-based cryptography: Single-qubit protocol secure against multi-qubit attacks	Andreas Bluhm, Matthias Christandl and Florian Speelman
49	Thomas G. Draper	Evaluating NISQ Devices with Quadratic Nonresidues	Thomas Draper
56	Aditya Jain	Efficient diagnostics for quantum error correction	Pavithran Iyer, Aditya Jain, Stephen D. Bartlett and Joseph Emerson
59	Benjamin Tan	Qubit-efficient encoding schemes for binary optimisation problems	Benjamin Tan, Marc-Antoine Lemonde, Supanut Thanasilp, Jirawat Tangpanitanon and Dimitris Angelakis
61	Giulia Rubino	Quantum superposition of thermodynamic evolutions with opposing time's arrows	Giulia Rubino, Gonzalo Manzano and Caslav Brukner
64	Oliver Hahn	Quantifying Qubit Magic with Gottesman-Kitaev-Preskill Encoding	Oliver Hahn, Alessandro Ferraro, Lina Hultquist, Giulia Ferrini and Laura García-Álvarez
65	Timo Hillmann	Performance of teleportation-based error correction circuits for bosonic codes with noisy measurements	Timo Hillmann, Fernando Quijandría, Arne L. Grimsmo and Giulia Ferrini
69	Josep Lumbreras	Multi-armed quantum bandits: Exploration versus exploitation when learning properties of quantum states	Josep Lumbreras, Erkka Haapasalo and Marco Tomamichel
71	Junseo Lee	Geometry of Random Unitary Channels in High-dimensional Quantum States	Junseo Lee and Kabgyun Jeong
73	Alicja Dutkiewicz	Heisenberg-limited quantum phase estimation of multiple eigenvalues with up to two control qubits	Alicja Dutkiewicz, Barbara Terhal and Thomas O'Brien
80	William Kirby	Second-quantized fermionic Hamiltonians for quantum simulation with polylogarithmic qubit and gate complexity	William Kirby, Bryce Fuller, Charles Hadfield and Antonio Mezzacapo

88	Christophe Piveteau	Quantum message-passing algorithm for optimal and efficient decoding	Christophe Piveteau and Joseph Renes
90	Margarite L. LaBorde	Testing symmetry on quantum computers	Margarite LaBorde and Mark Wilde
93	Nikita Gourianov	A Quantum Inspired Approach to Exploit Turbulence Structures	Nikita Gourianov, Michael Lubasch, Sergey Dolgov, Quincy van den Berg, Hessam Babaee, Peyman Givi, Martin Kiffner and Dieter Jaksch
94	Hlér Kristjánsson	Routed quantum circuits	Augustin Vanrietvelde, Hlér Kristjánsson and Jonathan Barrett
102	Huo Chen	Optomechanical Quantum Transduction Control Protocol	Huo Chen, Marti Vives and Mekena Metcalf
108	Kabgyun Jeong	Quantum Rényi Entropy Functionals for Bosonic Gaussian Systems	Kabgyun Jeong and Junseo Lee
113	Salvatore Tirone	Quantum Energy Lines and the optimal output ergotropy problem	Salvatore Tirone, Raffaele Salvia and Vittorio Giovannetti
114	Benjamin Schiffer	Adiabatic spectroscopy and a variational quantum adiabatic algorithm	Benjamin Schiffer, Jordi Tura Brugués and Ignacio Cirac
115	Andreas Bluhm	Maximal violation of steering inequalities and the matrix cube	Andreas Bluhm and Ion Nechita
116	Tulja Varun Kondra	Catalytic Transformations of Pure Entangled States	Tulja Varun Kondra, Chandan Datta and Alexander Streltsov
141	Peter Johnson	Computing Ground State Properties with Early Fault-Tolerant Quantum Computers	Ruizhe Zhang, Guoming Wang and Peter Johnson
143	Mathieu Roget	Quantum Perceptron Revisited: Computational-Statistical Tradeoffs	Mathieu Roget, Giuseppe Di Molfetta and Hachem Kadri
144	Atul Singh Arora	Oracle separations of hybrid quantum-classical circuits	Atul Singh Arora, Alexandru Gheorghiu and Uttam Singh
146	Mercy Amankwah	Quantum pixel representations and compression for N-dimensional images	Mercy Amankwah, Daan Camps, E. Wes Bethel, Roel Van Beeumen and Talita Perciano
148	Raffaele Salvia	Testing identity of collections of quantum states: sample complexity analysis	Marco Fanizza, Raffaele Salvia and Vittorio Giovannetti
