

Report

Workshop: BIG DATA: Mathematics in Industry 4.0

Date: 2 June 2017

Place: Instituto Superior de Engenharia do Porto, Portugal



The Portuguese Network for Industry and Innovation - PT-MATHS-IN launching workshop was held at ISEP - Porto on June 2nd. With excel guest speakers, from Academia and Industry, the meeting imprinted in the participants a fascinating insight into the society near future in the age of the 4.0 digital revolution.

From 35 distinct organizations, 130 participants, including a considerable number of students and people from industry attended the meeting. An intensive but stimulating program included a panel of distinguish plenary speakers:

Filipa Calvão - Professor at Católica Porto Law School
Challenges Concerning the Reform of Data Protection Rules in the EU

Gabriel Bernardino- Chairman of the European Insurance and Occupational Pensions Authority
Future Challenges for Big Data in Insurance

João Resende - WeDo Technologies
Challenges and Opportunities for Mathematicians in Fraud Management

Stefano Iacus - Director of the Data Science Laboratory, University of Milan
Big Data in Political Campaigns

Wil Schilders - President of EU-MATHS-IN
Big Data - Challenges and Opportunities from EU-MATHS-IN Point of View



The Chairman of EIOPA, Dr. Gabriel Bernardino, highlighted a number of foreseeable changes in the world of risk management and insurance. According to him, this revolution is not a mirage for the future, it happens at this moment and it is urgent to turn the challenges into opportunities.

Regarding data protection, the Chair of the Data Protection Commission, Prof. Filipa Calvão addressed several aspects related to the use and collection of data, focusing on the need for legislation to ensure that the data collected is clearly justified in function of the benefits to society of its use.

Following this subject, considering rights and duties and the exercise of democracy, the impact of Big Data in political campaigns emerged. In this context PT-MATHS-IN invited Prof. Stefano Iacus, Professor of Statistics at the University of Milan, director of the Data Science laboratory and co-founder of a Spinoff, "Voices of the Blog", to present part of his work.

The issue of fraud detection, a crucial issue linked to Big Data, was developed by WeDo Technologies' engineer João Resende and a strategic vision of the role of mathematicians in the Europe of Big Data was presented by the president of EU-MATHS- IN, Wil Schilders.

This meeting confirmed the notion that mathematicians have a very important role to play under the "BIG DATA" label, which includes various aspects such as the collection, storage, filtering, encryption and analysis of information, decision-making in a deterministic and stochastic environment, Data sensitivity analysis, among many others. It was also clear that the methodologies must be effective but also very efficient and that being a transversal subject to several areas in mathematics, it will be necessary to create expertise diversified mathematical teams. In this context PT-MATHS-In will surely have an important role to play in the service of mathematics, mathematicians, scientific employment and society.

The organizing committee

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