



21st Conference on Database Systems for Business, Technology and Web

**March 3 – 7, 2025,
University of Bamberg, Germany**

The BTW conference is the most important database conference in the German-speaking area, organized by the Database and Information Retrieval special interest group of the German Informatics Society (GI). Every two years since 1985, it has served as a central forum for the exchange of information between scientists, practitioners, and users on topics of database and information system technology.

Featuring:

- A high-quality, peer-reviewed **research program** (short and long papers) in five topic tracks: **Database Technologies and Systems**, **Text, Semi-structured Data and IR**, **Data Engineering**, **Data Science & Machine Learning**, **Database Languages & Theory**, and **Innovations and Use Cases**, conference proceedings published in Springer LNBI
- An **Industry program** on real-world applications of industrial-strength data management systems and experiences
- A **Data Science Challenge** integrated into a semester-long seminar for students and educators
- Interactive **Demonstrations and Poster** session
- Five community-driven **Workshops** on latest developments in data systems
- The **1st Symposium on Data Driven Smart City Science and Transferability (DaSciT)**, bridging research and applications in the domain of urban transformation, and Smart City Walking Tours

All this in a stunning location, the UNESCO World Heritage Site of Bamberg!



GESELLSCHAFT
FÜR INFORMATIK



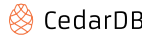
btw2025.gi.de



info.btw25@uni-bamberg.de



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our sponsors!**



Welcome Message

The 21st symposium “Database Systems for Business, Technology and the Web” (BTW’25) of the Department of Databases and Information Systems (DBIS) of the German Informatics Society (GI) will take place from March 3 to 7, 2025 at the University of Bamberg (<https://btw2025.gi.de/>). BTW’25 continues the long tradition of this conference series, which has been the largest database conference in the German-speaking world for more than 40 years and thus the largest meeting of scientists working in the database field.

The history of the University of Bamberg dates back to 1647, when the *Academia Bambergensis* was founded, initially focusing on philosophy and theology. In 1773, it was expanded into the *Universitas Ottoniano-Fridericiana*, also offering law and medicine. However, following secularization in 1803, the institution was reduced to a *Lyzeum*, losing its law and medical faculties. In 1923, the institution transitioned into the *Philosophisch-Theologische Hochschule*, continuing its focus on philosophy and theology. Parallel to this, between 1958 and 1972, the *Pädagogische Hochschule* (teacher training college) operated as a separate entity of the University of Würzburg. Both institutions were united in 1972 (*Gesamthochschule*). This transition ended in 1979 by officially (re-)attaining *university* status. Further advancements followed in the 21st century, with the establishment of the *Department of Information Systems and Applied Informatics (WIAI)* in October 2001. In August 2012, the university expanded with the opening of a *new building*, where the BTW 2025 takes place.

BTW 2025 main program received 49 research paper submissions, of which 21 have been accepted as full papers and 6 as short papers. The submissions to the main scientific program could be assigned to one or more of five tracks, which consistently cover the technical scope of the database community: “Database Technologies and Systems”, “Text, Semi-structured Data and IR”, “Data Engineering, Data Science and Machine Learning”, “Database Languages and Theory” and “Innovations and Use Cases”. The review process included an additional feedback and revision phase (as is now internationally practiced), which allowed discussions of the contributions in depth. We would especially like to thank all members of the program committee for preparing the reviews and the track chairs for preparing the meta-reviews. A total of 196 reviews were written during this selection process; we would like to emphasize that all reviews were received in time for the PC meeting. For the third time, the review process paid particular attention to the reproducibility of scientific artifacts, i.e. experiments and analyses. The contributions that could be successfully reproduced are marked accordingly in these conference proceedings.

The full conference program also includes 13 industry papers (8 full/5 short) and 17 research demonstrations. Each day of the conference also features a plenary keynote presentation. Julia Stoyanovich (New York University, Tandon School of Engineering) will open the conference with her keynote on “Transparency and Fairness

in ML-Based Decision Making” and Kai-Uwe Sattler (University of Ilmenau), who will conclude BTW’25 with his keynote on “Scalable Data Management for Future Hardware”. The “Fresh Thinking Talks” (first introduced at BTW’21) will provide innovative impulses on new topics for the database community. Martin Potthast (University of Leipzig) will speak on the topic of “Intelligent Language Technologies”. Ulrike Lucke (University of Potsdam) will present current developments in NFDI Computer Science and show how these developments can be used and identify open research questions for the database community.

The main conference is flanked by the symposium on Data Driven Smart City Science and Transferability (DaSCiT) and five workshops on topics of particular interest to the community.

