

# Alessandro Tosini

## List of publications

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### Published – Peer reviewed

1. M. Lugli, P. Perinotti, A. Tosini, *Unambiguous discrimination of Fermionic states through local operations and classical communication*, Phys. Rev. A **103**, 012416 (2020)
2. Michele Dall'Arno, Francesco Buscemi, Alessandro Bisio, Alessandro Tosini, *Data-Driven Inference, Reconstruction, and Observational Completeness of Quantum Devices*, Phys. Rev. A **102**, 062407 (2020) (2020)
3. G. M. D'Ariano, P. Perinotti, A. Tosini, *Information and disturbance in operational probabilistic theories*, Quantum **4**, 363 (2020)
4. M. Lugli, P. Perinotti, A. Tosini, *Fermionic state discrimination by local operations and classical communication*, Accepted in Phys. Rev. Lett. (2020)
5. Alessandro Bisio, Giacomo Mauro D'Ariano, Nicola Mosco, Paolo Perinotti, Alessandro Tosini, *Solutions of a Two-Particle Interacting Quantum Walk*, Entropy 20(6), 435 (2018)
6. Alessandro Bisio, Giacomo Mauro D'Ariano, Paolo Perinotti, Alessandro Tosini, *Thirring quantum cellular automaton*, Phys. Rev. A **97**, 032132 (2018)
7. Giacomo Mauro D'Ariano, Nicola Mosco, Paolo Perinotti, Alessandro Tosini, *Path-sum solution of the Weyl quantum walk in 3+1*, Philosophical Transactions A **375** 2106 (2017)
8. Michele Dall'Arno, Sarah Brandsen, Alessandro Tosini, Francesco Buscemi, Vlatko Vedral, *No-hypersignaling principle*, Phys. Rev. Lett. **119** 020401 (2017)
9. Giacomo Mauro D'Ariano, Marco Erba, Paolo Perinotti, Alessandro Tosini, *Virtually Abelian quantum walks*, J. Phys. A, **50**, 035301 (2017)
10. Giacomo Mauro D'Ariano, Nicola Mosco, Paolo Perinotti, Alessandro Tosini, *Discrete Time Dirac Quantum Walk in 3+1 Dimensions*, Entropy **18** 228 (2016)
11. A. Bisio, G. M. D'Ariano, M. Erba, P. Perinotti, A. Tosini, *Quantum walks with a one-dimensional coin*, Phys. Rev. A **93** 062334 (2016)
12. A. Bisio, G. M. D'Ariano, P. Perinotti, A. Tosini, *Free Quantum Field Theory from Quantum Cellular Automata. Derivation of Weyl, Dirac and Maxwell Quantum Cellular Automata*, Foundations of Physics, Volume **45**, Issue 10, pp 1137-1152 (2015)
13. A. Bisio, G. M. D'Ariano, P. Perinotti, A. Tosini, *Weyl, Dirac and Maxwell Quantum Cellular Automata. Analytical Solutions and Phenomenological Predictions of the Quantum Cellular Automata Theory of Free Fields*, Foundations of Physics, Volume **45**, Issue 10, pp 1203-1221 (2015)
14. A. Bibeau-Delisle, A. Bisio, G. M. D'Ariano, P. Perinotti, A. Tosini, *Doubly special relativity from quantum cellular automata*, EPL **109** 50003 (2015)
15. G. M. D'Ariano, N. Mosco, P. Perinotti, A. Tosini, *Discrete Feynman propagator for the Weyl quantum walk in 2+1 dimensions*, EPL **109** 40012 (2015)
16. A. Bisio, G. M. D'Ariano, A. Tosini, *Quantum field as a quantum cellular automaton: the Dirac*

- free evolution in one dimension*, Annals of Physics **354** 244 (2015)
17. G. M. D'Ariano, N. Mosco, P. Perinotti, A. Tosini, *Path-integral solution of the one-dimensional Dirac quantum cellular automaton*, Phys. Lett. A **378** 3165 (2014)
  18. G. M. D'Ariano, F. Manessi, P. Perinotti, A. Tosini, *The Feynman problem and fermionic entanglement: Fermionic theory versus qubit theory*, Int. J. Mod Phys. A **17** 1430025 (2014)
  19. G. M. D'Ariano, F. Manessi, P. Perinotti, A. Tosini, *Fermionic computation is non-local tomographic and violates monogamy of entanglement*, EPL **107** 20009 (2014)
  20. A. Bisio, G. M. D'Ariano, A. Tosini, *Dirac quantum cellular automaton in one dimension: Zitterbewegung and scattering from potential*, Phys. Rev A **88** 032301 (2013)
  21. A. Tosini, *A Quantum Cellular Automata Framework for Quantum Fields Dynamics*, Scientifica Acta 7, No. 1, Ph 21-30 (2013)
  22. G. M. D'Ariano, A. Tosini, *Emergence of space-time from topologically homogeneous causal networks*, Studies in History and Philosophy of Modern Physics **44** 294 (2013)
  23. G. M. D'Ariano, A. Tosini, *Testing axioms for quantum theory on probabilistic toy-theories*, Quant. Inf. Proc. **9** 95-141 (2010)

I, ALESSANDRO TOSINI, born in BRESCIA (BS) on 27/06/1985, resident in via Bordoncina n.7, PAVIA (IT), declare under penalty of perjury subject to all applicable laws (art.76 D.P.R. 28/12/2000 n.445), that the information provided is true and correct to the best of my knowledge, information and belief.  
I authorize the use of my personal data in compliance with D.L. 196/03.