Presentation from the VLDB 2015 PC Chairs

Chen Li
UC Irvine

Volker Markl
TU Berlin

VLDB

33 Research Sessions

6 Tutorials

7 Industrial Sessions

4 Keynotes

3 Demo Sessions

2 Panels

2 Poster Sessions

9 Workshops

2015 Turing Award Lecture!

Associate Editors

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Jignesh M. Patel

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Magdalena Balazinska

Shivnath Babu

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Rachel Pottinger

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Workshop Chair

Tutorial Chairs

Tova Milo

Pierre Senellart

Joe Hellerstein

Panel Chair

Chairs

Committee

- Sihem Amer-Yahia (Chair)
- Beng Chin Ooi
- Walid Aref
- Patrick Valduriez

Best Paper Award

Fei Li

H. V. Jagadish

Constructing an Interactive Natural Language Interface for Relational Databases

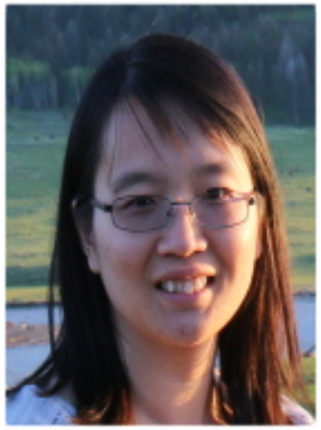
Tuesday, 15:30-17:00 (Research Session 7)

The paper proposes an interactive natural language interface for relational databases, which enables novice users to construct complex queries. It improves the usability of an RDBMS, as it enables anyone to use to ask questions to a database system. This paper is likely to start a new line of research as well as products. For a query expressed in natural language, the interface interacts with the user in several steps (as we do in real life to make our questions more precise) in determining the query semantics and subsequently generating the corresponding SQL. At each step, the system interactively presents to the user its own understanding of the query through alternatives, as opposed to just final answers. The authors rely on a query tree structure to represent the interpretation of an NLP query from the database's perspective, which facilitates verification by users, and translation into SQL. The system (NLIDB) was implemented following the component-based approach, where each component can be independently constructed, optimized or substituted. The experiments involve real users and verify the feasibility of the approach and illustrate the strengths of the system/ approach.

Best Paper Award

Resource Bricolage for Parallel Database Systems

Wednesday, 13:30–15:00 (Research Session 15)



Jiexing Li

Jeffrey Naughton

Rimma V. Nehme

This is a core database systems paper that addresses a real problem, mainly how to deal with the heterogeneity in the machines composing a cluster-based database system. The paper proposes a mechanism ("Resource Bricolage") to make efficient use of heterogeneous hardware when processing a workload in a parallel database system. It addresses a very relevant problem (clusters don't grow homogeneously) and is the first paper on this subject. The approach is relatively simple and practical, using linear programming to optimize data distribution - and thus resource consumption - in a cluster. The techniques were implemented on top of Microsoft SQL server parallel data warehouse. Overall, this is an excellent and impactful paper. One can envision many extensions that can follow up from this research.

Best Paper Award (Runner-up)

Committee

- Alfons Kemper (Chair)
- Viktor Leis
- Justin Levandoski
- Uwe Röhm
- Pinar Tözün

Best Demo Award

Vizdom: Interactive Analytics through Pen and Touch

Andrew Crotty (Brown University)
Alex Galakatos (Brown University)
Emanuel Zgraggen (Brown University)
Carsten Binnig (Brown University)
Tim Kraska (Brown University)

Thursday, 15:30-17:00 (Demo Session 3)

Best Demo Award

Mapping Talks to Posters

Papers	Talks	Posters
Research Track Papers (including Rollover Papers from VLDB 2014)	**33 Research Sessions** 18 min/paper, 1 min intro, 15 min presentation, 2 min Q&A	**Tuesday** Sessions 1-12 **Thursday** Sessions 13-33
Industrial Track Papers	**7 Industrial Sessions** 30 min/paper 1 min intro, 25 min presentation, 4 min Q&A	**Tuesday**
VLDB Journal Papers		**Tuesday**

151

The total number of accepted papers in the Research Track out of **710** submissions: **139** will be presented this week and **12** will rollover to **VLDB 2016**.

21

The total number of rollover papers from VLDB 2014.

20

The total number of accepted papers in the Industrial Track out of **68** submissions.

49

The total number of accepted papers in the Demonstration Track out of **148** submissions.