Andreas Henrich, Daniela Nicklas, Maximilian E. Schüle
University of Bamberg — BTW 2025 General Chairs

Meike Klettke, University of Regensburg
Ralf Schenkel, University of Trier
BTW 2025 Program Committee Chairs

Klaus Meyer-Wegener, FAU Erlangen
BTW 2025 Honorary Chair

Contact

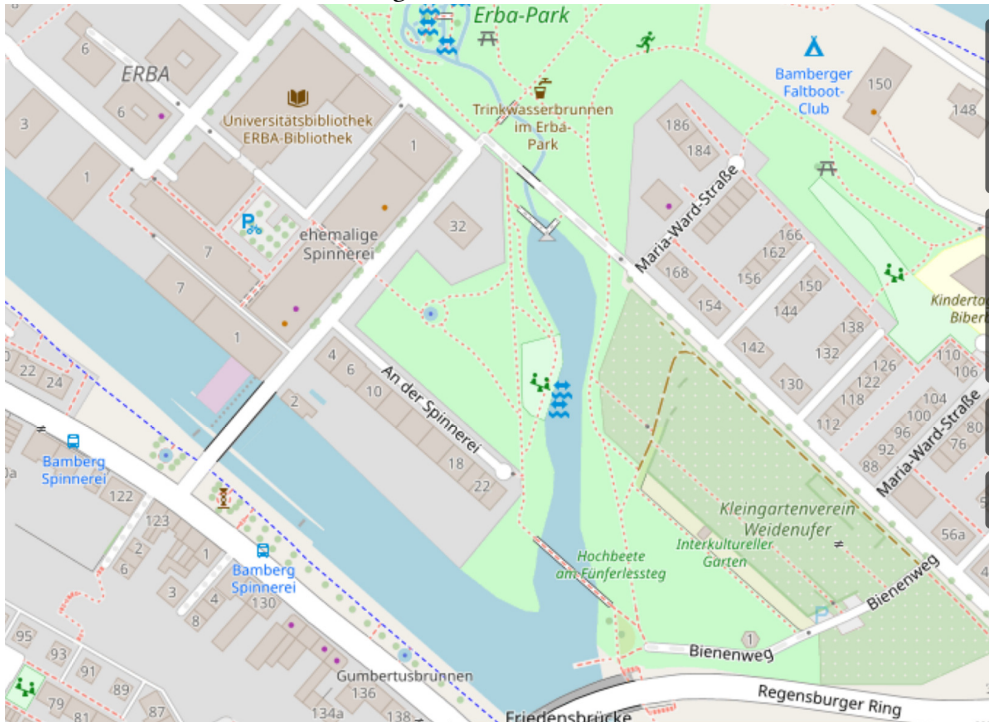
Conference Phone: +49 951/863-3597
Conference E-Mail: info.btw25@uni-bamberg.de



Location

The conference will take place at the University of Bamberg (Faculty of Information Systems and Applied Computer Sciences). The beautiful ERBA campus was created for the garden exhibition 2012.

