

School of Physics and Astronomy

QUANTUM SEMINAR

Harnessing non-equilibrium effects in bio-inspired and engineered quantum networks



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In this talk, I will present theoretical work exploring the interplay between coherent quantum and dissipative processes that is typical of condensed matter nano-structures embedded in real-world environments. My approach combines inspiration from the processes and molecular structures that underlie natural photosynthesis with the development of sophisticated open quantum systems approaches. Based on this framework, I will demonstrate the emergence of complex dynamics and non-equilibrium effects. I will argue that some of these effects could become beneficial and unlock non-classical performance for a host of practical applications ranging from improved photodetectors to solar light-harvesting and molecular electronics.

Date:	Thursday 28 th March
Time:	1pm
Venue:	Level 1, Large Seminar Room 107, 10 College Walk

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