



2nd  
AFI -SYMPOSIUM

> Origins of the Universe and of Life <

17 - 18 October 2008

University of Innsbruck

Claudiasaal

Herzog-Friedrich-Straße 3 – 6020 Innsbruck, Austria

(in the old town)

New developments in cosmology and biology offer exciting opportunities to explore the fundamental structure of the Universe, its physical origin and the origins of life. Vacuum energy, neutrinos and gravitational waves are fundamental ingredients of the physical Universe. The science of genomics and DNA explores the deep structure of life with its origins in cold and extreme environments. New advances in biology and computational science are driving exciting cross-disciplinary collaboration.

This meeting, composed of 9 colloquium talks and discussion sessions, will explore these fundamental issues.

Programme:



**Alexandre Anesio**

Bristol Glaciology Centre, University of Bristol

*Microbial processes in glaciers as a model for life on other planets*

**Diethard Böhme**

Department of Chemistry, York University

*Searching for chemical origins of life in interstellar clouds*



**Joanna Dunkley**

Oxford Astrophysics

*Cosmology from WMAP*

**Cecilia Jarlskog**  
Dept. of Mathematical Physics, Lund Institute of  
Technology



*A model for neutrino masses*



**Eva-Maria Koch**  
Alpine Research Centre Obergurgl

*Evening lecture: Obergurgl - nature and science*

**Astrid Lambrecht**  
Laboratoire Kastler Brossel, ENS, Univ. Paris VI, CNRS



*Vacuum energy and the Casimir effect*



**Michele Maggiore**  
Département de Physique Théorique, University of  
Geneva

*Gravitational waves*

**Jean-Robert Petit**  
CNRS - Laboratoire de Glaciologie et Géophysique de  
l'Environnement, Université Joseph Fourier-Grenoble



*The polar ice cores cornucopia: climate and earth  
environment over the last million years and a window over  
the subglacial Lake Vostok (Antarctica).*



**Corrado Priami**  
The Microsoft Research - University of Trento Centre for  
Computational and Systems Biology

*Algorithmic systems biology*

**Claude Thermes**  
CNRS - Centre de Génétique Moléculaire, Gif sur Yvette



*The genome: a system of overlaying codes*

All talks will be 40 minutes plus 10 minutes for discussion. The science programme will begin on Friday morning and finish Saturday lunch time.

A registration fee of 30 euros per participant will be requested to cover coffee breaks and an evening buffet (including wine) on the Friday evening.

Applications from students are welcome (please advise which group and whether Ph D student, diploma, or which semester for undergraduates).

For practical catering reasons, the total number of participants is limited.

For information and request for invitation please contact:

► [Steven.Bass@uibk.ac.at](mailto:Steven.Bass@uibk.ac.at) before October 6, 2008.

## Draft programme:

Friday		Saturday	
09.00	Welcome Vice President for Science: Tilmann Märk	09.00	Petit
09.10	Dunkley	09.50	Böhme
10.00	Coffee	10.40	Anesio
10.30	Thermes	11.30	Farewell with coffee
11.20	Jarlskog		
12.10	Lunch break		
15.00	Priami		
15.50	Lambrecht		
16.40	Coffee		
17.10	Maggiore		
18.00	Evening lecture: Koch		
19.00	Buffet		

## Local organisation (University of Innsbruck):

Steven Bass	Institute for Theoretical Physics
Birgit Sattler	Institute of Ecology
Florian Schallhart	Frankreich-Schwerpunkt
Barbara Tasser	Italien-Zentrum
Silvia Prock	Vizerektorat für Forschung

This meeting is organised in collaboration with the University of Innsbruck, the Frankreich Schwerpunkt and the Italien-Zentrum of the University of Innsbruck with support from the University and the Austrian Science Fund, FWF, through grant P20436 and the British Council.

**Travel information:**

The meeting site is in the Innsbruck old town, 10 minutes from the main train station and 20 minutes taxi from airport. Train connections are available at [www.oebb.at](http://www.oebb.at) . Train via Zuerich is suggested for participants travelling from Geneva.

For people coming by air, there are flights through Frankfurt and Vienna. Please check the connections and fares at both:

[www.lufthansa.com](http://www.lufthansa.com)

and

[www.aua.com](http://www.aua.com) (Austrian Airlines)

A map of Innsbruck is available at: [www2.innsbruck.at/WebCity/FrontController](http://www2.innsbruck.at/WebCity/FrontController)

The meeting room of the symposium is in: <http://www.uibk.ac.at/italienzentrum/kontakt.html>

For information about hotel possibilities and attractive excursions on Saturday afternoon: [www.tiscover.at](http://www.tiscover.at)