An der Weberei 5, 96047 Bamberg

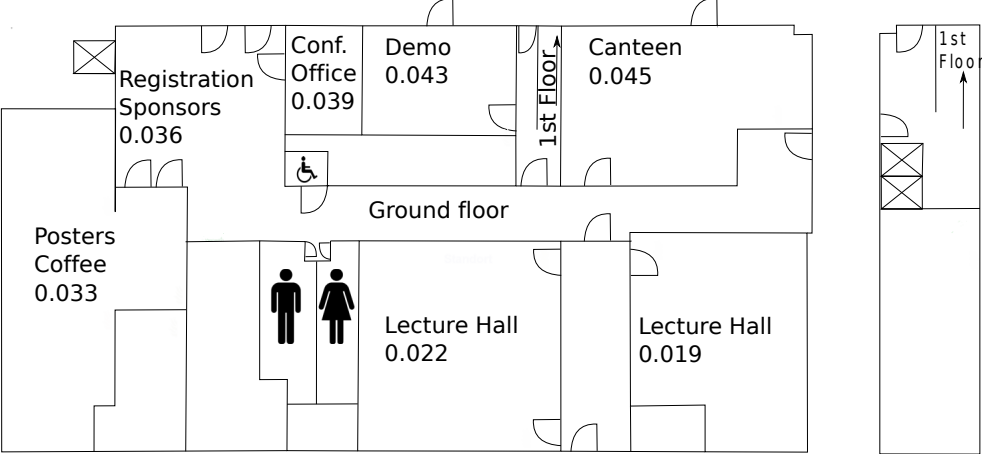


Map data (c) OpenStreetMap contributors

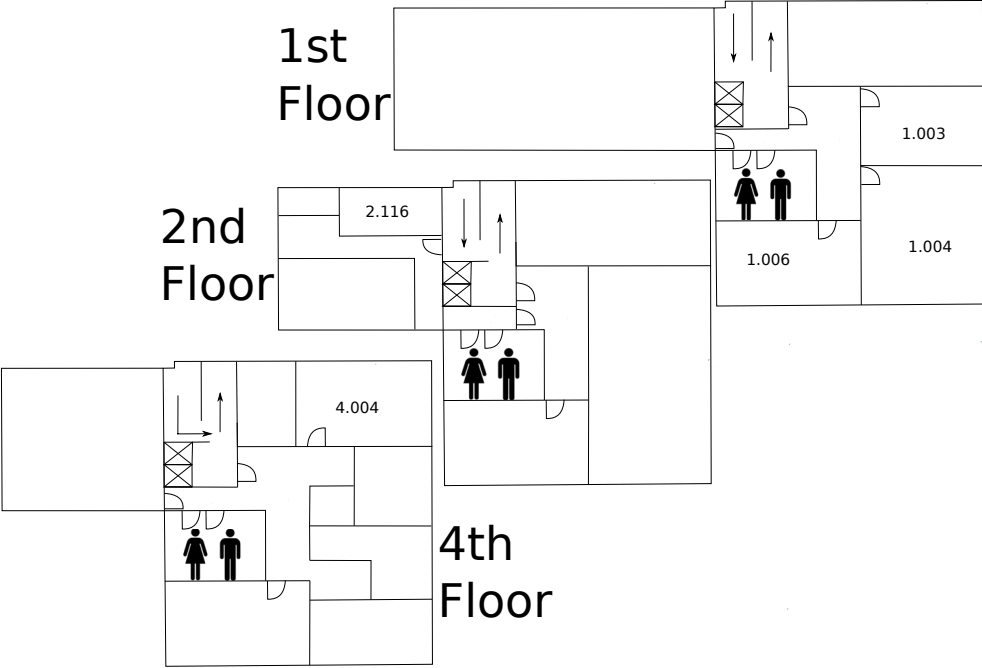


Room Plan

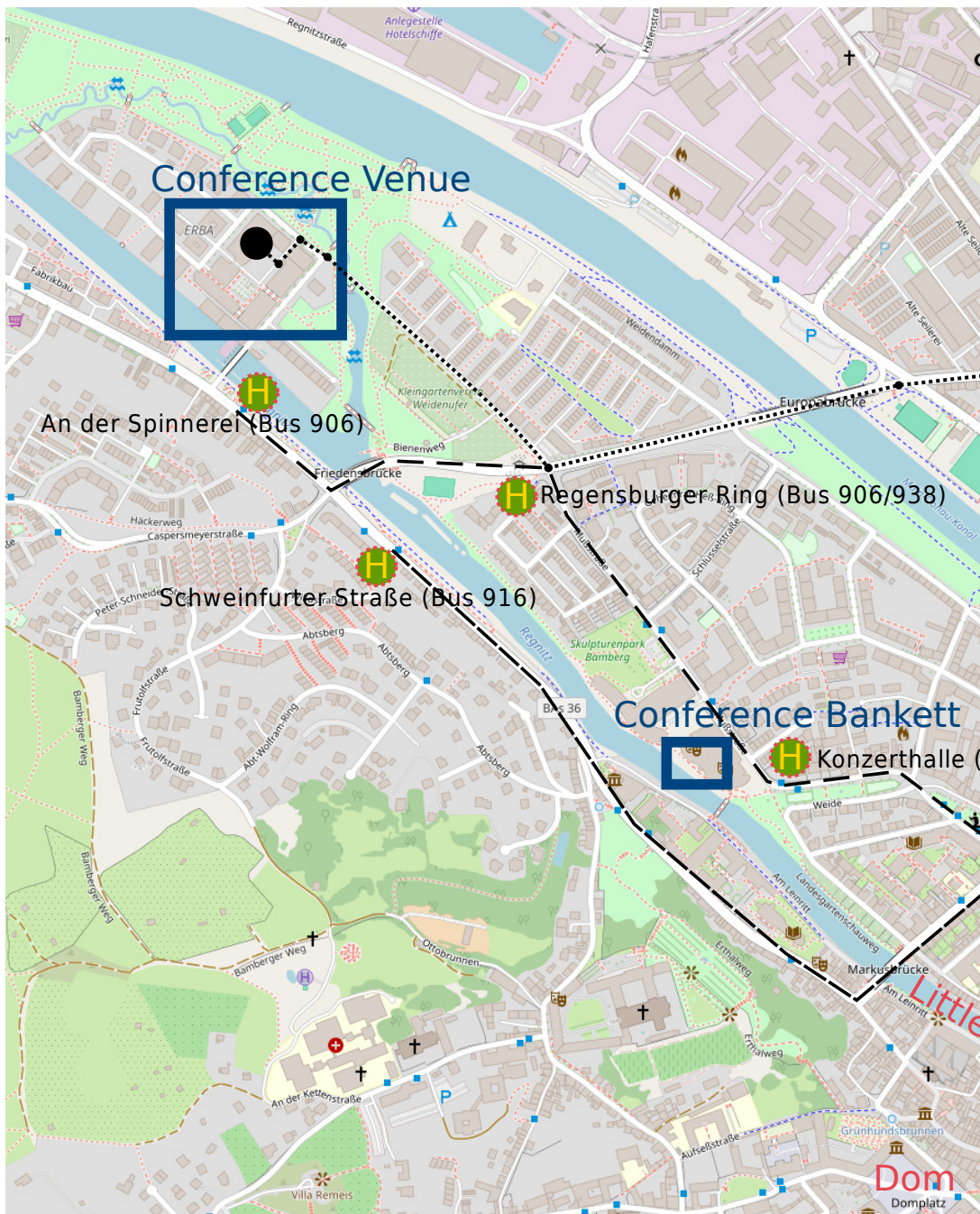
Forecourt



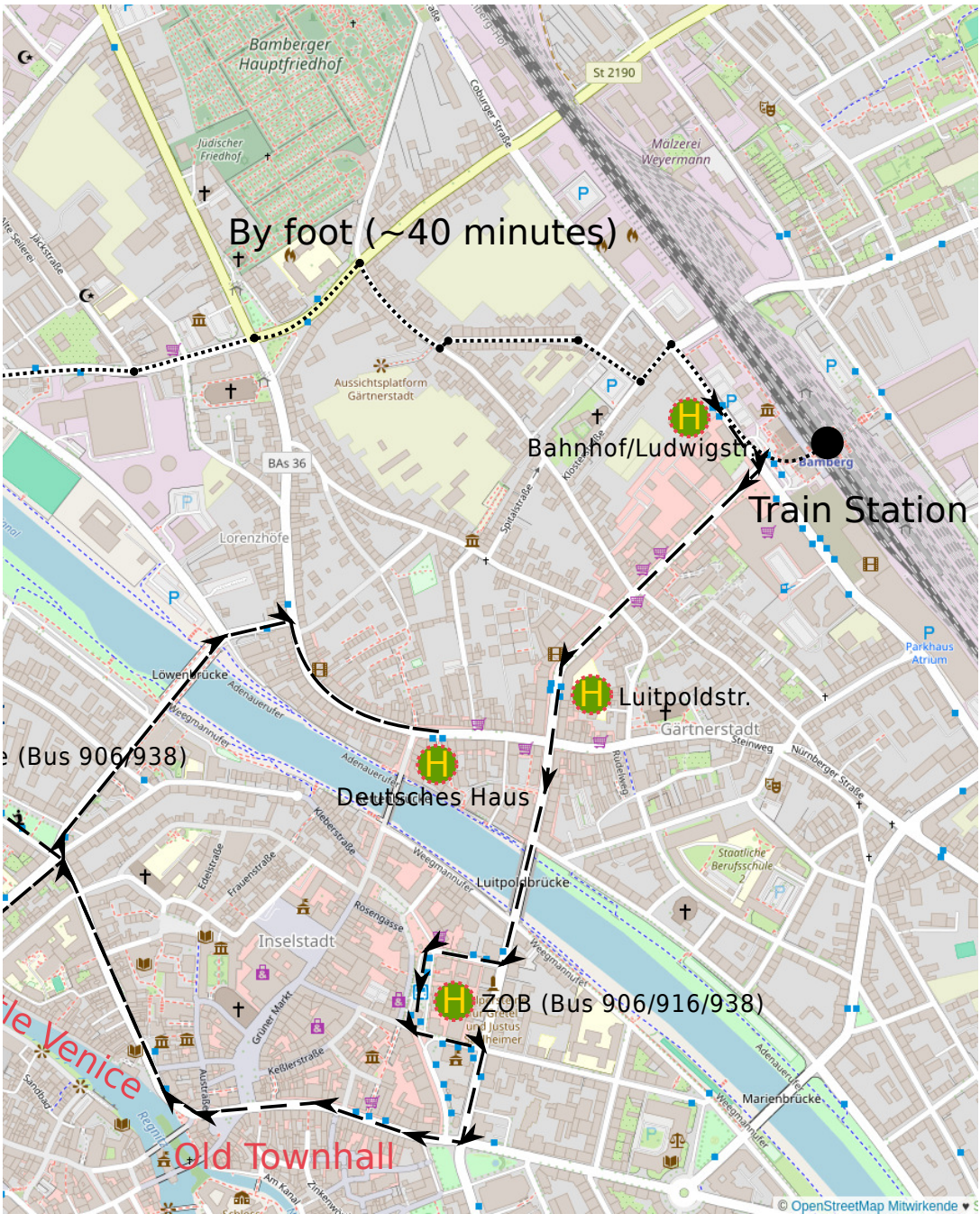
An der Weberei



Street Map



Street Map



Transport to/in Bamberg

Conference (Tu-Fr): An der Weberei 5, 96047 Bamberg

DaSCiT (Mo): Nathan-R.-Preston-Straße 1 96052 Bamberg

By Train

Bamberg is perfectly reachable by train as part of the ICE lines 18/28 Munich - Nuremberg - Erlangen - Bamberg - Erfurt - Halle/Leipzig - Berlin - Hamburg.

Train station: Ludwigstr. 6, 96052 Bamberg

Public Transport in Bamberg

- Conference (Tu-Fr): "An der Spinnerei" (line 906), "Schweinfurter Straße" (line 916), "Regensburger Ring" (line 906/938)
- Dinner (Th): Konzerthalle (line 906)
- DaSCiT (Mo): Lagarde Kaserne (line 901)

From Bamberg train station you can either walk by foot (40 minutes), drive by taxi (10 minutes) or take the bus (30 minutes) with an interchange at ZOB. At Bamberg train station, you have to exit through the main entrance, cross the street, turn right, walk to the bus station "Bahnhof/Ludwigstr", take any bus and change at "ZOB" to line 906 (or 916).

Unfortunately, the Bamberg bus network, which replaced the superior light rail in 1922, is not straight-forward: the bus stations next to the conference venue are "An der Spinnerei" (line 906), "Schweinfurter Straße" (line 916), and "Regensburger Ring" (line 906/938). Lines 906/916 work during the day, line 938 works during the evening. There are also special unreliable bus services (line 994/995) for school children connecting the train station with "An der Spinnerei".

