Message from the Chairs

On behalf of the entire conference organizing committee and of the workshop organizers, we are delighted to present to you the Proceedings of the EDBT/ICDT 2017 Workshops, held on March 21, 2017 in Venice, Italy.

The International Conference on Extending Database Technology (EDBT) and the International Conference on Database Theory (ICDT) are two prestigious forums for the exchange of the latest research results in the technological elements and theoretical foundations of data management and database systems. This year, five exciting workshops that focus on emerging topics in data management are co-located with EDBT/ICDT, complementing the areas covered by the main technical program.

DOLAP 2017: 19th International Workshop On Design, Optimization, Languages and Analytical Processing of Big Data

Data Warehouse (DW) and Online Analytical Processing (OLAP) technologies are the core of current Decision Support Systems. The widespread deployment of both DWs and OLAP technologies is due to the intuitive representation of data and simple primitives provided to data analysts or managers in support of management decisions. Research in data warehousing and OLAP has produced important technologies for the design, management and use of information systems for decision support. Business Intelligence (BI) of the future will be significantly different than what the current state-of-the-practice supports. The trend is to move from the current decision support systems that are "data presenting" to more dynamic systems that allow the semi-automation of the decision making process. This means that the systems partially guide their users towards data discovery, intuition and system-aided decision making via intelligent techniques and visualization. This thrust of the Big Data era requires new methods, models, techniques, and architectures to cope with the increasing demand in capacity, data type diversity and responsiveness. And, of course, this does not necessarily mean to re-invent the wheel, but rather, as recommended by Gartner to companies regarding Big Data adoption: "Build on existing BI programs — don't abandon or segregate them".

DOLAP 2017 is a venue where novel ideas around these new landscapes of Business Intelligence and Big Data are fostered and nurtured, and new exciting results are produced, in an attempt to build a strong, vibrant community around these areas.

GraphQ 2017: 6th International Workshop on Querying Graph Structured Data

The growing scale and importance of graph data in several database application areas has recently driven much research effort towards the development of data models and technologies for graph-data management. Life science databases, social networks, Semantic Web data, bibliographical networks, and knowledge bases and ontologies, are prominent examples of application domains exhibiting

data that is naturally represented in graph-based form. Datasets in these domains are often characterized by heterogeneity, complexity and size that make querying a challenging task. The overall goal of the GraphQ workshop is to bring together people from different fields, exchange research ideas and results, and encourage discussion about how to efficiently and effectively support graph queries in different application domains.

GraphQ 2017 provided an opportunity for inspiration and cross-fertilization for the many research groups working on graph-structured data, with a particular focus on graph querying.

LWDM 2017: 7th International Workshop on Linked Web Data Management

The joint application of data management and Semantic Web competencies, through the design of new models, languages and tools, has turned out to be very useful to enable the use of the Web as a huge, interlinked, dynamic repository of resources. The contributions and discussions born and developed during six previous editions of the LWDM workshop allowed to meet our goal of introducing a data management perspective within the Linked Data world, previously focused on publishing, retrieving, querying, browsing and mashing-up the ever growing amount of linked data in a meaningful way. The maturity gained by the workshop also enabled us to introduce new issues related with the main topics: (a) fruitful contributions on the combination of knowledge coming from data management, Semantic Web and Linked Data fields; (b) the study of Linked Data issues within a social perspective of the Web, where the relationships between users might play a crucial role in finding the right resources in an efficient way; (c) the need to face the quantity and the heterogeneity of data made available on the Web, while also managing the rapidity with which such data are distributed (Big Data issues). These problems also feature in the Linked Data world, requiring innovative applications of data management tools.

LWDM 2017 participants discussed data management issues related to Linked Data and other Semantic Web technologies, with a focus on new models, languages and applications that exploit the Web as a huge, interlinked, dynamic repository of linked resources.

BIGQP 2017: 1st International Workshop on Big Geo Data Quality and Privacy

Big Geo Data represents an important type of crowdsourced data that is available today at the global scale. This kind of data refers to locations, i.e., Points of Interest (POIs), and is usually published in social media (e.g., Facebook, Google+) or in specialized platforms (e.g., Open Street Maps, Yelp). The quality (e.g., precision, accuracy, consistency) of crowdsourced geo data depends on the origin (machine vs. human generated), the level of detail of the extraction techniques, as well as the obfuscation techniques used to protect users' privacy. There is clearly a tradeoff between enhancing the quality of published geo data and the privacy risks entailed for the individuals, also known as geoprivacy, to uncover places visited, trajectories, etc.. Understanding the different aspects of geographic, geometric and geospatial quality involved in crowdsourced geo data,

and assessing the privacy risks introduced by enhancing its quality in personal, social and urban applications, is a challenging topic.

BIGQP 2017 brought together computer science and geoscience researchers who are contributing to data quality and privacy of Big Geo Data, providing a unique opportunity to find, in a single place, up-to-date scientific works on subjects that have so far been only partially addressed by the different research communities, including data quality management, distributed and mobile systems, Internet of Things, and Big Data privacy.

KARS 2017: 1st International Workshop on Keyword-based Access and Ranking at Scale

Keyword search is the foremost approach for searching information and it has been successfully applied for retrieving non-structured documents such as text and multimedia files. Nonetheless, retrieving information from unstructured or semi-structured documents is intrinsically different from querying structured data sources with either an explicit schema, as relational databases or triple stores, or an implicit one, as tables in textual documents and on the Web. Structured queries are not end-user oriented and far away from a natural expression of users' information needs by means of keywords, given that their formulation is based on a quite complex syntax and requires some knowledge about the structure of the data to be queried.

KARS 2017 brought together researchers from Databases, Information Retrieval, Natural Language Processing, Semantic Web, and Human-Computer Interaction, and combined their perspectives and research to address the above-mentioned issues. In particular, researchers were encouraged to discuss the opportunities, challenges and results obtained in the development and evaluation of "complete", "ready-to-market" keyword search applications over structured data. Also encouraged were presentations of systemic approaches that manage all phases of keyword search, from the management of the data, query formulation, interpretation, computation, ranking and visualization of the results, and rigorous evaluation methodologies for such systems.

EuroPro 2017: 1st International Workshop on Big Data Management in European Projects

The main objective of this workshop was to share experiences and best practices, discuss challenges and effective solutions, and investigate opportunities for collaboration among European projects dealing with Big Data management. The workshop included presentations by seven such projects that addressed several Big Data challenges. Participants included active data management researchers, data scientists, and data practitioners from both the private and the public sector. Participants exchanged experiences and best practices in Big Data management, considered the ethical aspects and societal impact of Big Data technology, discussed the importance of worldwide initiatives such as the Research Data Alliance (RDA), clarified the relevance of new roles/job descriptions emerging, such as data scientist, initiated a dialogue among seemingly different projects that face similar data management challenges, and connected the data management research community with the European funding scene.

We thank the organizers of all workshops for putting together exciting technical programs, and the program committee members and external reviewers for their contribution that made these workshops possible. We are especially grateful to Giorgio Orsi for serving as the EDBT/ICDT 2017 Workshops Proceedings Chair.

Sincerely,

Yannis Ioannidis and Julia Stoyanovich
EDBT/ICDT 2017 Workshop Chairs