

Wed Jan 25 - The School
08:30 Registration Desk Opens

09:00-10:30 **Jeremy Heyl**

Review of General Relativity and ways in which it has been tested

11:00-12:30 **Dimitrios Psaltis**

Gravitational Waves

Review Article:

The basics of gravitational wave theory

Thu Jan 26 - Workshop Day 1
08:30 Registration Desk Opens

08:55 **Workshop Starts**

Welcome from organizers

09:00-09:30 **Pedro Ferreira**

A complete framework for testing gravity on cosmological scales

09:30-10:00 **Mark Trodden**

Multi-messenger time delays from lensed gravitational waves

10:00-10:30 **Eric Adelberger**

11:00-11:30 **Bruce Allen**

Direct observation of gravitational waves from the merger and inspiral of two black holes

11:30-12:00 **Frans Pretorius**

Testing GR and constraining alternative theories with LIGO observations

12:00-12:15 **Kent Yagi**

What do GW150914 and GW151226 tell us about extreme gravity?

12:15-12:30 **Leo Stein**

Black hole mergers: beyond general relativity

Lunch Break

12:30-13:30 (various locations)

13:30-15:00 **Lam Hui**

Review of cosmology and the cosmological and astrophysical tests of gravity

Lunch Break

12:30-14:00 (various locations)

14:00 **Joy Johnson**

Welcome from VPR

14:05-14:35 **Holger Mueller**

Using matter waves to look for the dark sector

14:35-15:05 **Clare Burrage**

Experimental searches for screened dark energy

15:05-15:20 **Tim Kovachy**

Testing the equivalence principle with macroscopic atom interferometers

15:20-15:35 **Jay Tasson**

Testing local Lorentz invariance with gravitational waves

15:30-17:00 **Justin Khoury**

Alternative gravity theories

16:00-16:10 **Aaron Zimmerman**

The horizon modes of black holes

16:10-16:20 **Alex Nielsen**

Testing black hole ringdowns with gravitational waves

16:20-16:30 **Hiromi Saida**

GR effect and mass of the massive BH at the center of our galaxy

16:30-16:40 **David Rapetti**

Modeling and constraining the cluster mass function to test gravity at large scales

16:40-18:00 **Very Short Talks**

Registration Open Until 19:00

Poster Session and Reception 18:00-20:00 (snacks & cash bar)

Fri Jan 27 - Workshop Day 2
08:30 Registration Desk Opens

09:00-09:30 **Cliff Burgess**

Effective field theories and modifying gravity: The view from below

09:30-10:00 **Austin Joyce**

10:00-10:30 **Hartmut Abele**

11:00-11:30 **Maxim Pospelov**

State of dark matter

11:30-12:00 **Justin Khoury**

Cosmic acceleration without dark energy

12:00-12:15 **Cedric Deffayet**

Partial masslessness beyond Einstein

12:15-12:30 **David Langlois**

Degenerate higher order scalar tensor theories beyond Horndeski

Lunch Break

12:30-14:00 (various locations)

14:00-14:30 **Ingrid Stairs**

Strong-field gravity with pulsars

14:30-15:00 **Claudia de Rham**

Binary pulsar tests of gravity

15:00-15:15 **Niaayesh Afshordi**

Echoes from the abyss

15:15-15:30 **Tanmay Vachaspati**

Quantum radiation during gravitational collapse

16:00-16:30 **Misao Sasaki**

Signatures from inflationary massive gravity

16:30-17:00 **Will Percival**

Final cosmological measurements from BOSS

17:00-17:30 **Roy Maartens**

Cosmology on ultra-large scales with the SKA

Sat Jan 28 - Workshop Day 3
09:00 Registration Desk Opens

09:30-10:00 **Bhuvnesh Jain**

Tests of gravity and dark matter interactions with halos and voids

10:00-10:20 **Richard Shaw**

Probing Dark Energy with CHIME

10:20-10:30 **Mustapha Ishak**

Cosmological consistency tests of gravity theory and cosmic acceleration

11:00-11:20 **Scott Menary**

The ALPHA-G experiment

11:20-11:40 **Masha Baryakhtar**

Searching for ultralight particles with black holes and gravitational wave

11:40-11:55 **Philippe Brax**

Gravitational birefringence

11:55-12:10 **Shinji Tsujikawa**

Cosmology in generalized Proca theories

12:10-12:20 **Joel Bergé**

MICROSCOPE on its way to the tightest test of the Weak Equivalence Principle

12:20-12:30 **Matteo Fasiello**

LSS probes for dark energy & modified gravity?

Lunch Break

12:30-14:00 (various locations)

14:00-14:10 **Alexander Vikman**

Canonical exorcism for cosmological ghosts

14:10-14:20 **Yin-Zhe Ma**

Constraining gravity and primordial non-Gaussianity with cosmological observations

14:20-14:30 **Danielle Leonard**

Testing gravity with EG: Mapping theory onto observation

14:30-14:40 **Sheila Dwyer**

Prospects for gravitational wave observations: update from LIGO

14:40-14:50 **Daniel D'Orazio**

Tools for characterizing a massive black hole binary population

14:50-15:30 **Lam Hui**

Light boson dark matter + conference summary

Workshop Ends

Conference Dinner 19:00 (Dockside on Granville Island)