

# The Universe Through Gravitational Waves

## Workshop Talk Schedule

Events for:  
Monday, December 12th - Thursday, December 15th

### Monday, December 12th

9:00am **Registration - SCGP Lobby**

9:45am **Luis Alvarez-Gaumè - SCGP 102**

10:00am **Bangalore Sathyaprakash - SCGP 102**

**Speaker:** Bangalore Sathyaprakash

**Title:** A geometric formulation of signal analysis: detection, measurement and model selection

**Abstract:** Analysis of data from gravitational wave detectors inspired an elegant geometric formulation of the problem that has allowed computationally optimal searches. The problem of measurement and tests of general relativity and astrophysical models can also be cast in a geometric language. In this talk I will provide an overview of the data analysis problem in the language of geometry and discuss recent results from LIGO

11:00am **Matt Choptuik - SCGP 102**

**Title:** Overview of Numerical Relativity.

12:00pm **Lunch - SCGP Cafe**

2:00pm **Alessandra Buonanno - SCGP 102**

**Title:** Analytical Relativity and Gravitational Waves

3:00pm **Michael Tremmel - SCGP 102**

**Speaker:** Michael Tremmel

**Title:** Supermassive Black Hole Mergers in Cosmological Simulations

4:00pm **Coffee - SCGP Lobby**

4:30pm **Idel Waisberg**

**Speaker:** Idel Waisberg

**Title:** GRAVITY/VLTI: Testing General Relativity at the Galactic Center with Optical Interferometry

**Tuesday, December 13th**

9:00am **Kostas Kokkotas - SCGP 102**

**Speaker:** Kostas Kokkotas

**Title:** Gravitational Waves from Neutron Stars

10:00am **Coffee Break - SCGP Cafe**

10:30am **Sebastiano Bernuzzi - SCGP 102**

**Title:** Modeling Gravitational Waves from Neutron Star Binaries with Numerical Relativity  
S.Bernuzzi - Parma U & INFN

11:30am **Lunch - SCGP Cafe**

1:00pm **SCGP Weekly Talk: Alessandra Buonanno - SCGP 102**

2:00pm **Rachel Rosen - SCGP 102**

**Speaker:** Rachel A Rosen

**Title:** Massive Spin-2's: A Status Report."

3:00pm **Riccardo Penco - SCGP 102**

**Title:** Superradiance: an overview, and an effective field theory approach

4:00pm **Coffee Break - SCGP Lobby**

4:30pm **Enrico Barausse - SCGP 102**

**Speaker:** Enrico Barausse

**Title:** Gravitational waves in modified gravity theories

5:30pm **Leo Stein & Hui & Sotiriou - SCGP 102**

**Speaker:** Leo Stein, Lam Hui, and Thomas Sotiriou

**Title:** Round table on modifications and tests of general relativity

**Wednesday, December 14th**

9:30am **Harald Pfeiffer - SCGP 102**

**Title:** Exploring the transition from comparable mass binary black hole binaries to extreme mass-ratio inspirals.

10:30am **Coffee Break**

11:00am **Adrian Ottewill - SCGP 102**

**Speaker:** Adrian Ottewill

**Title:** Low Frequency Gravitational Waves from Extreme Mass Ratio Inspirals

12:00pm **Lunch**

2:00pm **Walter Del Pozzo - SCGP 102**

**Speaker:** Walter Del Pozzo

**Title:** Tests of general relativity from compact coalescences of binary black holes

3:00pm **Richard O'Shaughnessy, Walter Del Pozzo - SCGP 102**

4:00pm **Coffee Break - SCGP Lobby**

4:30pm **Pawel Nurowski - SCGP 102**

**Title:** How the green light was given for gravitational wave search

5:30pm **Paolo Pani, Emanuele Berti - SCGP 102**

**Speaker:** Emanuele & Paolo

**Title:** Testing the black hole paradigm with gravitational waves"

6:45pm **Social Dinner - SCGP Cafe**

**Thursday, December 15th**

9:00am **Ira Rothstein - SCGP 102**

**Speaker:** Ira Rothstein

**Title:** Analytic Calculations of Gravitational Wave Signatures During Early Stages of Inspirals

10:00am **Robert Wald - SCGP 102**

**Speaker:** Robert M. Wald

**Title:** Some Remarks and Perspectives

12:00pm **Lunch**