149	Eric Chitambar	Friend or Foe in Quantum State Discrimination	Eric Chitambar and Laura Mančinska
150	James Watson	The Complexity of Approximating Critical Points of Quantum Phase Transitions	James Watson and Johannes Bausch
150	James Watson	The Complexity of Approximating Critical Points of Quantum Phase Transitions	James Watson and Johannes Bausch
154	Cihan Okay	Clifford covariance of Wigner functions, positive representation of Pauli measurement, and cohomology	Robert Raussendorf, Cihan Okay, Michael Zurel and Polina Feldmann
159	Jingzhen Hu and Qingzhong Liang	Climbing the Diagonal Clifford Hierarchy	Jingzhen Hu, Qingzhong Liang and Robert Calderbank
169	Satoshi Yoshida	Probabilistic exact implementation of an inverse map of black box isometry operations	Satoshi Yoshida, Akihito Soeda and Mio Murao
174	Bikun Li	Entangled photon factory: How to generate quantum resource states from a minimal number of quantum emitters	Bikun Li, Sophia Economou and Edwin Barnes
180	Jiasu Wang	On the energy landscape of symmetric quantum signal processing	Jiasu Wang, Yulong Dong and Lin Lin
180	Jiasu Wang	On the energy landscape of symmetric quantum signal processing	Jiasu Wang, Yulong Dong and Lin Lin

188	Casper Gyurik	Towards quantum advantage via topological data analysis	Casper Gyurik, Chris Cade and Vedran Dunjko
188	Casper Gyurik	Towards quantum advantage via topological data analysis	Casper Gyurik, Chris Cade and Vedran Dunjko
194	Marcos Crichigno	Complexity of Supersymmetric Systems and the Cohomology Problem	Chris Cade and P. Marcos Crichigno
196	Robert Salzmann	Interpolating between symmetric and asymmetric hypothesis testing	Robert Salzmann and Nilanjana Datta
198	Ho-Joon Kim	Relation between Quantum Coherence and Quantum Entanglement in Quantum Measurements	Ho-Joon Kim and Soojoon Lee
202	Max Hunter Gordon	Unifying and benchmarking state-of-the-art quantum error mitigation techniques	Daniel Bultrini, Max Hunter Gordon, Piotr Czarnik, Andrew Arrasmith, Patrick Coles and Lukasz Cincio
205	Llorenç Escola Farras	Quantifying Causal Influence in Quantum Mechanics	Llorenç Escolà Farràs and Daniel Braun
222	Harriet Apel	Holographic duality between local Hamiltonians from random tensor networks	Harriet Apel, Tamara Kohler and Toby Cubitt
227	João Doriguello	Quantum algorithm for stochastic optimal stopping problems	Joao F. Doriguello, Alessandro Luongo, Jinge Bao, Patrick Rebentrost and Miklos Santha
236	Marcel Hinsche, Marios Ioannou, Dominik Hangleiter	Learnability of the output distributions of local quantum circuits	Marcel Hinsche, Marios Ioannou, Alexander Nietner, Jonas Haferkamp, Jens Eisert, Dominik Hangleiter, Yihui Quek, Ryan Sweke and Jean-Pierre Seifert
241	Christoph Hirche	Bounding quantum capacities via partial orders and complementarity	Christoph Hirche and Felix Leditzky
247	Christoph Hirche	Quantum Network Discrimination	Christoph Hirche
249	Harold Ollivier	Verifying BQP Computations on Noisy Devices with Minimal Overhead	Dominik Leichtle, Luka Music, Elham Kashefi and Harold Ollivier
252	Rene Allerstorfer, Philip Verduyn Lunel	New Protocols and Ideas for Practical Quantum Position Verification	Rene Allerstorfer, Harry Buhrman, Florian Speelman and Philip Verduyn Lunel
253	Paul Skrzypczyk	All quantum measurements are asymptotically equivalent	Noah Linden and Paul Skrzypczyk
255	Ethan Epperly	A Theory of Quantum Subspace Diagonalization	Ethan Epperly, Lin Lin and Yuji Nakatsukasa
256	Manfredi Scalici	Preserving quantum correlations and coherence with non-Markovianity	Manfredi Scalici, Marek Miller, Alexander Streltsov, Jan Kołodynski, Kang-Da Wu, Guo-Yong Xiang, Chuan-Feng Li and Guang-Can Guo
