# INSTITUTE OF PHILOSOPHY
**Faculty of Humanities, Eötvös University, Budapest**

# *Theoretical Philosophy Forum*

Monday 4:00 PM  Room 226  Múzeum krt. 4/i, Budapest
Web site: `http://philosophy.elte.hu/tpf`
Contact: *László E. Szabó* (organizer) `leszabo@philosophy.elte.hu`

*The Forum is open to everyone, including students, visitors, and faculty members from all departments and institutes! The 60 minute lecture is followed by a 10 minute break and a 30-60 minute discussion. The language of presentation is English or Hungarian.*

# May 2009

## 4 May 4:00 PM Room 226

**Ferenc Csatári**
*Department of Logic, Institute of Philosohy*
*Eötvös University, Budapest*

**Az egytől az omegáig - fejezetek a számfogalom történetéből**
*(From '1' to 'ω' – selected topics from the history of arithmetic)*

Röviden áttekintjük a számok (számkörök) történetének egy-egy fontosabb fejezetét. Megállapítjuk, hogy egyáltalán nem triviális, mi az, amit számnak tekintünk; a matematika mai számfogalma (és tőle nyilván nem függetlenül hétköznapi számfogalmunk) hosszú, verítékes történeti fejlődés eredménye.
    Ezután megvizsgálhatjuk, bír-e mindez valamilyen tanulsággal – s ha igen, milyennel – a matematikai objektumok státuszával kapcsolatos esetleges elkötelezettségeinkre nézve.

## 11 May 4:00 PM Room 226

**Balázs Gyenis**
*Department of History and Philosophy of Science, University of Pittsburgh*

**Exact descriptions and well-posedness**

When thinking about "what is physically possible" it is a standard attitude in philosophy of science to follow the cookbook: take your favorite fundamental physical theory, extract the laws of nature, and claim that all mathematical models which are compatible with these laws represent physically possible worlds. And so we end up with Norton's Dome, Plato machines, time traveling spacetimes and so on. Until these examples are ruled out by a similar recipe based on a more fundamental theory we should regard them as representing real possibilities inferred from our best theories, or so we are told.
    One might argue that following this cookbook favors mathematical possibilities too much; models need to meet additional criteria as well in order to qualify as representing

the physically possible. The difficulty is in, of course, finding such additional criteria. In the talk I'm planning to take a look at a candidate (well-posedness) and construct an argument for it. The argument is based on interpreting exact correspondence between mathematical state-descriptions and physical states; in general we are going to worry about what is the relationship between pieces of mathematics and physical systems which they are supposed to describe.

This is supposed to be a general philosophy talk so I will keep the technology at the bare minimum. Also, it is very much a work in progress, so I'm looking forward to the discussion, both technical and philosophical.

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The scope of the Forum includes all aspects of **theoretical philosophy**, including: logic and philosophy of formal sciences / philosophy of science / modern metaphysics / epistemology / philosophy of language / problems in history of philosophy and history of science, relevant to the above topics / particular issues in natural and social sciences, important for the discourses in the main scope of the Forum.