VLDB '15 Summary

Submission

Acceptance

710 Total Submissions

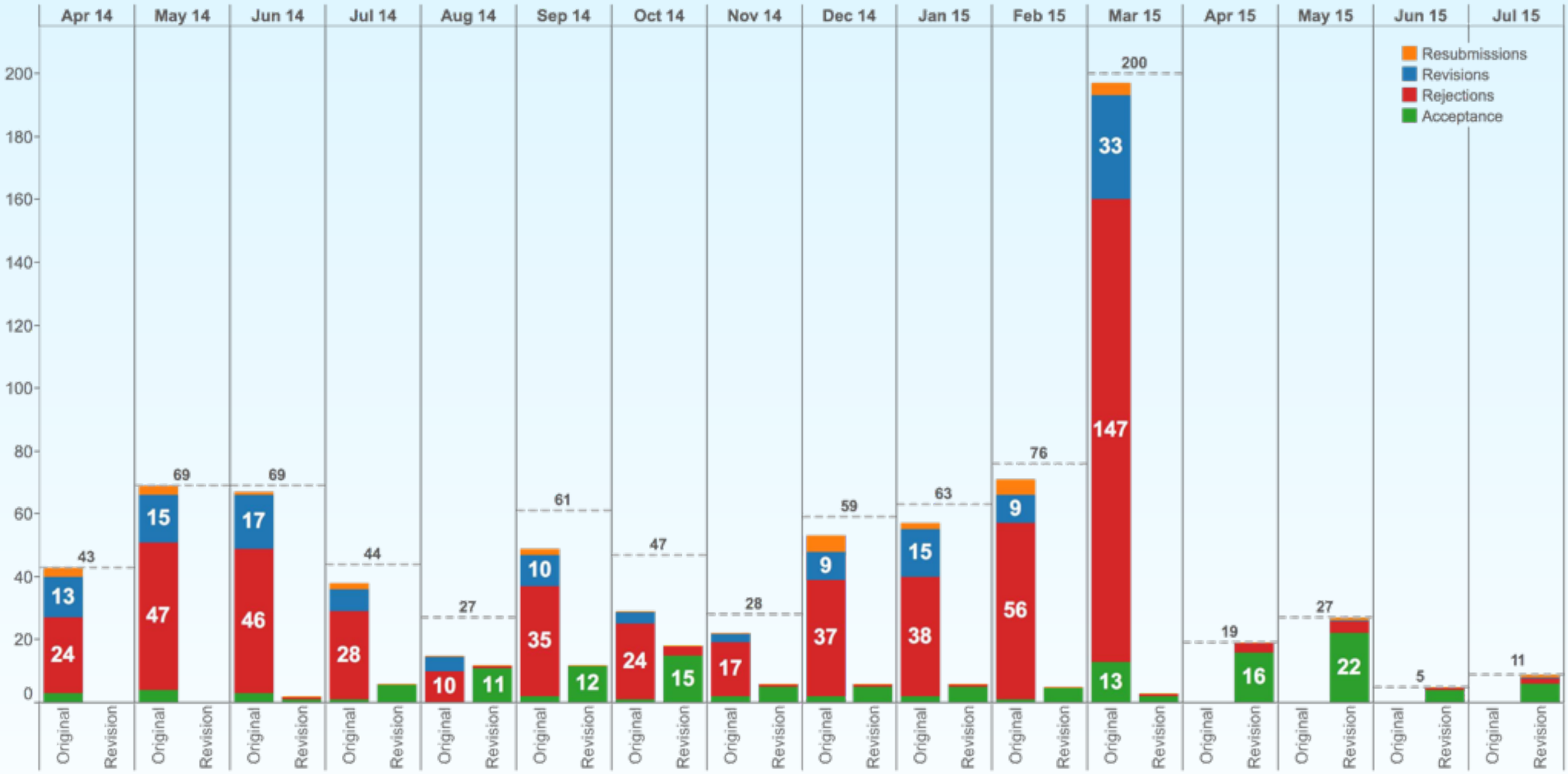
151 Accepted Papers