257	Kamil Korzekwa	Fluctuation-dissipation relations for thermodynamic distillation processes	Kamil Korzekwa, Tanmoy Biswas, Alexssandre de Oliveira Junior and Michał Horodecki
260	Jonathan Kunjummen	Shadow process tomography of quantum channels	Jonathan Kunjummen, Minh C. Tran, Daniel Carney and Jacob M. Taylor
263	Marios Ioannou	Estimating gate-set properties from random sequences	Jonas Helsen, Marios Ioannou, Ingo Roth, Jonas Kitzinger, Emilio Onorati, Albert H. Werner and Jens Eisert
265	Jacob L. Beckey	Computable and operationally meaningful multipartite entanglement measures	Jacob Beckey, Nicolás Gigena, Patrick Coles and Marco Vinicio Sebastian de la Roca

266	Sami Boulebnane	Predicting parameters for the Quantum Approximate Optimization Algorithm for MAX-CUT from the infinite-size limit	Sami Boulebnane and Ashley Montanaro
267	Yulong Li	A More Direct Proof of QMAexp = PSPACE	Yulong Li
268	Aleksandra Krawiec	Excluding false negative error in certification of quantum channels	Aleksandra Krawiec, Łukasz Pawela and Zbigniew Puchała
280	Marten Folkertsma and Jordi Weggemans	Estimating polynomial quantum speedups beyond asymptotic analysis	Chris Cade, Marten Folkertsma, Ido Niesen and Jordi Weggemans
281	Narayanan Rengaswamy	Distilling GHZ States using Stabilizer Codes	Narayanan Rengaswamy, Ankur Raina, Nithin Raveendran and Bane Vasic
282	Ben Jaderberg	Quantum Self-Supervised Learning	Ben Jaderberg, Lewis Anderson, Weidi Xie, Samuel Albanie, Martin Kiffner and Dieter Jaksch
285	Samson Wang	Impact of Noise and Error Mitigation on Trainability of Variational Quantum Algorithms	Samson Wang, Piotr Czarnik, Andrew Arrasmith, Marco Cerezo, Enrico Fontana, Kunal Sharma, Akira Sone, Lukasz Cincio and Patrick Coles
286	Keiichiro Furuya	Monotonic multi-state quantum f-divergences	Nima Lashkari, Keiichiro Furuya and Shoy Ouseph
290	Marco Cerezo	Generalization guarantees for variational quantum machine learning	Matthias Caro, Elies Gil-Fuster, Johannes Jakob Meyer, Jens Eisert, Ryan Sweke, Hsin-Yuan Huang, Marco Cerezo, Kunal Sharma, Andrew Sornborger, Lukasz Cincio and Patrick J. Coles
291	Xinan Chen	Information Carried by a Single Particle in Multiple-Access Channels	Xinan Chen, Yujie Zhang, Eric Chitambar, Virginia Lorenz and Andreas Winter
295	Galit Anikeeva	Recycling qubits in near-term quantum computers	Galit Anikeeva, Isaac H. Kim and Patrick Hayden
305	Ana Palacios de Luis	Steered quantum annealing: improving time efficiency with partial information	Ana Palacios de Luis, Artur García Sáez and Marta P. Estarellas
307	Grzegorz Głuch	Provable Adversarial Robustness in the Quantum Model	Khashayar Barooti, Grzegorz Gluch and Ruediger Urbanke
308	Tim Coopmans	LIMDD: A Decision Diagram for the Simulation of Quantum Computing Including Stabilizer States	Lieuwe Vinkhuijzen, Tim Coopmans, David Elkouss, Vedran Dunjko and Alfons Laarman
328	Armands Strikis	Quantum computing is scalable on a planar array of qubits with fabrication errors	Armands Strikis, Simon Benjamin and Benjamin Brown
330	Filip B. Maciejewski	Quantum average-case distances	Filip Maciejewski, Michał Oszmaniec and Zbigniew Puchała
331	Marco Pistoia, Dylan Herman and Pierre Minssen	NISQ-HHL: Portfolio Optimization for Near-Term Quantum Hardware	Romina Yalovetzky, Pierre Minssen, Dylan Herman and Marco Pistoia
334	Mitchell Chiew	Optimal fermion-qubit mappings	Mitchell Chiew and Sergii Strelchuk
342	Shuchen Zhu	Digital quantum simulation of gauge theories	Yao Ji, Henry Lamm and Shuchen Zhu
344	Supanut Thanasilp	Subtleties in the trainability of quantum machine learning models	Supanut Thanasilp, Samson Wang, Nhat Anh Nghiem Vu, Patrick Coles and Marco Cerezo