In the direction back from the conference venue to the train station, you should leave at "Deutsches Haus" from where you can walk by foot or enter any bus at "Luitpoldstraße" to travel one station.

The DaSCiT symposium on Monday takes place at Lagarde, reachable by bus 901.

The Dinner on Thursday takes place next to the conference venue in the congress hall, reachable by a ten minutes walk. The closest bus station is "Konzerthalle".

Sharing Services

The local service for sharing electric scooters is Zeus. Usage requires the installed app available for Android or iOS.

Taxi

Taxis wait on the train station forecourt (right to the main entrance). On the way back you can call or write to Taxi Bamberg: 15015@Taxi-Bamberg.de, 0951 / 15015.

By Car - Parking

Right behind the university building, there are some parking lots free of charge. However there is an underground parking within the university building's basement (fee: 1.5€/hour, 16€/day). The car's licence number is used for fee calculation. Make sure to have paid the fee at the vending machine on the forecourt before leaving the car park as there is no physical barrier (fine: 56€).

By Long-Distance Bus

Long-distance coaches stop at the bus station in the north of the train station.

By Plane

Bamberg-Breitenau Airfield is a special airfield for sport and business jets up to 10 MTOW (PPR request). The next international airports are Nuremberg (by train: change at Nuremberg Central station to/from U2) and Frankfurt (by train: change at Würzburg).

