Preface of the 33rd Italian Symposium on Advanced Database Systems

Abstract

This volume contains the proceedings of the 33rd Italian Symposium on Advanced Database Systems (SEBD – Sistemi Evoluti per Basi di Dati), held in Ischia (Italy) from 16 to 19 June 2025

Preface

The 33rd edition of the Italian Symposium on Advanced Database Systems (SEBD – Sistemi Evoluti per Basi di Dati) was held in Ischia (Italy) from 16 to 19 June 2025. This volume collects the papers selected for presentation at the conference.

SEBD is the major annual event of the Italian database research community at large, as it is thought of as a forum for all those people, in academia and industry, that are interested in data management and its wide range of applications, to meet, discuss, and exchange experiences.

SEBD 2025 covered topics including data-driven decision making, data quality, curation and fairness, interpretable data-centric AI, natural language processing, knowledge representation, information retrieval and social networks, privacy and security, and cloud/IoT applications.

The scientific program of SEBD 2025 was organized into nine sessions, one doctoral consortium session and one poster session, including the presentations of 58 peer-reviewed papers. The program also featured three keynote talks by highly renowned international researchers: Moshe Y. Vardi (Rice University, Houston, Texas) on the theory of regular queries, Phokion G. Kolaitis (University of California Santa Cruz) on local consistency and global consistency on annotated data, and Paolo Papotti (EURECOM, Campus SophiaTech, Biot, France) on SQL and large language models. Furthermore, SEBD 2025 included the Doctoral Consortium, chaired by Ilaria Bartolini (Università di Bologna), Gianluca Cima (Università degli Studi di Roma Sapienza) and Massimo Mecella (Università degli Studi di Roma Sapienza), with 8 presentations followed by extensive discussions and a dedicated panel. Finally, SEBD 2025 also featured the first edition of the SEBD Research Project Exhibition, chaired by Massimo Mecella, Francesca de Luzi, and Flavia Monti (Università degli studi di Roma Sapienza), with 7 poster presentations, creating a warm environment to find potential research partners and foster existing relationships.

SEBD 2025 assigned the *"Taste of Time"* Award (TTA), introduced in 2022 to recognize seminal contributions, and retracing the history of the Italian database community by selecting significant (and *tasty*) papers from past editions of SEBD. The ultimate goal of the TTA is to keep alive the tradition of the SEBD community, to contextualize the most important research lines and make sense of their evolution, and to inspire new generations of researchers by discussing

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SEBD 2025: 33nd Symposium on Advanced Database Systems, June 16-19, 2025, Ischia, Campania, Italy

how key challenges have been addressed, which ones are still open, and what can follow-up from them. The candidate papers for the SEBD 2025 TTA have been selected from:

6th SEBD 1998: Ancona
7th SEBD 1999: Como
8th SEBD 2000: L'Aquila
9th SEBD 2001: Venezia

The SEBD 2025 TTA Committee, chaired by Riccardo Torlone (Università Roma Tre), decided to assign the award to the authors of the following papers:

Diego Calvanese, Giuseppe De Giacomo, Maurizio Lenzerini, Moshe Y. Vardi: Rewriting of Regular Path Queries. SEBD 1999: 213-224

Valter Crescenzi, Giansalvatore Mecca, Paolo Merialdo: The RoadRunner Web Data Extraction System. SEBD 2001: 281-288

The SEBD 2025 TTA Honorable Mention is for the following paper:

Ilaria Bartolini, Marco Patella: Correct and efficient evaluation of region-based image search. SEBD 2000: 289-302

The SEBD community organized and largely participated in a special event held at SEBD 2025, to celebrate the forthcoming retirement of prof. Maurizio Lenzerini. Maurizio is one of the key figures in knowledge representation (KR), a branch of AI focused on representing information about the world in a form that enables computers to reason autonomously and solve complex problems. With a scientific background in databases, he was among the first to recognize that databases could be understood as KR systems. He established one of the world's leading KR research groups at the Università degli Studi di Roma "La Sapienza", and, through his pioneering vision, helped shape the trajectory of KR as a discipline. He is among the most cited computer scientists in Italy and has received numerous honors, including being named an ACM Fellow, AAAI Fellow, EurAI Fellow, ER Fellow, and Member of the Academia Europaea.

Distinguished representatives of the international and national research on databases testified to the importance of Maurizio's contributions to research. All of his numerous doctoral students paid tribute to Maurizio as a mentor. The entire community thanked Maurizio for the example he set, with his constant commitment to teaching.

SEBD 2025 was enriched with a vibrant social program, as in the SEBD tradition, that involved all 128 participants from 32 research institutions. It included team-building football matches, an archaeological visit to the Aragonese castle and an adventurous boat ride to the social dinner.

We want to thank all the speakers for making SEBD 2025 a great event, and we are grateful to the members of our Steering, Program, Doctoral, and Organization Committees, as well as Consulta Umbria, for timely providing their support in all organizational and technical aspects.

Domenico Lembo
Davide Martinenghi
Donatella Firmani
Antonella Poggi

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