350	Tiju Cherian John	A New Parametrization for Multimode Gaussian States and Related Operators with some Applications	Tiju Cherian John and K. R Parthasarathy

353	William J. Huggins	Nearly Optimal Quantum Algorithm for Estimating Multiple Expectation Values	William Huggins, Nathan Wiebe, Jarrod McClean, Thomas O'Brien, Kianna Wan and Ryan Babbush
354	Michael Beverland	Improved quantum error correction using soft information	Christopher Pattison, Michael Beverland, Marcus da Silva and Nicolas Delfosse
356	András Gilyén	Improved Approximation Algorithms for Fidelity Estimation	Andras Gilyen and Alexander Poremba
357	Luca Mondada	Quantum Circuits in Additive Hilbert Space	Luca Mondada
361	Juspreet Singh Sandhu	Limitations of Local Quantum Algorithms on Maximum Cuts of Sparse Hypergraphs and Beyond	Chi-Ning Chou, Peter Love, Juspreet Singh Sandhu and Jonathan Shi
363	Eddie Schoute	Surface code compilation via edge-disjoint paths	Michael Beverland, Vadym Kliuchnikov and Eddie Schoute
365	Junyu Liu	Representation Learning via Quantum Neural Tangent Kernels	Junyu Liu, Francesco Tacchino, Jennifer Glick, Liang Jiang and Antonio Mezzacapo
366	Elizabeth Bennewitz	Neural Error Mitigation of Near-Term Quantum Simulations	Elizabeth Bennewitz, Florian Hopfmueller, Bohdan Kulchytskyy, Juan Carrasquilla and Pooya Ronagh
371	Kfir Dolev	Gauging the bulk: generalized gauging maps and holographic codes	Kfir Dolev, Sam Cree, Vladimir Calvera and Dominic Williamson
372	Sanjaya Lohani	Learning from biased distributions of quantum states	Sanjaya Lohani, Joseph Lukens, Daniel Jones, Thomas Searles, Ryan Glasser and Brian Kirby
375	Paraj Titum	Quantifying the Impact of Precision Errors on Quantum Approximate Optimization Algorithms	Paraj Titum, Gregory Quiroz, Phillip Lotshaw, Pavel Lougovski, Kevin Schultz, Eugene Dumitrescu and Itay Hen
378	Arun Padakandla	Sample Complexity Bounds for PAC Learning of Quantum Measurement Classes	Arun Padakandla
380	Akshay Seshadri	Bounding the sum capacity of multiple access channels with and without assistance	Akshay Seshadri, Felix Leditzky, Vikesh Siddhu and Graeme Smith
381	Kunal Marwaha	Bounds on approximating Max kXOR with quantum and classical local algorithms	Kunal Marwaha and Stuart Hadfield
384	Karen Morenz Korol	Quantum approximation algorithms for the electronic structure problem	Karen Morenz Korol, Kenny Choo and Antonio Mezzacapo
389	Sam Cree	Fault-tolerant gates in holographic stabilizer codes are severely restricted	Sam Cree, Kfir Dolev, Vladimir Calvera and Dominic J Williamson
391	Ariel Shlosberg	Adaptive estimation of quantum observables	Ariel Shlosberg, Andrew J. Jena, Priyanka Mukhopadhyay, Jan F. Haase, Felix Leditzky and Luca Dellantonio
394	Sam Cree	Exact and approximate Petz recovery from differential geometry	Sam Cree and Jonathan Sorce
401	Michael Vasmer	Morphing quantum codes	Michael Vasmer and Aleksander Kubica
402	Troy Sewell	Preparing Rernomalization Group Fixed Points on NISQ Hardware	Troy Sewell and Stephen Jordan
406	Trevor Keen	Quantum Algorithms for Ground State Preparation and Green's Function Calculation	Trevor Keen, Eugene Dumitrescu and Yan Wang
410	Jessica Lemieux	Reflection-Based Adiabatic State Preparation	Jessica Lemieux, Artur Scherer and Pooya Ronagh

413	Joao Basso	The Quantum Approximate Optimization Algorithm at High Depth for MaxCut on Large-Girth Regular Graphs and the Sherrington-Kirkpatrick Model	Joao Basso, Edward Farhi, Kunal Marwaha, Benjamin Villalonga and Leo Zhou
415	Sam Gunn	On Certified Randomness from Quantum Advantage Experiments	Roozbeh Bassirian, Adam Bouland, Bill Fefferman, Sam Gunn and Avishay Tal
