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

Registration Open Until 19:00

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 **Niayesh 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 Colibrì

16:50-16:50 **Federico Urban**
Fuzzy dark matter and binary pulsars

16:50-17:50 **RAPID TALKS**
Session #1

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**
Lighting up Einstein's Dark Universe

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 ΛCDM 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**