By Ship

We do have a harbour with a cruise ship terminal right across the Main-Donau channel... Also, tourist boats stop next to the university although season starts in April...



Social Events

Monday, 18:00: Welcome Reception Smart City Bamberg

The Welcome Reception of the Smart City Bamberg takes place at Stadt:Raum (Promenadestraße 6a, 96047 Bamberg) close to the ZOB central bus station.

Tuesday, 17:00: Guided (Smart) City Tour – Experience Bamberg’s Future

- Meeting Point: Conference Foyer WE5/0.036
- Start: 17:00, directly after the workshops / talks (groups leave as soon as their session ends, latest start at 17:30)

Join us for a unique guided tour that blends Bamberg’s rich history with its smart future! Led by certified city guides, this insightful walk will not only show you Bamberg’s historical city center that is recognized as a UNESCO World Heritage Site for its well-preserved medieval architecture and unique city layout, but also take you to three exciting Smart City stations:

- **Smart City Office/Stadt:Raum** (ZOB, Promenadestraße 6a, 96047 Bamberg): Meet Bamberg’s Smart City team and get insights into their innovative projects.
- **Obere Brücke**: Learn how sensors for visitor counting were installed on this famous building despite heritage conservation regulations.
- **University Aula** (Dominikanerstraße 2A, 96049 Bamberg): Discover cutting-edge digital monument technologies, including Bamberg’s digital twin.

