


# Maxime Dupont

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*Last updated on: January 1, 2021*


## 2020

20. **Monolayer  $\text{CrCl}_3$ , 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](#)
19. **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](#)
18. **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](#)*
17. **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*  
[arXiv:2009.13535](#)
16. **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*  
[arXiv:2008.11206](#)
15. **Evidence for deconfined  $U(1)$  gauge theory at the transition between toric code and double semion**  
*Maxime Dupont, Snir Gazit and Thomas Scaffidi*  
[arXiv:2008.06509](#)
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](#)*  
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## 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](#)  
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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](#)  
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## 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](#)  
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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](#)