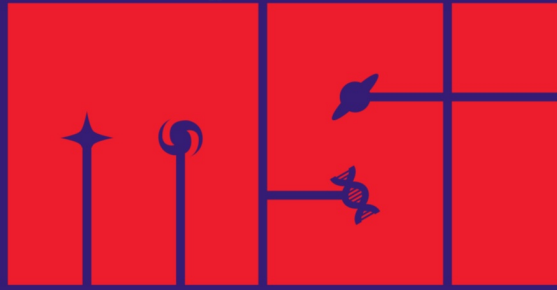


Institut Spatial de McGill



McGill Space Institute

# SEMINAR SERIES

## Exploring the Outer Solar System: now in vivid colour

**Michele Bannister**  
NRC Herzberg

The outer reaches of our Solar System are home to hundreds of thousands of small icy worlds - the leftover remnants of planetesimal formation. Their present orbits are a sculpted signature of the migrations of the giant planets, particularly Neptune, during the early history of the Solar System. Yet the faintness and highly eccentric orbits of most of these worlds mean only a tiny fraction have yet been discovered.

With the Outer Solar System Origins Survey, the highest-ranked Large Program on CFHT 2013-16, we are providing nearly half a thousand new outer Solar System discoveries, with exquisitely well-determined orbital parameters. Our complementary Large Program on Gemini North, "Colours of the Outer Solar System Origins Survey", is observing a magnitude-complete sample of the brightest of our discoveries in the optical and infrared at unprecedented precision. These colours provide information on the ices, silicates and organic compounds on the surfaces of these small worlds. Together, the colours and dynamical information will allow us to map the structure of the outer Solar System, answering questions about how Neptune migrated, and the radially changing composition of the original planetesimal disk.

**Tuesday Nov 17, 3:30 pm**

MSI Conference Room, 3550 University