21.3% Acceptance Rate

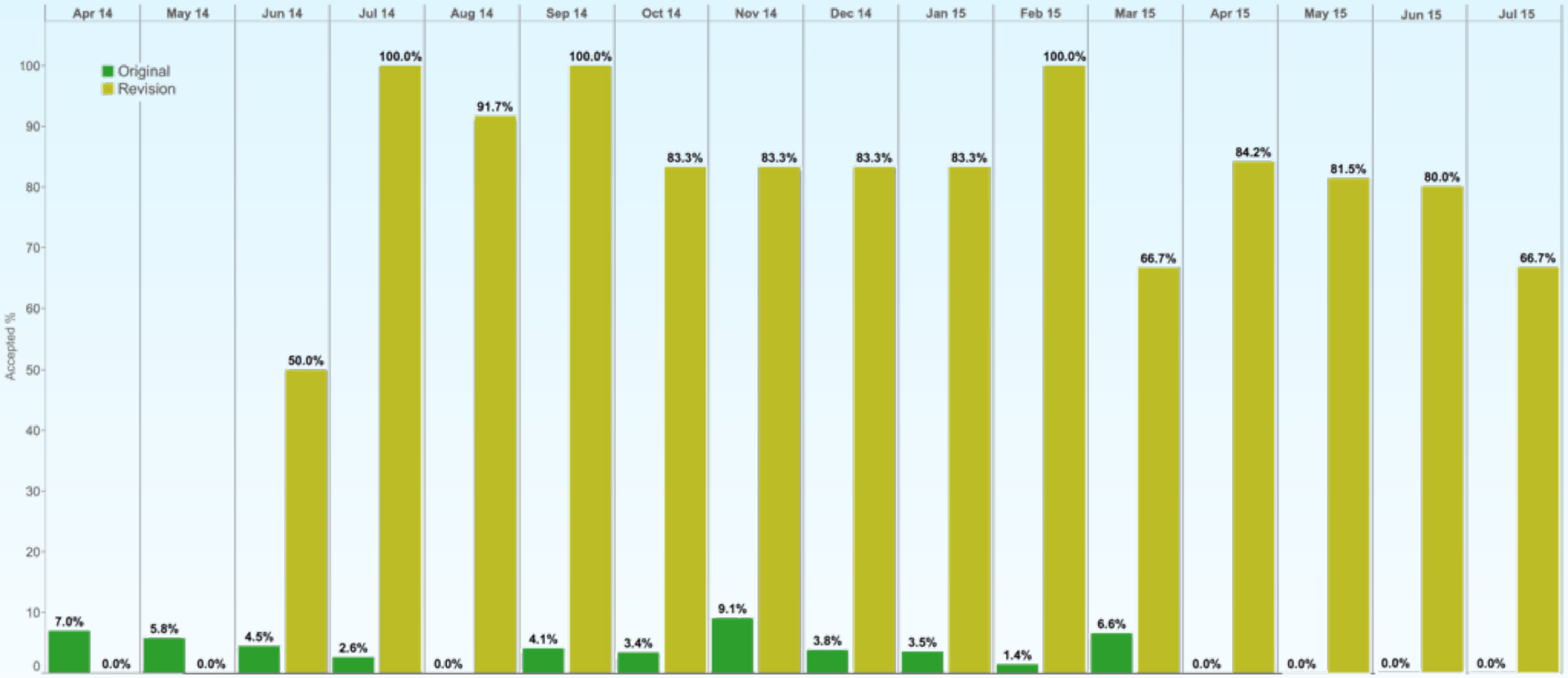
4.8% Acceptance Rate After the First Round

