"NAVIER-STOKES EQUATIONS" – A MILLENNIUM PROBLEM FOR US $1 MLN

Nedyu Popivanov

Abstract. *The Millennium Prize Problems are seven well-known mathematical problems selected by the Clay Mathematics Institute in 2000. The Clay Institute has pledged a US $1 million prize for the correct solution to any of these 7 problems. Up to now the only one of them (according to the Poincare conjecture) has been solved by Russian mathematician Grigori Perelmann in 2010.*

In my present talk I will try to explain more easily the other one of these Problems, named ***"Navier-Stokes existence and smoothness"****.*

Let mention also here that this problem is connected to many other natural problems. Solutions of the Navier-Stokes equations often include turbulence, which remains one of the greatest unsolved problems in physics, despite its immense importance in science and engineering.

Prof. Nedyu Popivanov, DSc[1,2]
[1] Institute of Information and Communication Technologies, BAS,
[2] Faculty of Mathematics and Informatics, Sofia University, Bulgaria
Corresponding author: nedyu@parallel.bas.bg, nedyu@fmi.uni-sofia.bg