416	Dong An	Time-dependent Hamiltonian Simulation of Highly Oscillatory Dynamics	Dong An, Di Fang and Lin Lin
419	Daochen Wang	Self-testing multi-qubit states and measurements of a single quantum device	Honghao Fu, Daochen Wang and Qi Zhao
421	Nithin Raveendran	Finite Rate QLDPC-GKP Coding Scheme that Surpasses the CSS Hamming Bound	Nithin Raveendran, Narayanan Rengaswamy, Filip Rozpedek, Ankur Raina, Liang Jiang and Bane Vasic
423	José Polo-Gómez	A detector-based measurement theory for quantum field theory	José Polo-Gómez, Luis J. Garay and Eduardo Martín-Martínez
424	Rabins Wosti	Implementing the fanout operation with simple pairwise interactions	Stephen Fenner and Rabins Wosti
424	Rabins Wosti	Implementing the fanout operation with simple pairwise interactions	Stephen Fenner and Rabins Wosti
426	Matthew Thibodeau	Nearly Frustration Free Ground State Preparation	Matthew Thibodeau and Bryan Clark
433	Shangnan Zhou (Zhou Shangnan)	Quantum Semi-Supervised Learning with Quantum Supremacy	Shangnan Zhou
434	Zijian Song	Topological defect network representations of fracton stabilizer codes and beyond	Zijian Song, Arpit Dua, Wilbur Shirley and Dominic Williamson
435	Atul Singh Arora	Improving the security of device-independent weak coin flipping protocols	Atul Singh Arora, Thomas Van Himbeeck and Jamie Sikora
439	Changhun Oh	Classical simulation of boson sampling using dynamical programming	Changhun Oh, Youngrong Lim, Bill Fefferman and Liang Jiang
440	Dr. Jamie Sikora	A constant lower bound for any quantum protocol for secure function evaluation	Jamie Sikora and Sarah Osborn
441	Yimu Bao	Finite time teleportation phase transition in random quantum circuits	Yimu Bao, Maxwell Block and Ehud Altman
442	Nathanan Tantivasadakarn	Hybrid Fracton Orders	Nathanan Tantivasadakarn, Wenjie Ji and Sagar Vijay
448	Ala Shayeghi	A lower bound on the space overhead of fault-tolerant quantum computation	Omar Fawzi, Alexander Müller-Hermes and Ala Shayeghi
453	Jin-Peng Liu	Quantum Simulation of Real-Space Dynamics	Andrew Childs, Jiaqi Leng, Tongyang Li, Jin-Peng Liu and Chenyi Zhang
462	Laurens Ligthart	A convergent inflation hierarchy for quantum causal structures	Laurens Ligthart, Mariami Gachechiladze and David Gross
470	Upendra Kapshikar	Quantum secure non-malleable-extractors	Naresh Goud Boddu, Rahul Jain and Upendra Kapshikar
474	Maria Kieferova	Training quantum neural networks with an unbounded loss function	Maria Kieferova, Carlos Ortiz Marrero and Nathan Wiebe
478	Maurice Weber	Toward Reliability in the NISQ Era: Robust Interval Guarantee for Quantum Measurements on Approximate States	Maurice Weber, Abhinav Anand, Alba Cervera-Lierta, Jakob Kottmann, Thi Ha Kyaw, Ce Zhang, Bo Li, Alán Aspuru-Guzik and Zhikuan Zhao
484	Mina Doosti	On the Connection Between Quantum Pseudorandomness and Quantum Hardware Assumptions	Mina Doosti, Niraj Kumar, Elham Kashefi and Kaushik Chakraborty

487	Lia Yeh	Fault-tolerant implementations of qutrit logic gates: how to construct any controlled Clifford+T gate unitarily	Shuxiang Cao, John van de Wetering and Lia Yeh
498	Shangnan Zhou (Zhou Shangnan)	Quantum Cross Entropy in Quantum Machine Learning	Shangnan Zhou and Yixu Wang
500	Daochen Wang	Quantum algorithms for reinforcement learning and bandits	Andrew Childs, Ashish Kapoor, Robin Kothari, Tongyang Li, Martin Roetteler, Aarthi Sundaram, Xuchen You and Daochen Wang
508	James Mills	Mitigating errors by quantum verification and post-selection	James Mills, Rawad Mezher and Elham Kashefi
511	Ala Shayeghi	A hierarchy of efficient bounds on quantum capacities exploiting symmetry	Omar Fawzi, Ala Shayeghi and Hoang Ta