84.6% Acceptance Rate After the Revision

Research Track



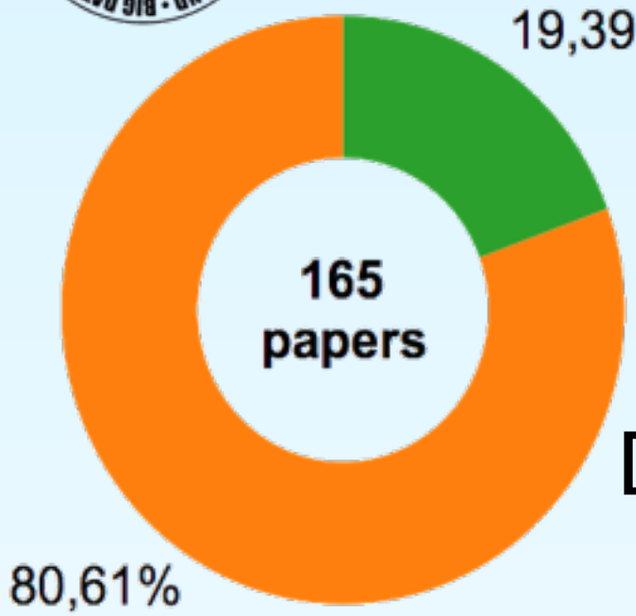
Research Track



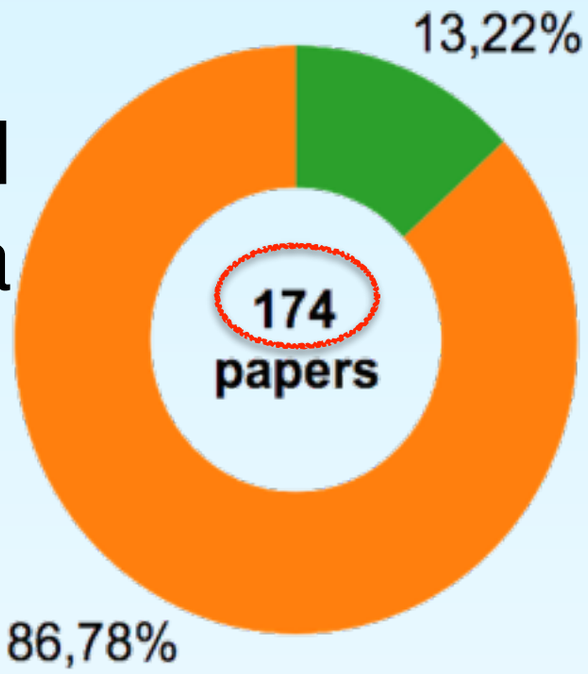
Acceptance Ratio

Accepted
Submission

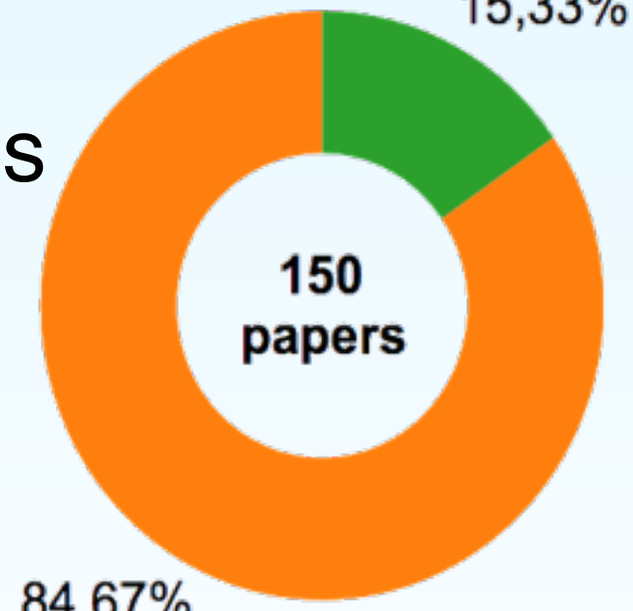
Text, Data Types, and Semi-structured Data



