



IRAFS  
Logos&Pathos

# INTERNATIONAL SYMPOSIUM “CELEBRATING TWENTY YEARS OF IRAFS”

The International Research Area on Foundations of the Sciences

**May 8th 2017**

Pontifical Lateran University

**Secretary: Events Office, PUL**

Piazza San Giovanni in Laterano, 4 | 00120 – Città del Vaticano

Tel. +39 06 6989 5676 – 699 | E-mail: [eventi@pul.it](mailto:eventi@pul.it) | Web: [www.pul.it](http://www.pul.it) – [www.irafs.org](http://www.irafs.org)

# PROGRAM

9:00–9:15 | Farewell Speech: Bishop Enrico dal Covolo, PUL Rector  
9:15–9:00 | Symposium Introduction: Gianfranco Basti,  
IRAFS Director

## SESSION I: MATHEMATICS AND PHYSICS

9:30–10:15 | Roger Penrose (Oxford University): The Big Bang  
and its Dark-Matter Content: Whence, Whither  
and Wherefore  
10:15–11:00 | Sarah Jones Nelson (IRAFS): A New Ontology of  
Integers: Questions of Proof and Consistency  
11:00–11:30 | Coffee Break  
11:30–12:15 | Gianfranco Basti (PUL): Non-wellfounded sets  
and quantum topologies in physics, logic, and  
computer science  
12:15–12:45 | Discussion  
12:45–14:00 | Lunch

## II SESSION MATHEMATICS AND COMPUTER SCIENCE

14:00–14:45 | Marco Forti (University of Pisa): Numerosity theory:  
counting the infinite in a Euclidean way  
14:45–15:30 | Davide Sangiorgi (University of Bologna): The  
origins of coinduction: from anti-foundation  
axioms and morphisms to bisimulation  
15:30–16:00 | Discussion  
16:00 | Symposium Ends

### Scientific Committee:

Gianfranco Basti, Flavia Marcacci, Sarah Nelson

### Organizing Committee:

Flavia Marcacci, Alfonso D'Amodio