516	Naresh Goud Boddu	Quantum Measurement Adversary	Divesh Aggarwal, Naresh Goud Boddu, Rahul Jain and Maciej Obremski
527	Gregory White	Non-Markovian Quantum Process Tomography	Gregory White, Felix A. Pollock, Lloyd Hollenberg, Charles Hill and Kavan Modi
531	Jacob Watkins	Time-dependent multiproduct formulas for Hamiltonian simulation	Jacob Watkins, Alessandro Roggero, Nathan Wiebe and Dean Lee
532	Kunal Marwaha	Classical algorithms and quantum limitations for maximum cut on high-girth graphs	Boaz Barak and Kunal Marwaha
534	Wieslaw Laskowski	Cooperation and dependencies in multipartite systems	Waldemar Klobus, Mahasweta Pandit, Ray Ganardi, Lukas Knips, Jan Dziewior, Jasmin Meinecke, Harald Weinfurter, Wieslaw Laskowski and Tomasz Paterek
536	Bryan Gard	A Classically Efficient Quantum Scalable Fermi-Hubbard Benchmark	Bryan Gard and Adam Meier
541	Aliza Siddiqui	Quantifying the performance of bidirectional quantum teleportation	Aliza Siddiqui and Mark Wilde
542	Aby Philip	Intrinsic Non-Locality and Device-Independent Conference Key Agreement	Aby Philip, Eneet Kaur, Peter Bierhorst and Mark M. Wilde
543	Johannes Jakob Meyer	Fisher Information in Noisy Intermediate-Scale Quantum Applications	Johannes Jakob Meyer
544	Abhishek Rajput	Hybridized Methods for Quantum Simulation in the Interaction Picture	Abhishek Rajput, Alessandro Roggero and Nathan Wiebe
549	Nicetu Tibau Vidal	A local-realistic theory for fermions	Nicetu Tibau Vidal
554	Benjamin Hall	Simulation of Collective Neutrino Oscillations on a Quantum Computer	Benjamin Hall, Alessandro Roggero, Alessandro Borni and Joseph Carlson
556	Gregory Rosenthal	Query and Depth Upper Bounds for Quantum Unitaries via Grover Search	Gregory Rosenthal
557	Asmae Benhemou	Universality of Z3 parafermions via edge mode interaction and quantum simulation of topological space evolution with Rydberg atoms	Asmae Benhemou, Toonyawat Angkhanawin, Charles S. Adams, Dan E. Browne and Jiannis K. Pachos
560	Samrat Sen	Local Quantum State Marking	Samrat Sen, Edwin Peter Lobo, Sahil Gopalkrishna Naik, Ram Krishna Patra, Tathagata Gupta, Subhendu B. Ghosh, Sutapa Saha, Mir Alimuddin, Tamal Guha, Some Sankar Bhattacharya and Manik Banik
563	Constantin Dalyaca	Quantum evolution kernel: Machine learning on graphs with programmable arrays of qubits	Louis-Paul Henry, Slimane Thabet, Constantin Dalyac and Loïc Henriet

564	Ruslan Shaydulin	Importance of Kernel Bandwidth in Quantum Machine Learning	Ruslan Shaydulin and Stefan Wild
565	Timothy Forrer	Entanglement assisted LOCC implementation of bipartite non-local unitary operations	Tim Forrer, Mio Murao and Akihito Soeda
567	Youyi Huang and Lu Wei	Second-order statistics of fermionic Gaussian states	Youyi Huang and Lu Wei
567	Lu Wei, Youyi Huang	Second-order statistics of fermionic Gaussian states	Youyi Huang and Lu Wei
570	Jemma Bennett	Error Suppression in Continuous-time Quantum Computing	Jemma Bennett, Viv Kendon, Nicholas Chancellor, Tom O'Leary, Mia West and Adam Callison
571	Marco Lewis	Verifying Silq using SMT Solvers	Marco Lewis
573	Dominic Widdows	Near-Term Advances in Quantum NLP	Dominic Widdows
575	Christian Siegele	GKP code stabilization with robust ancilla error suppression	Christian Siegele, Mazyar Mirrahimi and Philippe Campagne-Ibarcq
576	Ghofrane Bel Hadj Aissa	A differential geometrical approach to entanglement estimation	Ghofrane Bel Hadj Aissa, Denise Cocchiarella, Stefano Scali, Salvatore Ribisi, Bianca Nardi and Roberto Franzosi
577	Arthur Pesah and Eric Huang	Tailoring three-dimensional surface codes for biased noise	Eric Huang, Arthur Pesah, Christopher Chubb, Michael Vasmer and Arpit Dua