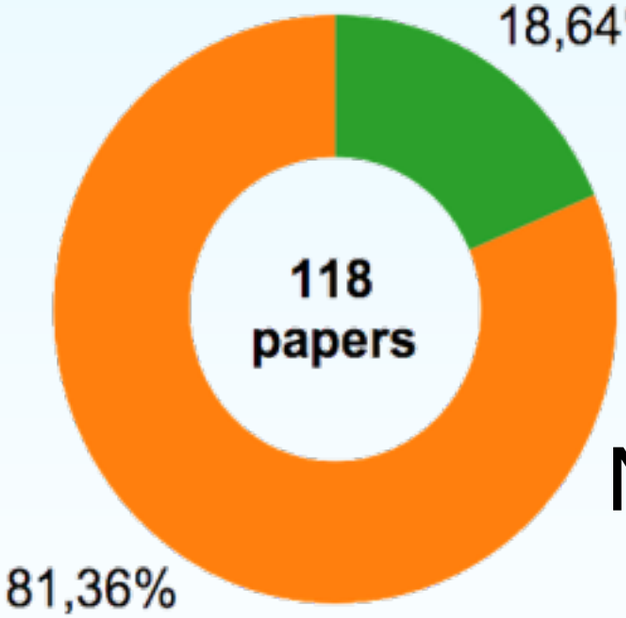
Database Engines



Applications



Novel Database Architectures

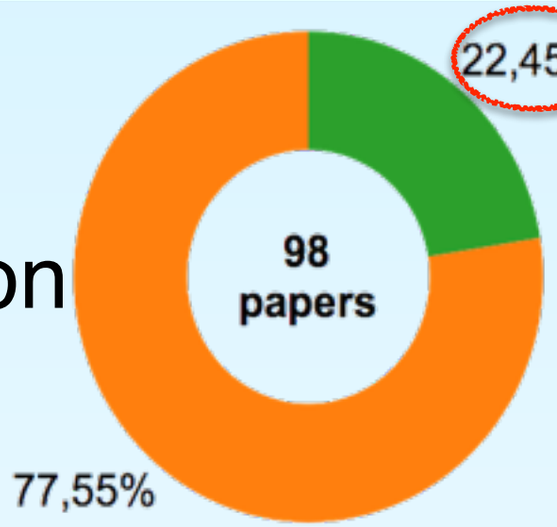


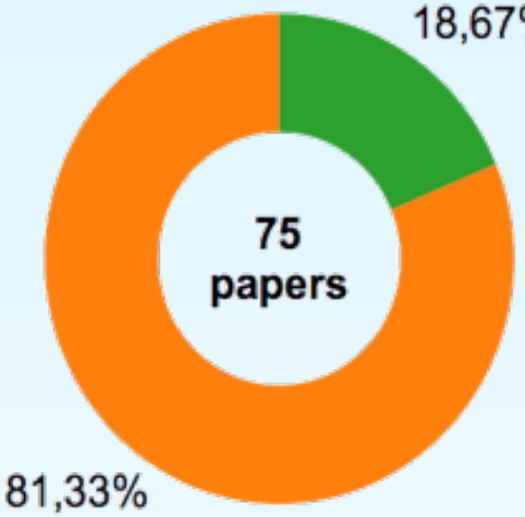
Top Primary Areas

Accepted

Submission

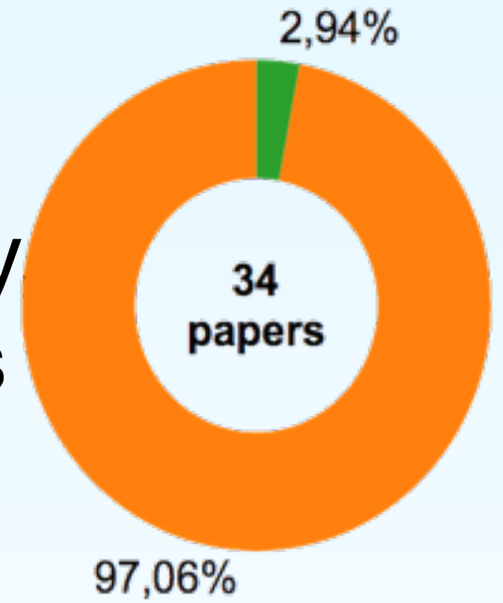
Information Integration

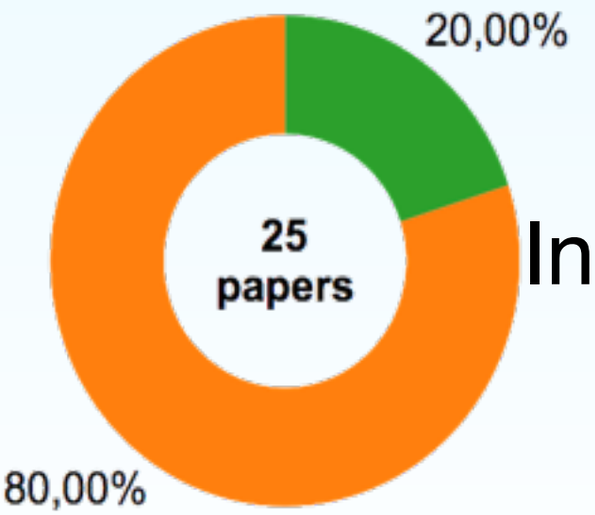




Experiments and Analysis

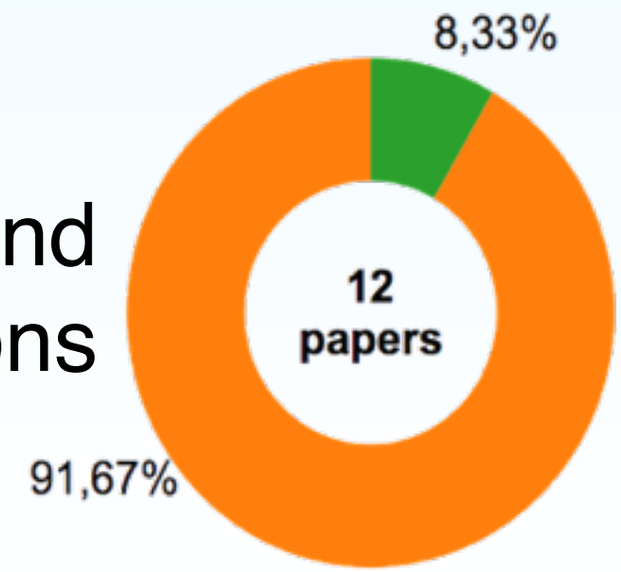
Languages, Usability and User Interfaces





