



HARVARD UNIVERSITY  
17 Oxford Street  
Cambridge, MA 02138

# Mathematical Picture Language Seminar



**Tuesday, October 17**

**9:30 a.m. Boston time**

**Jefferson 453**

**Graeme Smith**

Institute for Quantum Computing  
University of Waterloo

## Mathematical challenges in quantum information theory

**Abstract:** A central goal of quantum information theory is to determine the capacities of a quantum channel for sending different sorts of information. I'll highlight the new and fundamentally quantum aspects that arise in quantum information theory compared to the classical theory. These include the central role of entanglement, nonadditivity, and synergies between resources. I will also discuss some challenging open questions that we will have to solve to push the theory forward.



Zoom QR Code & Link:

<https://harvard.zoom.us/j/779283357?pwd=MitXVm1pYUIJVzZqT3lwV2pCT1ZUQT09>

<https://mathpicture.fas.harvard.edu/seminar>