578	Arshag Danageozian	Thermodynamic Constraints on Quantum Information Gain and Error-Correction	Arshag Danageozian, Francesco Buscemi and Mark Wilde
582	Alistair Smith	Quantum kernels for variational quantum algorithms	Alistair Smith, A. J. Paige and M. S. Kim
584	Uzi Pereg	An Information-Theoretic Perspective on Quantum Repeaters	Uzi Pereg, Christian Deppe and Holger Boche
586	Amanda Gatto Lamas	Genuine Multipartite Network Nonlocality in Stabilizer Networks	Amanda Gatto Lamas and Eric Chitambar
587	Armando Bellante	Quantum Matching Pursuit: a Quantum Algorithm for Sparse Representations	Armando Bellante and Stefano Zanero
588	Jacob Bringewatt	Lefschetz Thimble Quantum Monte Carlo for Spin Systems	Jacob Bringewatt, T. C. Mooney and Lucas T. Brady
590	Tobias Haug	NISQ Algorithm for Semidefinite Programming	Kishor Bharti, Tobias Haug, Vlatko Vedral and Leong Chuan Kwek
591	Maria Violaris	A quantum Penrose triangle: does quantum theory contain twisted logic?	Maria Violaris, Abdulla Alhajri, Vlatko Vedral and Chiara Marletto
593	Eduardo Villasenor	Quantum error correction of erasure errors for continuous variable states	Eduardo Villasenor and Robert Malaney
594	Ting-Chun Lin	Good quantum LDPC code with linear time decoder from 2-sided lossless expanders	Ting-Chun Lin and Min-Hsiu Hsieh
598	Haoxing Du	The stabilizer subtheory has a unique noncontextual model	David Schmid, Haoxing Du, John Selby and Matthew Pusey
599	Sahil Gopalkrishna Naik	On composition of multipartite quantum systems: perspective from time-like paradigm	Sahil Gopalkrishna Naik, Edwin Peter Lobo, Samrat Sen, Ramkrishna Patra, Mir Alimuddin, Tamal Guha, Some Sankar Bhattacharya and Manik Banik
600	Dan Browne (Lingling Lao may also join via online participation - TBC)	2QAN: A quantum compiler for 2-local qubit Hamiltonian simulation algorithms	Dan Browne and Lingling Lao
602	Sebastian Zur	Simplifying the multiplicative adversary method with compressed oracle arguments	Sebastian Zur

603	Garazi Muguruza	An efficient combination of quantum error correction and authentication	Yfke Dulek, Garazi Muguruza and Florian Speelman
604	Jan Lukas Bosse	Probing ground state properties of the kagome antiferromagnetic Heisenberg model using the Variational Quantum Eigensolver	Jan Lukas Bosse and Ashley Montanaro
607	James Dborin	Matrix Product State Pre-Training for Quantum Machine Learning	James Dborin, Fergus Barratt and Andrew Green
608	Yutaka Hashimoto	Comparison of unknown unitary channels	Yutaka Hashimoto, Akihito Soeda and Mio Murao
610	Mads Friis Frand-Madsen	On the Secrecy of Shared Classical Correlation	Mads Friis Frand-Madsen and Matthias Christandl
611	Paula Belzig	Fault-tolerant coding for the entanglement-assisted classical capacity	Paula Belzig, Matthias Christandl and Alexander Müller-Hermes
613	Ryan McGaha	Approximating Entanglement Measures Using VQA	Ryan McGaha and George Androulakis
616	Adam Callison	Towards practical Maximum-Likelihood Quantum Amplitude Estimation	Adam Callison and Dan Browne
619	Shiv Shankar	Variational Anyonic Entanglement Renormalization Circuits	Shiv Shankar and Don Towsley
620	Oscar Higgott	Improved single-shot decoding of higher dimensional homological product codes	Oscar Higgott and Nikolas Breuckmann
621	Francisco Escudero Gutiérrez	There is no multiplicative converse for the polynomial method	Francisco Escudero Gutiérrez and Jop Briët
623	Lucy Liuxuan Zhang	Domain Walls for Kitaev's Quantum Double Model	Lucy Liuxuan Zhang and Tobias Fritz
624	Alexis Ralli	Unitary Partitioning Measurement Reduction for the Contextual Subspace Variational Quantum Eigensolver	Alexis Ralli, Peter Love, William Kirby, Andrew Tranter and Peter Coveney
626	Avinash Mocherla	Matchgate Simulation with supplementary resources	Avinash Mocherla