The tour concludes in Bamberg’s city center, perfectly timed for you to head straight to the Distributed Bamberg Dinner!

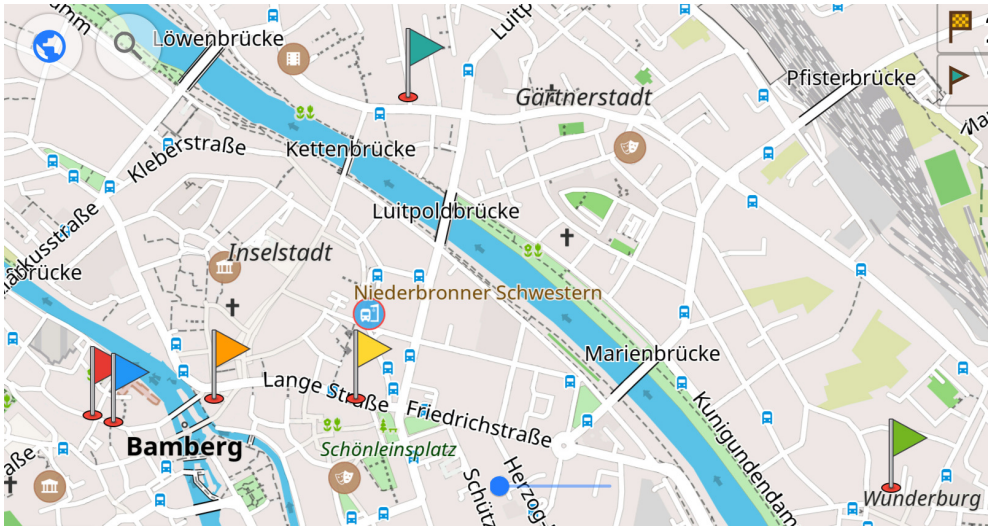


Tuesday, 19:30: Distributed Bamberg Dinner (self-paid)

Bamberg is famous for many family-run breweries producing hand-crafted traditional and innovative beer in town. Since we couldn't decide which of the many breweries to feature, we reserved tables for 10 to 20 BTW people in many different venues at 19:30. You can pick "tickets" representing a reservation at the conference desk until 17:00, and you will meet other BTW participants there! The tickets are free, and the meal and beer are self-paid. We just offer the distribution function.

Beware: Since the 4.3. is carnival Tuesday, those tables were not easy to get. So, if you pick a reservation ticket at the conference desk, be there at the reserved time; otherwise, the table might be given to other guests.

- Alt Ringlein, Dominikanerstraße 7, 96049 Bamberg (blue flag)
- Keesmann, Wunderburg 5, 96050 Bamberg (green flag)
- Brüderla, Obstmarkt 1, 96047 Bamberg (orange flag)
- Fässla, Obere Königsstr. 19-21, 96052 Bamberg (dark green flag)
- Kachelofen, Obere Sandstr. 1, 96049 Bamberg (red flag)
- Sternla, Lange Str. 46, 96049 Bamberg (yellow flag)



Wednesday, 18:00: Poster/Demo Reception

WE5/0.033, WE5/0.036 and WE5/0.043

Thursday, 19:00: Dinner

Hegelsaal of the conference and congress center:
Mußstraße 1, 96047 Bamberg

At the cold buffet

- Rapunzel salad with yoghurt dressing and raspberry dressing
- Boskop, crispy bacon, feta in oil
- Parmesan shavings, olives, cherry tomatoes
- Glazed walnuts, grilled peppers and courgettes
- Honey aubergines, fiery white wine carrots
- mushroom caps in balsamic vinegar
- Selection of baguettes

From the hot buffet

- Butter-tender Beefribbs with braised sauce, colourful root vegetables and potato trio: Annabell, Blue Swede, sweet potatoes
- Beetroot gnocchi with spinach leaves and gorgonzola sauce (vegetarian)
- Bamberg onion stuffed with pearl cous-cous and vegetables, served with tomato sugo (vegan)

Dessert from the buffet in a glass

- Curd cream with honey and thyme under almond crumble
- Dark chocolate mousse with cherries



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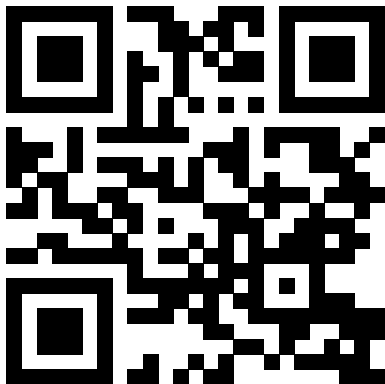


