

Editor's Notes

Welcome to the March 2015 issue of the ACM SIGMOD Record!

First of all, the ACM SIGMOD Record Editorial Board welcomes four new Associate Editors, who started their terms on January 1st, 2015.

- Anastasios Kementsietsidis, Google Research
(<http://research.google.com/pubs/AnastasiosKementsietsidis.html>)
- Jun Yang, Duke University
(<https://www.cs.duke.edu/~junyang/>)
- Olga Papaemmanouil, Brandeis University
(<http://www.cs.brandeis.edu/~olga/home.html>)
- Aditya Parameswaran, University of Illinois Urbana-Champaign
(<http://web.engr.illinois.edu/~adityagp/>)

In addition, the ACM TODS Editorial Board welcomes six new Associate Editors, as described in the message from Christian Jensen, the Editor-in-Chief of TODS.

Second, we are very pleased to feature Michael Stonebraker as the 2014 ACM Turing Award winner! Stonebraker, currently Professor at the Massachusetts Institute of Technology, will receive the 2014 Turing Award for fundamental contributions to the concepts and practices underlying modern database systems. The article by Bruce Shriver and Marie Gentile in this issue of the SIGMOD Record has more on Stonebraker's contributions and the ACM Turing Award.

The issue continues with a Database Principles article by Luc Segoufin, which surveys recent results on the topic of enumerating answers to queries over a database. A new way to formulate the query evaluation process is to assume that tuples of the query result can be generated one by one with some regularity, for example by ensuring a fixed delay between two consecutive outputs once some necessary precomputation has been performed to construct a suitable index structure. This article focuses on such a case that the enumeration is performed with a constant delay between any two consecutive solutions, after linear-time preprocessing. While such constant delay enumeration cannot be always achieved, this article considers conjunctive queries and describes several scenarios in which it is indeed possible.

The Research and Vision Articles Column features a vision article, by Power et al., on "Implications of Emerging 3D GPU Architecture on the Scan Primitive". This article delivers a main message that as one projects into the future and examines 3D die-stacked systems, highly data-parallel architectures, such as General Purpose GPUs, can provide a large benefit over current CPU platforms as well as 3D-stacked CPU systems. It is a timely publication that calls for the attention of the database community to embrace high-bandwidth, highly data parallel architectures and perhaps rethink of database design in the future.

The Surveys Column features a survey by Kantorski et al. on "Automatic Filling of Hidden Web Forms". Today, a significant portion of the information on the Web is stored in online databases, in so-called Hidden Web and Deep Web. Access to information in the Hidden Web requires filling an HTML form that is submitted as a query to the underlying database. This article surveys a number of recent works on how to automate the process of filling forms by choosing appropriate values to fill the fields and retrieving nonempty result sets. Since this can be a challenging task due to the wide variety of forms and lack of prior knowledge of valid values for each field, this article presents 15 methods that are most influential in Web form filling, offering a good coverage and categorization of relevant techniques.

The Distinguished Profiles column features two winners of 2014 SIGMOD Jim Gray Doctoral Dissertation Award: Aditya Parameswaran and Andy Pavlo. Aditya graduated from Standard University, with a dissertation entitled “Human-Powered Data Management,” and now is an assistant professor at the University of Illinois (UIUC). In the interview, Aditya speaks about his work, its impact in industry, and how he became determined to be an academic. Andy graduated from Brown University with a dissertation “On Scalable Transaction Execution in Partitioned Main Memory Database Systems.” Andy is now an assistant professor at Carnegie Mellon University. In the interview, Andy talks about his work and his decision to stay focused on this single project in graduate school, which led to the success of his dissertation.

In the Research Centers Column, Stratos Idreos describes several areas of ongoing research at the DASlab at the Harvard School of Engineering and Applied Sciences. The long-term goal of DASlab is to assist in minimizing the time it takes to turn data into knowledge by designing and building novel data systems, tailored for the new and ever-evolving challenges of a data-driven world. Towards this goal, DASlab has ongoing research projects on self-designing data systems, auto-exploration systems, interactive and visual analytics, indexing in modern data systems, and hardware software co-design.

This issue features an event report, by Christophides and Palpanas, on the First International Workshop on Personal Data Analytics in the Internet of Things (PDA@IOT 2014). As one witnesses an increasing number of devices with embedded sensors and actuators becoming pervasive in everyday life, this workshop aims to spark research on data analytics, especially on how individual people can effectively exploit the data that they massively create in Cyber-Physical worlds. The workshop succeeded with two keynote talks, seven research papers, and a panel discussion.

Finally, the issue closes with the call for papers for the Sixth ACM Symposium on Cloud Computing (SoCC 2015), to be co-located with VLDB 2015, and call for participation for the Federated Computing Research Conference (FCRC 2015).

On behalf of the SIGMOD Record Editorial board, I hope that you all enjoy reading the March 2015 issue of the SIGMOD Record!

Your submissions to the Record are welcome via the submission site:

<http://sigmod.hosting.acm.org/record>

Prior to submitting, please read the Editorial Policy on the SIGMOD Record’s Web site:

<http://www.sigmod.org/publications/sigmod-record/sigmod-record-editorial-policy>

Yanlei Diao

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Alexandros Labrinidis (2007 – 2009)

Michael Franklin (1996 – 2000)

Margaret H. Dunham (1986 – 1988)

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Jennifer Widom (1995 – 1996)

Jon D. Clark (1984 – 1985)

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