

## Scalable Cloud Data Management Workshop 2017

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The Fifth Workshop on Scalable Cloud Data Management (SCDM 2017) is co-located with the BTW 2017 conference and tackles the manifold new topics in the area of cloud data management. The workshop is focused on new research challenges for scalable databases and data processing in the context of cloud computing.

### *Motivation*

The increasing adoption of cloud computing for databases and data services introduces a variety of new research challenges. To leverage elastic cloud resources, scalability has to be a fundamental architectural design trait of these new cloud databases. This challenge has manifested in new data models, replication, caching and partitioning schemes, relaxed consistency and transaction guarantees as well as new protocols, APIs and storage services.

This workshop invites submissions about new technologies enabling databases for cloud environments and offering them as services (Database-as-a-Service). We solicit research on novel database designs and their distribution and storage mechanisms as well as scalable data and data-processing services. The application side of cloud databases is equally important, as it might impose new programming models, APIs and web-enabled interfaces. We are convinced that bringing together cloud computing, service design and data architectures in this workshop will contribute to this exciting new field.

Topics of interest include, but are not limited to:

- Database as a Service, Multi-tenancy
- Elasticity and Scalability for Cloud Data Management Systems
- New Protocols, Service Interfaces and Data Models for Cloud Databases
- Polyglot Persistence, NoSQL, Schemaless Data Modeling, Integration
- Data-Centric Web-Services, RESTful Data Services
- Database Architectures for Mobile and Web Clients
- Content Delivery Networks, Caching, Load-Balancing, Web-scale workloads
- Virtualization for Cloud databases, Storage Structures and Indexing
- Frameworks and Systems for Parallel and Distributed Computing
- Scalable Machine Learning, Analytics and Data Science
- Resource and Workload Management in Cloud Databases
- Tunable and Eventual Consistency, Latency
- High Availability, Reliability, Failover

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- Transactional Models for Cloud Databases
- Query Languages and Processing, Programming Models
- Consistency, Replication and Partitioning
- CAP, Data Structures and Algorithms for Eventually Consistent Stores

The goal of this first German version of the Scalable Cloud Data Management workshop is, to particularly bring together the community of European researchers that are concerned with building, improving and evaluating cloud-based databases and data processing systems. The workshop offers the opportunity to present current research, exchange ideas, discuss trends and form new cooperations. Five high quality full papers were accepted for publication in SCDM 2017 that range from surveys to the design and implementation of modern cloud databases.

We would like to thank all members of the program committee that made this workshop possible and provided insightful reviews to the authors. We are looking forward to a successful workshop with interesting presentations and lively discussions.

## **1 Workshop Organizers**

Felix Gessert, University of Hamburg  
Norbert Ritter, University of Hamburg

## **2 Program Committee**

Andreas Thor, University of Leipzig  
Armin Roth IBM  
Ching Hsien (Robert) Hsu, Chung Hua University  
Eiko Yoneki, University of Cambridge  
Fabian Panse, Universität Hamburg  
Haopeng Chen, Shanghai Jiao Tong University  
Harald Kosch, Universität Passau  
Holger Schwarz, Universität Stuttgart  
Jiannan Ouyang, University of Pittsburgh  
Keke Chen, Wright State University  
Liqiang Wang, University of Wyoming  
Meike Klettke, Universität Rostock  
Nils Gruschka, Kiel University of Applied Science  
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Sameh Elnikety, Microsoft Research  
Sébastien Mosser, Université Nice-Sophia Antipolis  
Sherif Sakr, University of New South Wales  
Shigeru Hosono, NEC Knowledge Discovery Research Lab.  
Shiping Chen, CSIRO

Stefan Dessloch, University of Kaiserslautern  
Uta Störl, Hochschule Darmstadt