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Program at a Glance

Overview	Mo, 3.3.25		Tu, 4.3.2025		We, 5.3.2025		Th, 6.3.2025		Fr, 7.3.2025	
	Location: Lagarde 1, Bamberg		Location: ERBA, An der Weberei 5, Bamberg							
08:00			Registration	Registration				Registration		
08:30	Registration			Registration		Registration		Registration		
09:00	DaSCiT Symposium	Early Career Workshop	Workshops Session 1	Opening		Industry-Keynote		Research 7		
09:30				Keynote				Dissertation Awards		
10:00						Best Student Paper				
10:30			Break		Break		Break		Break	
11:00			Workshops Session 2	Research 1	MongoDB-Escape	Research 4	Industry 2	Closing Keynote		
11:30										
12:00							Closing			
12:30			Lunch (Bags)		Lunch		Lunch		Lunch (Bags)	
13:00			Workshops Session 3		FTT1		FTT2			
13:30										
14:00					Research 2		Industry 1			
14:40			Break							
15:00			Workshops Session 4/FG-Treffen		Break		Break			
15:30					Research 3 + Minute Madness	Tutorial 1	Research 6	Tutorial 2		
16:00										
16:30										
17:00							Safe journey!			
17:30			Break							
18:00										
18:30	Smart City Reception		Smart City Guided City Tour		Reception: Demo / Student Poster / Data Science Challenge					
19:00										
19:30			Distributed Bamberg Dinner (self-paid)		Dinner with Award Ceremonies					
20:00										
20:30										
23:30										



2025-03-03 09:00 — 2025-03-03 09:15

DaSCiT Opening

Location: Lagarde: Event Space

Chair: Maria A. Wimmer

2025-03-03 09:15 — 2025-03-03 10:00

DaSCiT Keynote 1

Location: Lagarde: Event Space

Chair: Leonie Valentina Ackermann

2025-03-03 10:00 — 2025-03-03 11:00

DaSCiT Session 1: Research papers and experience reports

Location: Lagarde: Event Space

Chair: Maria A. Wimmer

Commercialization for Public Value - A Path for Civic Technology Innovation to Diffuse Into Public Administrations

Bauer, Luca T. (University of Bremen, Germany)

Interact360: A new Paradigm for Interacting with a Future Smart City

Mathuseck, Lars; Lange, Sebastian; David, Klaus (Universität Kassel, Germany)

2025-03-03 11:00 — 2025-03-03 11:30

Coffee Break

2025-03-03 11:30 — 2025-03-03 13:00

DaSCiT Session 2: Research paper and solutions

Location: Lagarde: Event Space

Chair: Leonie Valentina Ackermann

Customer Centricity in the Smart City - Aspects of an participative approach with service orientation

Schachtner, Christian (Hochschule RheinMain, Germany)

Verwendung von MobiTopp als Grundlage für die Generierung von Bewegungsverläufen mit SUMO

Kneis, Lukas (FZI Forschungszentrum Informatik, Germany)

SensBee - A Sensor Data Backend for Smarty City Applications

Räth, Timo; Martins, Laurin; Sattler, Kai-Uwe (TU Ilmenau, Germany)

2025-03-03 13:00 — 2025-03-03 14:00

DaSCiT Lunch

2025-03-03 14:00 — 2025-03-03 14:45

DaSCiT Keynote 2

Location: Lagarde: Event Space

Chair: Franz Schäfer

2025-03-03 14:45 — 2025-03-03 15:45

DaSCiT Poster Session

Location: Lagarde: Project Space

Chair: Adele Wecker

How to Travel the City? - Making Public Transport Travel Times Explorable for Everyone

Panzer, Lukas; Beck, Fabian (University of Bamberg, Germany)

On-demand Context Aware Bus Route Profiling: A Study on Enhancing Urban Mobility

Bhandari, Bishal; Das, Debasree (University of Bamberg, Germany, Germany)

User-Driven Placement of Urban Digital Twin 3D-Models for Augmented Reality

Öder, Bernhard; Jörg, Sophie (Otto-Friedrich-Universität Bamberg, Germany)

Ageing Smart DSS: Spatial Decision-Support-System für die kommunale Planung

Berg, Matthias; Hassenfratz, Benjamin (Fraunhofer IESE, Germany)

App LitSpatz for literary walks to promote primary students' text comprehension, perspective taking and related skills: Experiences, findings and implications

Heyne, Nora; Pfof, Maximilian; Kuntner, Peter (University of Bamberg, Germany)

Smart Cities as enablers of collaborative open-source software development

Weidner, Christian (Universität Potsdam, Germany)

