Department of HISTORY AND PHILOSOPHY OF SCIENCE
Loránd Eötvös University, Budapest

Pázmány P. sétány 1/C Budapest
Phone/Fax: (36-1) 372 2924
The web site of the colloquium: *http://philosophy.elte.hu/colloquium*

Philosophy of Science Colloquium

Room 1.817 (1st floor) Monday 4:00 PM

October 2006

2 October 4:00 PM 1st floor 1.817

Language: *Hungarian*

Ferenc Huoranszki

Philosophy, Central European University, Budapest

A szabad akarat kondícionális elemzése
(The Conditional Analysis of Free Will)

G.E. Moore "Ethics" c. műveben a szabad akarat fogalmát egy kontrafaktuális kondícionális segitségével elemzi. A javasolt elemzést azóta néhány filozófus a kritikák figyelembe vétele nélkül elfogadja, a legtöbb viszont a kritikák hatására elutasítja. Az előadásban amellett érvelek, hogy Moore elmélete helyes, de módosításra szorul. A módosítás kiindulópontját az utóbbi években a diszpozicionális terminusok elemezése kapcsán kialakult vita szolgáltatja. Ezek alapján igyekszem megmutatni, hogy a kondícionális elemzéssel kapcsolatos ellenvetesek egyértelmű párhuzamot mutatnak a diszpozíciók egyszerű kondícionális elemzésével szemben felhozott érvekkel, és hogy az utóbbi kapcsán javasolt módosítások a moore-i elemzésre is alkalmazhatók.

9 October 4:00 PM 1st floor 1.817

Language: *English*

László E. Szabó

Theoretical Physics Research Group of HAS
HPS, Eötvös University, Budapest

Empirical foundation of the absolute theory of space and time

First I shall demonstrate how sloppy and circular is the way we talk about the empirical meanings of such fundamental physical quantities as time and distance. Then, I shall try to sketch the empirical/operational definition of space and time tags of physical events, without circularities and with a minimal number of conventional elements. As we will see, the task is not trivial; and our analysis will lead to the following, perhaps surprizing, conclusions:

- The space and time tags so obtained are absolute in the sense that they are not relative to a reference frame but prior to any reference frame.
- No objective meaning can be assigned to the concept of „proper" time. „Time" is what the etalon clock reads, by definition.
- It is meaningless to talk about „non-inertial reference frame", „space-time coordinates (tags) defined/measured by an accelerating or rotating observer", and the likes.
- Whether the standard clock used in the contemporary physical laboratories is appropriate for the definition of space-time tags is still an open empirical question.

16 October 4:00 PM 1st floor 1.817

Language: *English*

Hanoch Ben-Yami

Philosophy, Central European University, Budapest

A different approach to simultaneity in special relativity, with application to the twins paradox

In a recent paper (*BJPS* 2006) I showed that within the framework of Special Relativity, definitions of simultaneity different from Einstein's standard one are acceptable. In particular, I showed there that one can define as the events simultaneous with a given events all those on its backward light cone. In this talk I shall discuss some features of this definition. I shall present and, time permitting, derive the formulae for length and time change of moving rods and clocks according to this simultaneity definition. I shall also analyze the Twins Paradox from this point of view, showing that no paradox arises in this way and that this approach to simultaneity does not force us to distinguish inertial from non-inertial frame within Special Relativity.

30 October 4:00 PM 1st floor 1.817

Language: *English*

László Gulyás

HPS, Eötvös University, Budapest

Understanding emergent social phenomena – properties and applications of agent-based modeling

Agent-based modeling (ABM) is a new branch of computer simulation, especially suited for the modeling of complex (social) systems. Its main tenet is to model the individual, together with its imperfections (e.g., limited cognitive or computational abilities), its idiosyncrasies, and personal interactions. Thus, the approach builds the model from 'the bottom-up', focusing mostly on micro rules and seeking the understanding of the emergence of macro behavior.

In this talk we will discuss the main properties of the ABM approach, such as the ability to handle heterogeneous and dynamic populations; the requirement for explicit and often dynamic interaction topologies; the focus on computable individual behavior; and potential to incorporate emergent actors. These properties will be analyzed drawing upon examples from our works with various co-authors in domains ranging from urban studies and econometrics, via theoretical political science, to evolutionary theory.

The colloquium is open to everyone, including students, visitors, and faculty members from all departments!

The 60-minute lecture is followed by a 10-minute break. Then we hold a 30-60-minute discussion. The participants may comment on the talks and are encouraged to initiate discussion through the Internet. The comments should be written in the language of the presentation.

The organizer of the colloquium: László E. Szabó (email: leszabo@philosophy.elte.hu)