

Wed Jan 14 - The School**(1900 Fletcher Challenge Theatre)**08:30 *Registration desk opens*09:00-10:30 **Jeremy Heyl**, *Introduction to GR and gravitational interactions on different scales*11:00-12:30 **Mark Trodden**, *Review of dark energy and modified gravity*12:30-13:30 **Lunch Break**, *various locations*13:30-15:00 **Michael Landry**, *Introduction into gravitational waves*15:30-17:00 **Gary Hinshaw**, *Review of cosmology and the latest observations*21:00 *Registration desk closes***Thu Jan 15 - Workshop Day 1****(1900 Fletcher Challenge Theatre)**08:30 *Registration Desk Opens*09:00-09:05 **Workshop starts**, *Introduction from organizers*09:05-09:15 **Welcome**, *Joy Johnson, SFU VP Research*09:15-09:35 **Dimitrios Psaltis**, *Overview of gravity tests*09:35-10:00 **Mark Trodden**, *The state of theory*10:00-10:30 **Eric Adelberger**, *Table top tests of gravity*11:00-11:30 **Misao Sasaki**, *Creation of the universe in bigravity*11:30-12:00 **Mark Kasevich**, *Cold atoms*12:00-12:30 **Nico Yunes**, *Gravitational wave probes of extreme gravity*12:30-12:50 **Michael Landry**, *LIGO*13:00-14:00 **Lunch Break**, *various locations*14:00-14:25 **Kazuya Koyama**, *Non-linear structure formation in modified gravity models*14:25-14:50 **Rachel Bean**, *Testing gravity with large scale surveys*14:50-15:15 **David Langlois**, *A unifying description of dark energy*15:15-15:35 **Alessandra Silvestri**, *Parametrized approaches to cosmological tests*16:00-18:00 **Contributed Talks**, *in 1700 Labatt Hall, see separate schedule*18:00-20:00 **Poster Session and Reception**, *snacks & cash bar*21:00 *Registration desk closes*

Thu Jan 15 - Contributed Talks**(1700 Labatt Hall)**16:00-16:10 **Robert Ferdman**, *Using pulsars in a galactic-scale gravitational-wave detector*16:15-16:40 **7 short talks**, 3 min each

- **Jonathan Thornburg**, *Gravity waves from extreme mass ratio inspiral systems*
- **Walter Del Pozzo**, *Testing general relativity with gravitational waves observations*
- **Emmanuel Fonseca**, *A comprehensive study of relativistic gravity using PSR B1534+12*
- **Jannis R. Bielefeld**, *An $SU(2)$ Yang-Mills model of color radiation*
- **Alexis Helou**, *From black holes to cosmology, and back*
- **Shinsuke Asaba**, *Effect of supersonic relative motion on spherical collapse*
- **Matt Beach**, *Self-force on a charge outside a five-dimensional black hole*

16:45-16:55 **Jim Franson**, *Supernova 1987a and the equivalence principle*17:00-17:25 **7 short talks**, 3 min each

- **Chryssomalis Chryssomalakos**, *Operational geometry with extended probes*
- **Jeffrey Hyde**, *Gravitational waves from preheating of a Higgs-like scalar*
- **Kei Yamada**, *Relativistic Sagnac effects by Chern-Simons gravity*
- **Alexandra Terrana**, *Bigravity theories and gravitational waves*
- **Ryotaro Kase**, *The effective field theory of modified gravity*
- **Orest Hrycyna**, *Dynamics and observational constraints on Brans-Dicke cosmological model*
- **William Terrano**, *Looking for torsion in general relativity, or the role of spin in gravity*

17:25-17:35 **Manu Paranjape**, *How to measure the speed of gravity*17:40-18:00 **6 short talks**, 3 min each

- **Amol Upadhye**, *Large-scale structure as a test of dark energy and modified gravity*
- **Alejo Stark**, *A novel test of gravity in galaxy cluster scales*
- **Jacob Moldenhauer**, *Interactive testing of cosmological models using the latest data sets in the CosmoEJS package*
- **Shohei Saga**, *More accurate analysis of secondary gravitational waves in LambdaCDM cosmology*
- **Isoyama Soichiro**, *Effective hamilton dynamics of the self-forced motion in Kerr spacetime*
- **David W. Tian**, *Thermodynamics-gravity correspondence of the Universe in general relativity and modified gravity*

Fri Jan 16 - Workshop Day 2**(1900 Fletcher Challenge Theatre)**08:30 *Registration desk opens*09:00-09:30 **Douglas Scott**, *CMB, Planck results*09:30-09:40 **Ali Narimani**, *MG bounds from Planck*09:40-10:05 **Brian Keating**, *Fundamental physics from BICEP1, BICEP2, POLARBEAR*

- 10:05-10:30 **Ue-Li Pen**, *Testing quantum gravity with pulsar-black hole binaries*
- 11:00-11:25 **Gunther Cronenberg**, *Slow neutrons and their role to test gravity*
- 11:25-11:50 **David Moore**, *Levitated microspheres*
- 12:00-12:25 **Jay Tasson**, *Searches for local Lorentz violation*
- 12:25-12:50 **Jiro Murata**, *Short distance gravity with nuclear scattering technique*
- 13:00-14:00 **Lunch Break**, *various locations*
- 14:00-14:30 **Manuela Campanelli**, *GW source modeling*
- 14:30-14:55 **Ingrid Stairs**, *Pulsars*
- 14:55-15:15 **Philippe Brax**, *New tests of modified gravity*
- 15:15-15:35 **Ruth Gregory**, *Screened scalars and black holes*
- 16:00-16:30 **Avery Broderick**, *Near horizon effects*
- 16:30-17:00 **Bill Unruh**, *What analogue gravity can say about gravity?*
- 17:00-17:30 **Mark Van Raamsdonk**, *String theory, emergent gravity*
- 19:00 **Conference Dinner**, *Dockside on Granville Island*

Sat Jan 17 - Workshop Day 3

(1900 Fletcher Challenge Theatre)

- 09:00 *Registration desk opens*
- 09:30-10:00 **Martin White**, *Redshift surveys*
- 10:00-10:25 **Ludo Van Waerbeke**, *Weak lensing*
- 10:25-10:40 **Mustapha Ishak & Jason Dossett**, *Current constraints on DE and MG*
- 11:10-11:40 **Lam Hui**, *Symmetries in gravity and large scale structure*
- 11:40-12:00 **Gong-Bo Zhao**, *N-body simulations in MG*
- 12:10-12:30 **Shinji Tsujikawa**, *Disformal invariance of cosmological perturbations in a generalized class of Horndeski theories*
- 12:30-12:50 **Cedric Deffayet**, *Consistent massive graviton on arbitrary backgrounds*
- 13:00-14:00 **Lunch Break**, *various locations*
- 14:00-14:25 **Niayesh Afshordi**, *Cosmological (non-) constant problem*
- 14:25-14:50 **Makoto Fujiwara**, *ALPHA at CERN, testing gravity of antimatter*
- 15:00-15:30 **Lam Hui**, *Workshop summary*

Workshop Ends