



# John Ruan

## McGill Space Institute

# Fade to Black

*The Origin and Utility of Changing-Look Quasars*

**Tuesday, 26 Sept • 3:30 PM**  
*MSI Confernece Room • 3550 University*

The proliferation of wide-field multi-epoch imaging surveys has now opened a new window to the time-domain for discovery of new and rare time-variable phenomena. From these surveys, the recent discovery of 'changing-look' quasars poses potential challenges to our understanding of accretion onto supermassive black holes. In this phenomenon, luminous quasars suddenly fade into quiescent galaxies over timescales of just a few years, a factor of 10000 faster than expected. I will examine different explanations for the origin of changing-look quasars, and discuss their incredible usefulness in probing accretion physics, supermassive black hole feedback, and galaxy evolution over cosmic time.

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## Seminar Series