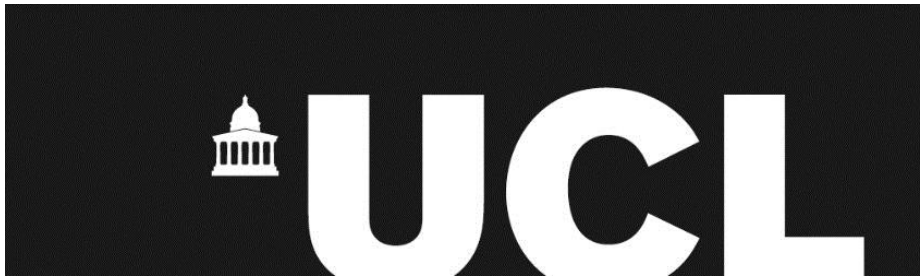

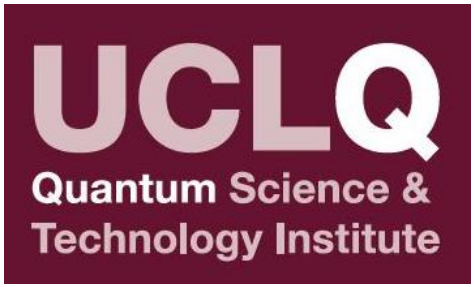

- **University College London**, Quantum Science and Technology Institute ("UCLQ")
- **PI: Prof Paul Warburton** (EE,LCN)
- Prof John Morton (EE,LCN), Prof Andrew Green (Physics), Dr Simone Severini (Comp Sci), Dr Ed Romans (EE, LCN), Dr Jon Fenton (LCN), Dr Nick Chancellor (LCN), Sherif Mohammed (Centre for Doctoral Training in Quantum Tech), Dr Tabasum Farzaneh (BDM)

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Quantum Science & Technology Institute

Research Area of Interest:

- Tuneable superconducting *p*-local couplers for quantum annealing, $p \geq 3$

$$H_{3-Local} = -J_{123} s_1 s_2 s_3$$

- Harder problems: Auffinger *et al.* (2010), Thomas and Katzgraber (2011)

- 4-local for full connectivity (Lechner 2015)

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Our Capabilities and Expertise

- Superconducting device fabrication and characterization *PRB* **87** 144510, *JAP* **116** 224501
- EBL, Neon FIB, MBE, Dilution Fridges….
- Al, Nb, NbN, NbSi, W, TlBaCaCuO….
- Classical / quantum hybrid comp. *Sci. Rep.* **4** 5703
- Quantum annealing for classical error correction arXiv:1506.08140

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Partner Capabilities Required

- Theory: complexity of p-local graphs $p \geq 3$
- Applications: problems amenable to $p \geq 3$ (3-SAT *etc…*)

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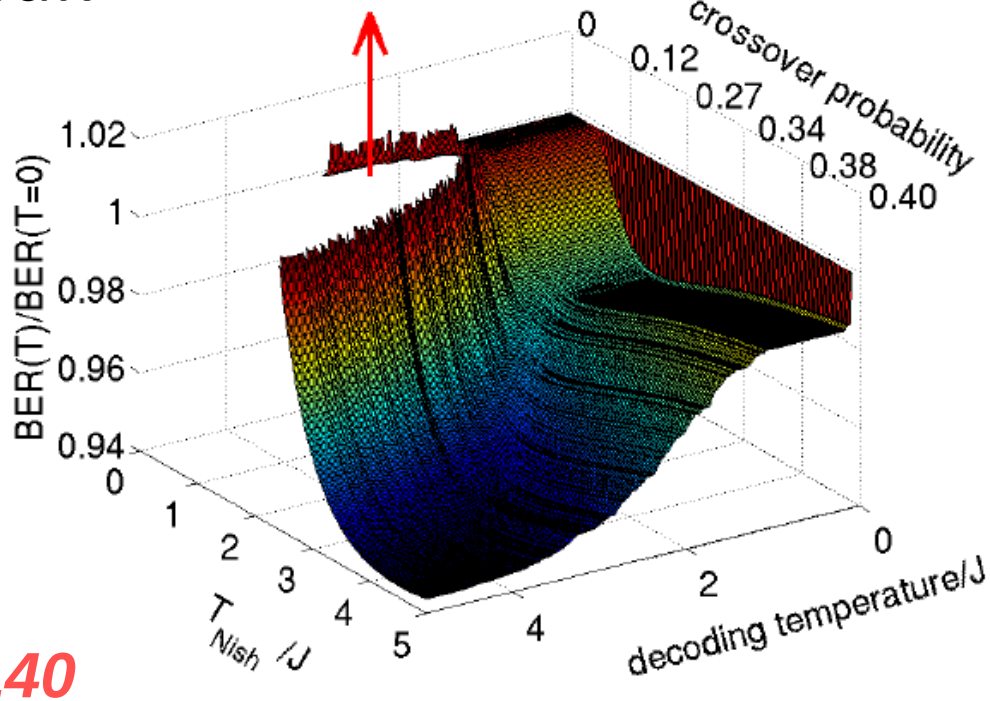

arXiv:1506.08140