627	Václav Potoček	Quantum local time	Václav Potoček and Václav Zatloukal
629	Karl Mayer	Globally addressed universal two-qubit gate set	Karl Mayer, Charles Baldwin and Michael Foss-Feig
632	Adam Ehrenberg	Sampling Complexity of Many-Body Localized Systems	Adam Ehrenberg, Abhinav Deshpande, Christopher Baldwin and Alexey Gorshkov
635	Gokul Subramanian Ravi	A Clifford Ansatz for Variational Quantum Algorithms	Gokul Subramanian Ravi, Pranav Gokhale, Yi Ding, William Kirby, Kaitlin Smith, Peter Love, Kenneth Brown, Henry Hoffmann and Frederic Chong
637	Louis Schatzki	Entangled Datasets for Quantum Machine Learning	Louis Schatzki, Andrew Arrasmith, Patrick Coles and Marco Cerezo
638	Andrew Guo	Lieb-Robinson light cone for power-law interactions	Minh Tran, Andrew Guo, Christopher Baldwin, Adam Ehrenberg, Alexey Gorshkov and Andrew Lucas
639	Jack Davis	Stellar representation of extremal Wigner-negative spin states	Jack Davis, Robie Hennigar, Robert Mann and Shohini Ghose
642	George Androulakis	Petz-R\'{e}nyi relative entropy reduces to classical R\'{e}nyi relative entropy	George Androulakis and Tiju Cherian John
643	Niels Kornerup	The Spooky Pebble Game: using measurement-based uncomputation to reduce qubit complexity	Niels Kornerup, Jonathan Sadun and David Soloveichik
644	Andrew Zhao	Error-mitigated fermionic shadow tomography	Andrew Zhao and Akimasa Miyake
645	Amin Shiraz Gilani	There is no quantum advantage for triangle counting.	Amin Shiraz Gilani
648	Ryan LaRose	Logical shadow tomography: Efficient estimation of error-mitigated observables	Hong-Ye Hu, Ryan LaRose, Yi-Zhuang You, Eleanor Rieffel and Zhihui Wang
649	Akshay Bansal	Finding better quantum die-rolling protocols	Jamie Sikora and Akshay Bansal

650	Jonathan Baker	Synthesizing Efficient Pulses for Practical Qudit Circuits	Jonathan Baker, Jason Chadwick, Lennart Maximillian Seifert, Andrew Litteken, Natalia Nottingham, Anders Petersson, Stefanie Guenther and Frederic T. Chong
651	Ankith Mohan	Inner Approximations and a NISQ Algorithm for the Quantum Separability Problem	Ankith Mohan, Tobias Haug, Kishor Bharti and Jamie Sikora
652	Angela Jia	Time evolution of a dissipative generic qubit-boson system	Angela Jia, Karen Lei, Kelin Wang and Juhao Wu
654	Dhruv Devulapalli	Quantum Routing with Teleportation	Dhruv Devulapalli, Eddie Schoute, Aniruddha Bapat, Andrew M. Childs and Alexey V. Gorshkov
656	Joran van Apeldoorn	A Framework for Distributed Quantum Queries in the CONGEST model	Joran van Apeldoorn and Tijn de Vos
657	Dina Abdelhadi	Limitations of QAOA quantum advantage under dephasing noise	Dina Abdelhadi
660	Khurshed Fitter	Approximation algorithms for the geometric measure of entanglement of random multipartite quantum states	Khurshed Fitter, Cécilia Lancien and Ion Nechita
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662	Shi Jie Samuel Tan	Approximating Output Probabilities of Shallow Quantum Circuits which are Geometrically-local in any Fixed Dimension	Suchetan Dontha, Shi Jie Samuel Tan, Stephen Smith, Sangheon Choi and Matthew Coudron
663	Cristina Cirstoiu	Estimation of correlations and non-separability in quantum channels via unitarity benchmarking	Matt Girling, Cristina Cirstoiu and David Jennings
664	Dmitry Kravchenko	Quantum algorithm for Dyck Language with Multiple Types of Brackets	Kamil Khadiev and Dmitry Kravchenko
665	Jonathan Conrad	Gottesman-Kitaev-Preskill codes: A lattice perspective	Jonathan Conrad, Jens Eisert and Francesco Arzani
669	Dan Mills	Volumetric benchmarking of digital error-mitigation with Qermit	Cristina Cirstoiu, Silas Dilkes, Dan Mills, Seyon Sivarajah and Ross Duncan