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**4<sup>th</sup> INTERNATIONAL WINTER SCHOOL ON BIG DATA**

**BigDat 2018**

**Timișoara, Romania**

**January 22-26, 2018**

Organized by:  
West University of Timișoara  
Rovira i Virgili University

<http://grammars.grlmc.com/BigDat2018/>

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--- Regular registration deadline: January 19, 2018 ---

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**SCOPE:**

BigDat 2018 will be a research training event with a global scope aiming at updating participants about the most recent advances in the critical and fast developing area of big data, which covers a large spectrum of current exciting research and industrial innovation with an extraordinary potential for a huge impact on scientific discoveries, medicine, engineering, business models, and society itself. Renowned academics and industry pioneers will lecture and share their views with the audience.

Most big data subareas will be displayed, namely foundations, infrastructure, management, search and mining, security and privacy, and applications (to biological and health sciences, to business, finance and transportation, to online social networks, etc.). Major challenges of analytics, management and storage of big data will be identified through 2 keynote lectures, 25 five-hour and fifteen-minute courses, and 1 round table, which will tackle the most active and promising topics. The organizers are convinced that outstanding speakers will attract the brightest and most motivated students. Interaction will be a main component of the event.

An open session will give participants the opportunity to present their own work in progress in 5 minutes. Also, there will be two special sessions with industrial and recruitment profiles.

**ADDRESSED TO:**

Master students, PhD students, postdocs, and industry practitioners will be typical profiles of participants. However, there are no formal pre-requisites for attendance in terms of academic degrees. Since there will be a variety of levels, specific knowledge background may be assumed for some of the courses. Overall, BigDat 2018 is addressed to students, researchers and practitioners who want to keep themselves updated about recent developments and future trends. All will surely find it fruitful to listen and discuss with major researchers, industry leaders and innovators.

### **STRUCTURE:**

3 courses will run in parallel during the whole event. Participants will be able to freely choose the courses they wish to attend as well as to move from one to another.

### **VENUE:**

BigDat 2018 will take place in Timișoara, which has been nominated one of the European Capitals of Culture in 2021. The venue will be:

Universitatea de Vest  
Blvd. Vasile Parvân, nr. 4  
300223 Timișoara

### **KEYNOTE SPEAKERS:**

Bing Liu (University of Illinois, Chicago), Towards Machines that Learn like Humans

Jeffrey Ullman (Stanford University), Data Science: Is it Real?

### **PROFESSORS AND COURSES:**

Paul Bliese (University of South Carolina), [introductory/intermediate] Using R for Mixed-effects (Multilevel) Models

Hendrik Blockeel (KU Leuven), [intermediate] Decision Trees for Big Data Analytics

Diego Calvanese (Free University of Bozen-Bolzano), [intermediate] tba

Nick Duffield (Texas A&M University), [introductory/intermediate] Sampling for Big Data

Sašo Džeroski (Jožef Stefan Institute), [introductory/intermediate] Multi-target Prediction: Techniques and Applications

Geoffrey C. Fox (Indiana University, Bloomington), [intermediate] Integration of HPC, Big Data Analytics and Software Ecosystem

Minos Garofalakis (Technical University of Crete), [intermediate/advanced] Data Streaming Analytics

David W. Gerbing (Portland State University), [introductory] Data Visualization with R

Maurizio Lenzerini (Sapienza University of Rome), [intermediate/advanced] Semantic Technologies for Open Data Publishing

Bing Liu (University of Illinois, Chicago), [intermediate/advanced] Lifelong Learning and its Applications in NLP

B.S. Manjunath (University of California, Santa Barbara), [introductory] Unstructured (Big) Data

Folker Meyer (Argonne National Laboratory), [introductory/intermediate] Efficient Multi Cloud Execution of Reproducible Data Analytics using Common Workflow Language, AWE and SHOCK

Wladek Minor (University of Virginia), [introductory/advanced] Big Data in Biomedical Sciences

Fionn Murtagh (University of Huddersfield), [introductory/advanced] The New Science of Big Data Analytics, Based on the Geometry and the Topology of Complex, Hierarchic Systems

Raymond Ng (University of British Columbia), [introductory] Mining and Summarizing Text Conversations

Srinivasan Parthasarathy (Ohio State University), [introductory/intermediate] Network Science Fundamentals

Hanan Samet (University of Maryland, College Park), [introductory/intermediate] Sorting in Space: Multidimensional, Spatial, and Metric Data Structures for Applications in Spatial Databases, Geographic Information Systems (GIS), and Location-based Services

Kyuseok Shim (Seoul National University), [introductory/intermediate] MapReduce Algorithms for Big Data Analysis

Jaideep Srivastava (Qatar Computing Research Institute), [introductory/intermediate] Social Computing: Computing as an Integral Tool to Understanding Human Behavior and Solving Problems of Social Relevance

Jeffrey Ullman (Stanford University), [introductory] Big-data Algorithms That Aren't Machine Learning

Pascal Van Hentenryck (University of Michigan, Ann Arbor), [intermediate] Big Data in Transportation and Mobility

Sebastián Ventura (University of Córdoba), [intermediate/advanced] Pattern Mining on Big Data

Haixun Wang (Facebook), [intermediate/advanced] Understanding Natural Language: End-to-end and Structure Learning Approaches

Xiaowei Xu (University of Arkansas, Little Rock), [introductory/advanced] Mining Big Networked Data

Zhongfei Zhang (Binghamton University), [introductory/advanced] Relational and Media Data Learning and Knowledge Discovery

### **OPEN SESSION**

An open session will collect 5-minute voluntary presentations of work in progress by participants. They should submit a half-page abstract containing title, authors, and summary of the research to david.silva409 (at) yahoo.com by January 15, 2018.

### **INDUSTRIAL SESSION:**

A session will be devoted to demonstrations of practical applications of big data in industry. Companies interested in contributing are welcome to submit a 1-page abstract containing the program of the demonstration, the duration requested and the logistics necessary. At least one of the people participating in the demonstration should have registered for the event. Expressions of interest have to be submitted to david.silva409 (at) yahoo.com by January 15, 2018.

### **EMPLOYER SESSION:**

Firms searching for personnel well skilled in big data will have a space reserved for one-to-one contacts. At least one of the people in charge of the search should have registered for the event. Expressions of interest have to be submitted to david.silva409 (at) yahoo.com by January 15, 2018.

### **ORGANIZING COMMITTEE:**

Carlos Martín-Vide (co-chair)  
Viorel Negru  
Manuel J. Parra Royón  
Dana Petcu  
Monica Sancira (co-chair)  
David Silva

### **REGISTRATION:**

It has to be done at

<http://grammars.grlmc.com/BigDat2018/registration.php>

The selection of up to 8 courses requested in the registration template is only tentative and non-binding. For the sake of organization, it will be helpful to have an approximation of the respective demand for each course. During the event, participants will be free to attend the courses they wish.

Since the capacity of the venue is limited, registration requests will be processed on a first come first served basis. The registration period will be closed and the on-line registration facility disabled if the capacity of the venue is exhausted. It is highly recommended to register prior to the event.

**FEES:**

Fees comprise access to all courses and lunches. There are several early registration deadlines. Fees depend on the registration deadline.

**ACCOMMODATION:**

Suggestions for accommodation will be available in due time.

**CERTIFICATE:**

Participants will be delivered a certificate of attendance indicating the number of hours of lectures.

**QUESTIONS AND FURTHER INFORMATION:**

david.silva409 (at) yahoo.com

**ACKNOWLEDGMENTS:**

Universitatea de Vest din Timișoara  
Universitat Rovira i Virgili