Poštovani,

Društvo matematičara i fizičara poziva Vas na predavanje koje će se održati **u četvrtak, 24. 10. 2013. godine u 18:30 sati**, u zgradi Sveučilišnih odjela u kampusu na Trsatu (Radmile Matejčić 2), u prostoriji O-029. Predavač je **Joao Pita Costa**, s Instituta „Jožef Stefan“, Ljubljana. Naslov predavanja je **„Order structures for Topological Data Analysis“.**

Predavanje će biti na engleskom jeziku.

Predsjedništvo DMF-a

Sažetak:

In the past 20 years Topological Data Analysis has been a vibrant area of research a lot due to the developments in applied and computational algebraic topology. Essentially it applies the qualitative methods of topology to problems of machine learning, data mining or computer vision. Under this topic, persistent homology is an area of mathematics interested in identifying a global structure by inferring high-dimensional structure from low-dimensional representations and studying properties of a often continuous space by the analysis of a discrete sample of it, assembling discrete points into global structure. Lattices are omnipotent in the everyday life of a working mathematician being distributive lattices some of the most important varieties of these algebras. A recent approach to the study of persistent homology using techniques of lattice theory is presented in this talk where we will also look at several algorithmic applications that imply the impact of these strategies.

Joao Pita Costa is a researcher in Mathematics at the Artificial Intelligence Lab at the Institute JozefŠtefan in Ljubljana, working at the FP7 EU project Toposys, developing a general framework for Computational Topology using techniques of Universal Algebra, Category Theory and Mathematical Logic. Joao has participated in several major international conferences workshops and meetings in Algebra and Applied Topology, and published in journals of reference as the Semigroup Forum, Algebra Universalis or DemonstratioMathematica. He graduated in Mathematics (Lisbon 2005), did his Master studies in Algebra and Logic (Lisbon 2007) and his Ph.D. in Universal Algebra and Semigroup Theory under the topic of noncommutative lattices (Ljubljana 2012). He has also worked at the Mathematics Faculty and the Computer Science Faculty of the University of Ljubljana (Ljubljana 2012), at the Gulbenkian Science Institute (Lisbon 2006-07), and at the Teachers Training Center APM (Lisbon 2005). For more info please visit www.joaopitacosta.info.