Innovative Systems

Benchmarks and Administrations



Contributors

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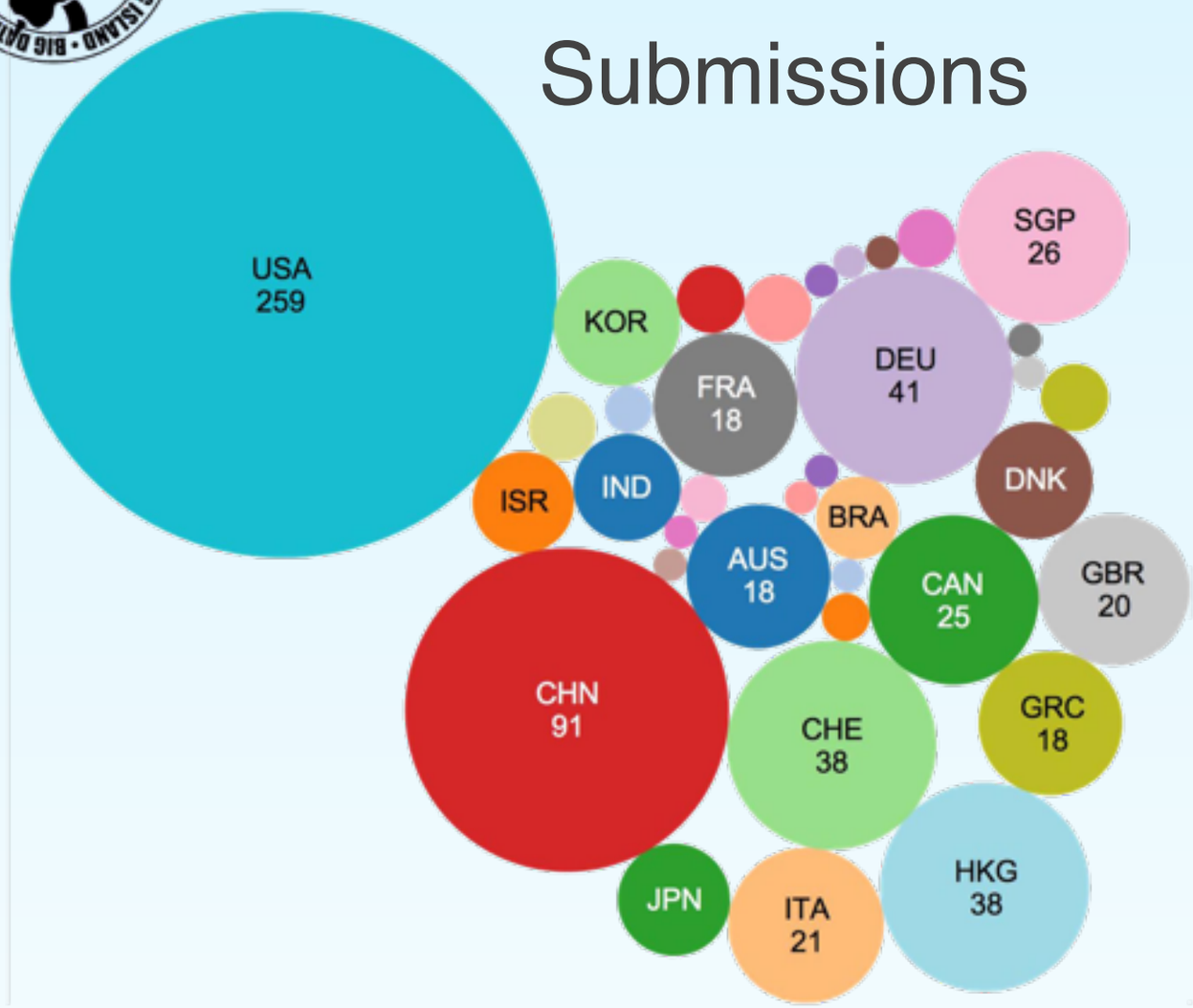
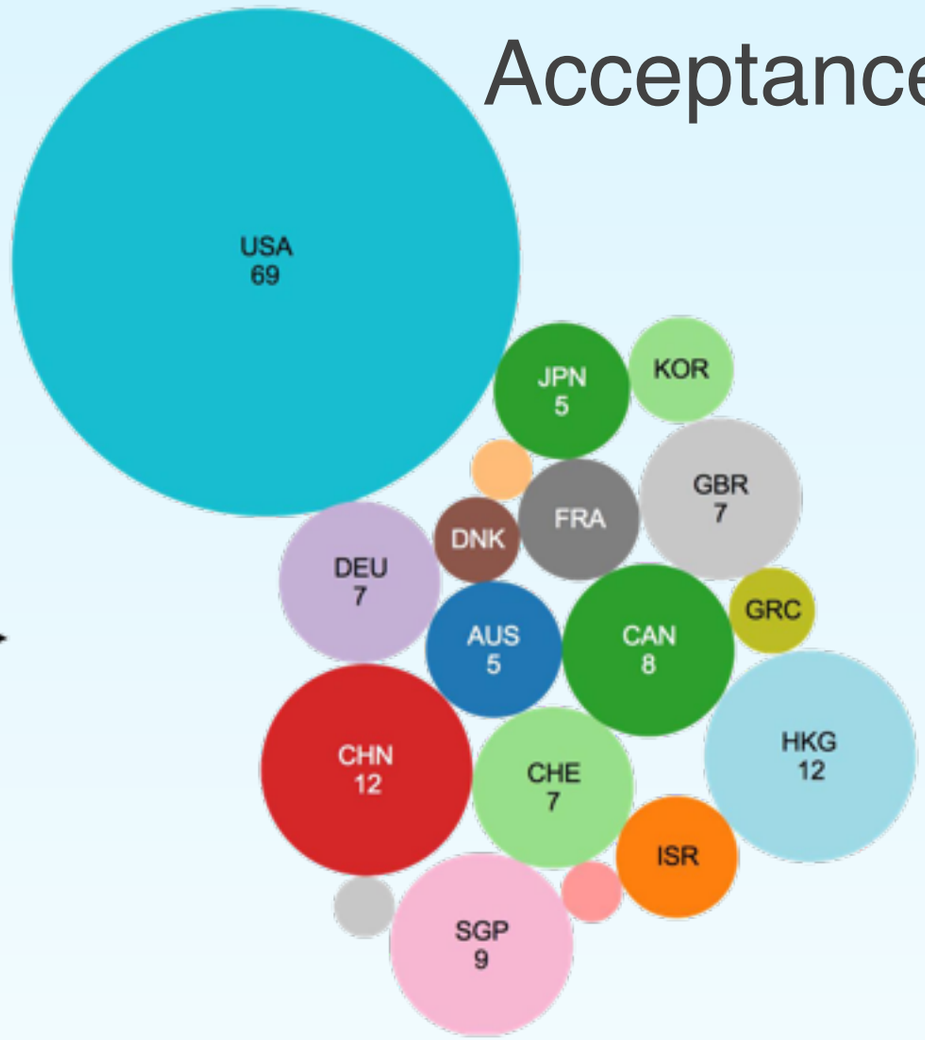
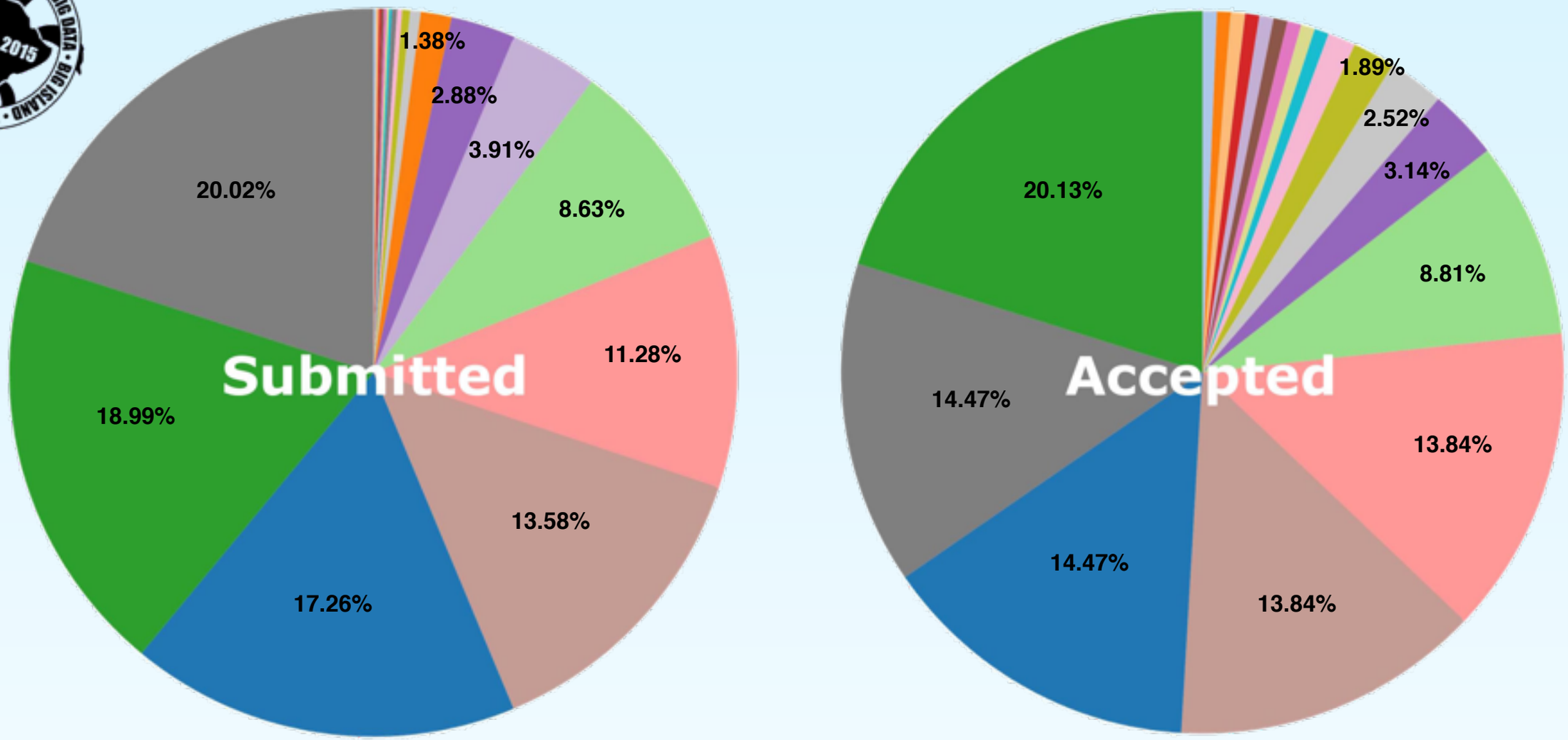
Submissions



