

## How big is your Mathematics?

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Monday, 7<sup>th</sup> July 2014

12:30pm Room 3-E4-SR03 Via Röntgen 1 Milano

### Abstract

This seminar presents two direct applications of Bruno de Finetti's fundamental theorem of prevision, a theorem that resolves every problem there is in probability. I will begin by presenting three solutions to a well posed urn problem that had been proposed some fifty years ago by Frederic Mosteller. The problem appears at the end of this abstract. You are invited to bring your solution to the seminar, and a valuable prize will be awarded to the biggest solution! Be sure to solve the problem that is posed, not some other problem. The three solutions will be discussed, and will be followed by another application as a real solution to a billion dollar actuarial problem involving the diagnosis of asbestosis by so-called "median decisions".

The urn problem that will be discussed is as follows:

An urn contains 16 balls, some of them white and the remainder are red. Two balls are drawn from the urn. The probability that they are the same colour equals the probability that they are different colours. How many of the balls in the urn are red?