

## Schedule

	Tue (31/05)	Wed (01/06)	Thu (02/06)	Fri (03/06)
09:00-09:30	XXXXXXX	OPENING		
09:30-10:00		S1	S6	SHORT COMMUNICATIONS
10:00-10:30			S7	
10:30-11:00		COFFEE BREAK		
11:00-11:30		S2	S8	S11 & CLOSING
11:30-12:00				
15:00-15:30	REGISTRATION	S3		XXXXXXX
15:30-16:00		S4	S9	
16:00-16:30		COFFEE BREAK		
16:30-17:00		S5	S10	

## Organizing Committee

**Ednilton Santos de Oliveira**  
(Universidade Federal do Pará, Brazil)

**Luiz Carlos Bassalo Crispino - Chair**  
(Universidade Federal do Pará, Brazil)

**Matt Visser**  
(Victoria University of Wellington, New Zealand)

**Stefano Liberati**  
(Scuola Internazionale Superiore di Studi Avanzati, Italy)

**Theodore A. Jacobson**  
(University of Maryland, College Park, USA)

**Vitor Cardoso**  
(Universidade Técnica de Lisboa, Portugal)

**William George Unruh**  
(University of British Columbia, Canada)

Sponsors:



# III ASP

## III Amazonian Symposium on Physics



May 31st - June 3rd, 2011  
Federal University of Pará, Brazil

Sponsors:



## II ASP

The Amazonian Symposium on Physics (ASP) is an introductory to mid-level symposium intended to be regularly held by the Graduate Program in Physics at the Pará University, presently a federated institution of the ICTP.

This second edition of the Amazonian Symposium on Physics will be mainly focused on Analogue Models of Gravity, celebrating the 50 year of the publication of Bill Unruh's paper "Experimental Black-Hole Evaporation?" (PRL, vol. 46, p. 1351-1355, 1981), which played a seminal role leading to the currently vibrant field of Analogue Models of Gravity.

The Amazonian Symposium on Physics is targeted for young researchers and graduate students in Physics, as well as for last-year undergraduate students, wishing to quickly learn the basics of the Analogue Models of Gravity, which is a rapidly developing field, from some of the world's leading experts.

The II ASP will be held in the Belém Campus of the Federal University of Pará. In the gateway to Amazonia, the Belém Campus is located on the shore of the river Guamã, one of the rivers which form the Guajará bay.



Bill Unruh among the lecturers and other participants of the Amazonian School on Quantum Theory and Applications, held in Belém (Brazil), in February 2008.



Aerial view of the Belém Campus of the Federal University of Pará, where the ASP is held. Photo by Marcelo Neth.

## Seminars (S)

**Seminar (S1):** A Survey on Analogue Models of Gravity - William George Unruh (University of British Columbia, Canada)

**Seminar (S2):** Analog Model for Quantum Gravity Effect: Phonon in Random Fluid - Nami Fukuyuker (Centro Brasileiro de Pesquisas Físicas, Brazil)

**Seminar (S3):** Analog cosmology with spinor Bose-Einstein condensates - Erleben Adolfo Colzetta (Universidad de Buenos Aires, Argentina)

**Seminar (S4):** Entanglement Entropy and Mutual Information Production Rates in Acoustic Black Hole - Stefano Giovanazzi (Universität Heidelberg, Germany)

**Seminar (S5):** Detecting Observer-Related Quantum Phenomena in Dilute Ultracold Bose Gases - Uwe Robert Fischer (Seoul National University, Korea)

**Seminar (S6):** Radiation from moving refractive index perturbations - dynamical Casimir effect, Unruh or Hawking radiation? - Ralf Schützhold (Universität Duisburg-Essen, Germany)

**Seminar (S7):** Experimental Superradiant scattering - Maurício Richartz (Universidade Estadual de Campinas, Brazil)

**Seminar (S8):** Quantum amplifiers, and amplifier noise - William George Unruh (University of British Columbia, Canada)

**Seminar (S9):** Scattering and absorption in acoustic hole spacetime - Ednilton Santos de Oliveira (Universidade Federal do Pará, Brazil)

**Seminar (S10):** Quasirenormal modes, superresonance, and sonic bombs in acoustic holes - José Pizarro de Sãode e Lemos (Universidade Técnica de Lisboa, Portugal)

**Seminar (S11):** Measurement of Stimulated Hawking emission in an analogue system - William George Unruh (University of British Columbia, Canada)



Night view showing the Jesuitical Church Santo Alexandre and square, in Belém.