

Maxime Dupont

› LIST OF PUBLICATIONS

📄 Personnel website | 🔍 Google Scholar | 📄 arXiv

Last updated on: April 30, 2021

2021

22. **From trivial to topological paramagnets: The case of \mathbb{Z}_2 and \mathbb{Z}_2^3 symmetries in two dimensions**

Maxime Dupont, Snir Gazit and Thomas Scaffidi

Phys. Rev. B 103, 144437 (2021) – [arXiv:2008.11206](#)

21. **Evidence for deconfined $U(1)$ gauge theory at the transition between toric code and double semion**

Maxime Dupont, Snir Gazit and Thomas Scaffidi

Phys. Rev. B 103, L140412 (2021) – [arXiv:2008.06509](#)

20. **Spatiotemporal crossover between low- and high-temperature dynamical regimes in the quantum Heisenberg magnet**

Maxime Dupont, Nicholas E. Sherman and Joel E. Moore

[arXiv:2104.13393](#)

19. **Detection of Kardar-Parisi-Zhang hydrodynamics in a quantum Heisenberg spin-1/2 chain**

Allen Scheie, Nicholas E. Sherman, Maxime Dupont, Stephen E. Nagler, Matthew B. Stone, Garrett E. Granroth, Joel E. Moore and David A. Tennant

Nat. Phys. (2021) – [arXiv:2009.13535](#)

18. **Quantum magnetism on small-world networks**

Maxime Dupont and Nicolas Laflorencie

[arXiv:2102.04919](#)

2020

17. **Monolayer CrCl_3 , an ideal testbed for the universality classes of 2D magnetism**

Maxime Dupont, Yaroslav O. Kvashnin, Mahroo Shiranzadei, Jonas Fransson, Nicolas Laflorencie and Adrian Kantian

[arXiv:2012.12801](#)

16. **Learning the ground state of a non-stoquastic quantum Hamiltonian in a rugged neural network landscape**


Marin Bukov, Markus Schmitt and Maxime Dupont

[arXiv:2011.11214](#)

15. **Dirty bosons on the Cayley tree: Bose-Einstein condensation versus ergodicity breaking**

Maxime Dupont, Nicolas Laflorencie and Gabriel Lemarié


Phys. Rev. B 102, 174205 (2020) – [arXiv:2006.15465](#)

14. **Universal spin dynamics in infinite-temperature one-dimensional quantum magnets**
Maxime Dupont and Joel E. Moore
[Phys. Rev. B 101, 121106\(R\) \(2020\)](#) – [arXiv:1907.12115](#)
 **Editors' Suggestion**

2019

13. **From eigenstate to Hamiltonian: Prospects for ergodicity and localization**
Maxime Dupont, Nicolas Macé and Nicolas Laflorencie
[Phys. Rev. B 100, 134201 \(2019\)](#) – [arXiv:1907.12124](#)
12. **NMR relaxation in the spin-1 Heisenberg chain**
Sylvain Capponi, *Maxime Dupont*, Anders W. Sandvik and Pinaki Sengupta
[Phys. Rev. B 100, 094411 \(2019\)](#) – [arXiv:1905.12697](#)
11. **Numerical study of the temperature dependence of the NMR relaxation rate across the superfluid-Bose glass transition in one dimension**
Maxime Dupont
[Phys. Rev. B 99, 205147 \(2019\)](#) – [arXiv:1902.07361](#)
10. **Many-body localization as a large family of localized ground states**
Maxime Dupont and Nicolas Laflorencie
[Phys. Rev. B 99, 020202\(R\) \(2019\)](#) – [arXiv:1807.01313](#)

2018

9. **Detection of a disorder-induced Bose-Einstein condensate in a quantum spin material at high magnetic fields**
Anna Orlova, Hadrien Mayaffre, Steffen Krämer, *Maxime Dupont*, Sylvain Capponi, Nicolas Laflorencie, Armando Paduan-Filho and Mladen Horvatić
[Phys. Rev. Lett. 121, 177202 \(2018\)](#) – [arXiv:1801.01445](#)
8. **Dynamical response and dimensional crossover for spatially anisotropic antiferromagnets**
Maxime Dupont, Sylvain Capponi, Nicolas Laflorencie and Edmond Orignac
[Phys. Rev. B 98, 094403 \(2018\)](#) – [arXiv:1806.04913](#)
 **Editors' Suggestion**
7. **Dynamical properties of the $S = \frac{1}{2}$ random Heisenberg chain**
Yu-Rong Shu, *Maxime Dupont*, Dao-Xin Yao, Sylvain Capponi and Anders W. Sandvik
[Phys. Rev. B 97, 104424 \(2018\)](#) – [arXiv:1712.01701](#)

2017

6. **Competing Bose-glass physics with disorder-induced Bose-Einstein condensation in the doped $S = 1$ antiferromagnet $\text{Ni}(\text{Cl}_{1-x}\text{Br}_x)_2 - 4\text{SC}(\text{NH}_2)_2$ at high magnetic fields**

Maxime Dupont, Sylvain Capponi, Mladen Horvatić and Nicolas Laflorencie

Phys. Rev. B 96, 024442 (2017) – [arXiv:1705.07166](#)

5. **Nuclear magnetic resonance reveals disordered level-crossing physics in the Bose-glass regime of Br-doped $\text{Ni}(\text{Cl}_{1-x}\text{Br}_x)_2 - 4\text{SC}(\text{NH}_2)_2$ compound at high magnetic field**

Anna Orlova, Rémi Blinder, Edwin Kermarrec, Maxime Dupont, Nicolas Laflorencie, Sylvain Capponi, Hadrien Mayaffre, Claude Berthier, Armando Paduan-Filho and Mladen Horvatić

Phys. Rev. Lett. 118, 067203 (2017) – [arXiv:1607.02360](#)

4. **Disorder-induced Revival of the Bose-Einstein Condensation at High Magnetic Fields in $\text{Ni}(\text{Cl}_{1-x}\text{Br}_x)_2 - 4\text{SC}(\text{NH}_2)_2$**

Maxime Dupont, Sylvain Capponi and Nicolas Laflorencie

Phys. Rev. Lett. 118, 067204 (2017) – [arXiv:1610.05136](#)

3. **Nuclear magnetic resonance study of the magnetic-field-induced ordered phase in the $\text{NiCl}_2 - 4\text{SC}(\text{NH}_2)_2$ compound**

Rémi Blinder, Maxime Dupont, Sutirtha Mukhopadhyay, Mihael S. Grbić, Nicolas Laflorencie, Sylvain Capponi, Hadrien Mayaffre, Claude Berthier, Armando Paduan-Filho and Mladen Horvatić

Phys. Rev. B 95, 020404(R) (2017) – [arXiv:1610.03312](#)

 **Editors' Suggestion**

2016

2. **Temperature dependence of the NMR relaxation rate $1/T_1$ for quantum spin chains**

Maxime Dupont, Sylvain Capponi and Nicolas Laflorencie

Phys. Rev. B 94, 144409 (2016) – [arXiv:1606.09502](#)

 **Editors' Suggestion**

1. **Dimensional modulation of spontaneous magnetic order in quasi-two-dimensional quantum antiferromagnets**

Shunsuke C. Furuya, Maxime Dupont, Sylvain Capponi, Nicolas Laflorencie and Thierry Giamarchi

Phys. Rev. B 94, 144403 (2016) – [arXiv:1607.05381](#)