

**Wed Jan 23 - The School**  
08:00 *Registration Desk Opens*

09:00-10:10 **Dimitrios Psaltis**

*Introduction to General Relativity and ways of testing it*

10:30-11:40 **Lam Hui**

*The landscape of modified gravity theories*

11:45-12:55 **Nicolas Yunes**

*Binary systems and gravitational waves*

**Lunch Break**

13:00-14:30 *(various locations)*

14:30-15:40 **Jeremy Heyl**

*Neutron stars and astrophysical tests of gravity*

16:00-17:10 **Alessandra Silvestri**

*Cosmological tests of gravity*

**Thu Jan 24 - Workshop Day 1**  
08:00 *Registration Desk Opens*

08:55 **Workshop Starts**

*Welcome from organizers*

09:00-09:30 **Alessandra Buonanno**

*Probing the nature of gravity and fundamental physics with gravitational-wave observations*

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

*Extending the classical double copy*

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

*Eot-Wash update: fuzzy dark matter, equivalence principle tests, short-distance gravity and LIGO instrumentation*

11:00-11:30 **Cliff Burgess**

*Effective applications of gravity: some surprises from EFT*

11:30-12:00 **Ruth Gregory**

*Testing gravitational quantum tunneling*

12:00-12:15 **Niaresh Afshordi**

*Quantum black holes in the sky*

12:15-12:30 **Jay Tasson**

*The systematic search for Lorentz violation*

**Lunch Break**

12:30-14:00 *(various locations)*

14:00-14:30 **Hartmut Abele**

*qBOUNCE, and an acoustic Ramsey-type gravity resonance spectrometer*

14:30-15:00 **Misao Sasaki**

*Primordial black holes from inflation and gravitational waves*

15:00-15:10 **Florent Michel**

*Simulating vacuum tunneling with cold atoms*

15:10-15:20 **Matthew Robbins**

*Bose-Einstein condensates as gravitational wave detectors*

15:20-15:30 **John Lee**

*Gravity below 50 micrometers*

16:00-16:10 **Daniel Carney**

*Tabletop experiments for quantum gravity*

16:10-16:20 **Heather Fong**

*Latest results from Advanced LIGO and Virgo and outlook for the next observing run*

16:20-16:30 **Yoshio Kamiya**

*Experimental search for new gravity-like forces in the nanometer scale with slow neutrons*

16:30-16:40 **Lia Medeiros**

*Quantifying black hole images in non-Kerr metrics*

16:40-16:50 **Ilaria Caiazzo**

*Shining black holes: testing gravity with Colibri*

16:50-16:50 **Federico Urban**

*Fuzzy dark matter and binary pulsars*

16:50-17:50 **RAPID TALKS**

Session #1

**Registration Open Until 19:00**

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

**Fri Jan 25 - Workshop Day 2**  
08:30 *Registration Desk Opens*

09:00-09:30 **Justin Khoury**  
*Search optimization, self-organized criticality, and Higgs metastability*

09:30-09:45 **Clare Burrage**  
*Symmetron scalar fields: modified gravity, dark matter or both?*

09:45-10:00 **Jiro Murata**  
*Status and new idea of experimental tests of Newtonian gravity*

10:00-10:15 **Austin Joyce**  
*Shapes of gravity: graviton non-Gaussianity and heavy particles*

10:15-10:30 **Alexander Rider**  
*Testing gravity with optically levitated test masses*

11:00-11:30 **Avery Broderick**  
*Mapping spacetimes with black hole cinema*

11:30-11:45 **Dimitrios Psaltis**  
*EHT update*

11:45-12:15 **Nicolas Yunes**  
*Can we probe Planckian corrections at the horizon scale with gravitational waves?*

12:15-12:25 **Tomas Galvez**  
*Towards a generalized Stefan–Boltzmann law for curved spacetime*

12:25-12:35 **Raúl Carballo-Rubio**  
*Testing the nature of black hole boundaries*

**Lunch Break**  
12:35-14:00 *(various locations)*

14:00-14:30 **Manuela Campanelli**  
*Shedding light on binary supermassive black hole mergers*

14:30-15:00 **Ingrid Stairs**  
*Strong-field gravity with pulsars*

15:00-15:30 **Will Percival**  
*Testing gravity with galaxy surveys*

16:00-16:30 **Mark Kasevich**  
*Testing gravity and quantum mechanics with atom interferometry*

16:30-17:00 **Mark Wise**  
*Primordial non-Gaussianities from quantum loops in de Sitter space and their impact on the large scale distribution of galaxies*

17:00-17:30 **Tanmay Vachaspati**  
*Classical quantum correspondence*

17:30-17:45 **Gabor Kunstatter**  
*Lost horizons: the dynamics of regular black hole formation and evaporation*

**Conference Dinner 19:00** ([\*Al Porto\*](#) on Waterfront)

**Sat Jan 26 - Workshop Day 3**  
09:00 *Registration Desk Opens*

09:30-10:00 **Alessandra Silvestri**  
*New perspectives in black hole spectroscopy with gravitational-wave observations*

10:00-10:30 **Bhuvnesh Jain**  
*Lensing by halos and large-scale structure: results from DES*

11:00-11:20 **Chukman So**  
*The ALPHA-g experiment*

11:20-11:30 **Douglas Scott**  
*Dimensionless cosmology and gravity*

11:30-12:30 **RAPID TALKS**  
[\*Session #2\*](#)

**Lunch Break**  
12:30-14:00 *(various locations)*

14:00-14:15 **Shinji Tsujikawa**  
*Galaxy-ISW constraints on dark energy models consistent with GW170817*

14:15-14:25 **Georgios Papadomanolakis**  
*The tachyon instability in scalar tensor theories*

14:25-14:35 **Jessica Muir**  
*Splitting growth and geometry to test  $\Lambda$ CDM with DES*

14:35-14:45 **Dimitry Ayzenberg**  
*RELXILL\_NK: a non-Kerr extension of the RELXILL X-Ray reflection model*

14:45-14:55 **Andrius Tamosiunas**  
*Testing emergent gravity on galaxy cluster scales*

14:55-15:25 **Lam Hui**  
*Symmetries in dark matter and black holes*

16:00-16:10 **Nelson Nunes**  
*Testing the equivalence principle with RadioAstron*

16:10-16:20 **Christian Arnold**  
*Simulating galaxy formation with the Illustris-TNG model in  $f(R)$  modified gravity*

16:20-16:30 **Alexander Mead**  
*Accurate non-linear power spectra calculations for modified gravity models using halo-model responses*

16:30-16:40 **Wenjuan Fang**  
*A new probe of gravity using the Minkowski functionals of large-scale structure*

16:40-16:50 **Marco Raveri**  
*Reconstructing gravity on cosmological scales*

16:50-17:00 **Conference Summary**