Acceptance

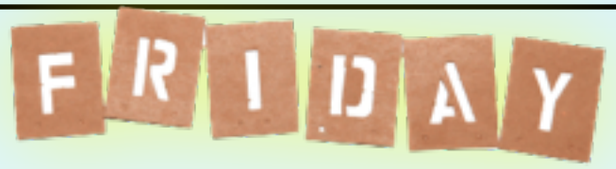


AUS BEL BGD BRA CAN CHE CHN CYP CZE
DEU DNK EGY ESP FIN FRA GBR GRC HKG
IND IOT ISR ITA JPN KOR NLD NZL OMN
PAK QAT SAU SGP SWE THA TUR TWN USA



Subject Areas

- Benchmarking and Performance Measurement
- Data Cleansing and Data Profiling
- Fuzzy, Probabilistic, and Approximate Data
- Multi-core, Main memory, and other emerging hardware
- Query Processing
- Vision Track
- Web Data Managment
- None of the above
- Spatial Databases and GIS
- User Interfaces
- Tree, Graph, and Semi-structured Data
- Benchmarks and Administration
- Innovative Systems
- Languages, User interfaces, and Usability
- Experiments and Analysis
- Information Integration
- Novel DB Architectures
- Applications
- Database Engines
- Text, Semi-structured data, and Data Types



To be held on Friday

Bring your laptops!

Each tutorial will be presented twice.

8 Tutorials on Publicly Available Open Source Big Data Systems

BOSS Workshop

Engineering Database Hardware and Software Together

Juan Loaiza, Oracle

As Senior Vice President of Systems Technology at Oracle, Juan Loaiza is in charge of developing the mission-critical capabilities of Oracle Database, including data and transaction management, high availability, performance, in-memory processing, enterprise replication, and Oracle Exadata.

Mr. Loaiza joined the Oracle Database development organization in 1988. Mr. Loaiza holds BS and MS degrees in computer science from the Massachusetts Institute of Technology.

Keynote

Databases and Hardware: The Beginning and Sequel of a Beautiful Friendship

Anastasia Ailamaki, EPFL

Anastasia Ailamaki is a Professor of Computer and Communication Sciences at the Ecole Polytechnique Federale de Lausanne (EPFL) in Switzerland. Her research interests are in data-intensive systems and applications, and in particular (a) in strengthening the interaction between the database software and emerging hardware and I/O devices, and (b) in automating data management to support computationally-demanding, data-intensive scientific applications. She has received an ERC Consolidator Award (2013), a Finmeccanica endowed chair from the Computer Science Department at Carnegie Mellon (2007), a European Young Investigator Award from the European Science Foundation (2007), an Alfred P. Sloan Research Fellowship (2005), eight best-paper awards in database, storage, and computer architecture conferences (2001-2012), and an NSF CAREER award (2002). She holds a Ph.D. in Computer Science from the University of Wisconsin-Madison in 2000. She is the vice chair of the ACM SIGMOD community, a senior member of the IEEE, and has served as a CRA-W mentor. She is a member of the Global Agenda Council for Data, Society and Development of the World Economic Forum.

Keynote

Big Plateaus of Big Data on the Big Island

Todd Walter, Teradata

Todd Walter is the Chief Technologist for Teradata across the Americas region. With substantive expertise in big data, database engineering and systems architecture, he works closely with Teradata customers, colleagues, and alliance partners to evaluate and prioritize initiatives — and implement data strategy and analytics. As a pragmatic visionary, Walter helps customer business analysts as well as technologists better understand all of the astonishing possibilities of big data and analytics in view of emerging as well as existing capabilities of information infrastructures.

Todd works with organizations of all sizes and levels of experience, from start-ups to Fortune 100 companies at the leading edge of adopting big data, data warehouse and analytics technologies. Walter has been with Teradata for nearly 28 years, contributing significantly to Teradata's unique design features and functionality. He holds more than a dozen Teradata patents and is a Teradata Fellow, the highest technical award granted by the company. Todd served for more than ten years as Chief Technical Officer of Teradata Labs, responsible for vision, strategy and technical leadership of the Teradata product line before taking on his current strategic consulting role.

Keynote

Big Data Research: Will Industry Solve all the Problems?

Magdalena Balazinska, University of Washington

Magdalena Balazinska is an Associate Professor in the department of Computer Science and Engineering at the University of Washington and the Jean Loup Baer Professor of Computer Science and Engineering. She's the director of the IGERT PhD Program in Big Data and Data Science. She's also a Senior Data Science Fellow of the University of Washington eScience Institute. Magdalena's research interests are in the field of database management systems. Her current research focuses on big data management, scientific data management, and cloud computing. Magdalena holds a Ph.D. from the Massachusetts Institute of Technology (2006). She is a Microsoft Research New Faculty Fellow (2007), received an NSF CAREER Award (2009), a 10-year most influential paper award (2010), an HP Labs Research Innovation Award (2009 and 2010), a Rogel Faculty Support Award (2006), a Microsoft Research Graduate Fellowship (2003-2005), and multiple best-paper awards.

Keynote

Many thanks to everyone who devoted their time & energy to make VLDB 2015 possible.

Enjoy the conference!

We thank Reda Al Azmeh for his support in preparing figures and this PC Chair presentation!

Acknowledgement