Gender-sensitive urban planning: Connections between gender, perception of safety in public space, and environmental design

Helgerth, Katharina Anna Christina; Schütz, Astrid (University of Bamberg, Germany)

2025-03-03 15:45 — 2025-03-03 16:00

Coffee Break

2025-03-03 16:00 — 2025-03-03 17:30

DaSCiT Interactive Session

Location: Lagarde: Project Space

Chair: Leonie Valentina Ackermann

2025-03-03 18:00 — 2025-03-03 19:30

Welcome Reception Smart City Bamberg at Stadt:Raum

Location: Stadt:Raum

2025-03-04 09:00 — 2025-03-04 10:30

Workshop on Advances in Cloud Data Management 1

Location: WE5/00.019

Chair: Jana Giceva

09:00 – 09:45 Peter Boncz CWI Amsterdam Keynote; 09:50 – 10:10 Viktor Leis TU München; 10:10 – 10:30 Benjamin Wagner Firebolt

MotherDuck: DuckDB backed by the cloud

Boncz, Peter (CWI, Netherlands, The)

The Future of the Cloud and the Future of Cloud Databases

Leis, Viktor (Technische Universität München, Germany)

Firebolt Transactions: Consistency, Performance and Availability - Pick All Three

Wagner, Benjamin (Firebolt)

Workshop on Big (and Small) Data in Science and Humanities 1

Location: begins in WE5/00.022, last 20 minutes in WE5/04.004

Chair: Stefanie Scherzinger

The session starts at 09:00am with a joint keynote together with the Workshop on Data Engineering for Data Science (DE4DS) in room WE5/00.022. At around 10:05am we will then go to room WE5/04.004 for our first workshop presentation starting at 10:10am.

Perspectives on Human-Data Interaction

Koesten, Laura (University of Vienna, Austria)

The Case for XCIP: Bridging User and Data Provider Expectations in Research Infrastructures

Brandenstein, Dominik (1); Beilschmidt, Christian (2); Drönnner, Johannes (2); Glombiewski, Nikolaus (1); Mattig, Michael (2); Seeger, Bernhard (1) (1: University of Marburg, Dept. of Mathematics and Computer Science, Hans-Meerwein-Str. 6, 35032 Marburg, Germany; 2: Geo Engine GmbH, Am Kornacker 68, 35041 Marburg)

Workshop on Data Engineering for Data Science 1

Location: WE5/00.022

Chair: Stefanie Scherzinger

ALPINE: Abstract Language for Pipeline Integration and Execution

Restat, Valerie; Störl, Uta (University of Hagen, Germany)

Workshop on ML4Sys and Sys4ML 1

Location: WE5/01.004

Opening remarks Andreas/Matthias ; Maximilian Schüle (Uni Bamberg) Blue Elephants Inspecting Pandas: Inspection and Execution of Machine Learning Pipelines in SQL; Maximilian Böther (ETH Zurich) Modyn: Data-Centric Machine Learning Pipeline Orchestration; Stefan Graßberger (TU Berlin)

Workshop on Novel Data Management Ideas on Heterogeneous Hardware Architectures 1

Location: WE5/01.006

Poster: Offset-Value Coding using SIMD Intrinsics

Schmeller, Florian (1); Rabl, Tilmann (1); Graefe, Goetz (2) (1: HPI, University of Potsdam, Germany; 2: Google, USA)

Poster: Dynamic Write-Mode Fragmentation for Non-Volatile Memory Simulation

Rau, Janina; Biebert, Daniel; Hakert, Christian; Chen, Jian-Jia (TU Dortmund University, Germany)

Poster: Embracing NVM: Optimizing B ^{ϵ} -Tree Structures and Data Compression in Storage Engines

Karim, Sajad (1); Wünsche, Fia (1); Broneske, David (2); Kuhn, Michael (1); Saake, Gunter (1) (1: Otto-von Guericke University Magdeburg, Germany; 2: German Centre for Higher Education Research and Science Studies, Hanover, Germany)

2025-03-04 10:30 — 2025-03-04 11:00

Coffee Break

2025-03-04 11:00 — 2025-03-04 12:30

Workshop on Advances in Cloud Data Management 2

Location: WE5/00.019

11:00 – 11:20 Fabian Hueske Confluent; 11:20 – 11:50 Andreas Kipf TU Nürnberg; 11:50 – 12:10 Tomas Karnagel Observe; 12:10 – 12:30 Panos Parchas AWS Redshift

Preparing Data for Analytics: Exploring Modern Approaches to Data Pipelines

Hüske, Fabian (Confluent, Germany)

Workload-Driven Indexing in the Cloud

Kipf, Andreas (University of Technology Nuremberg, Germany)

OBSERVE - Petascale Streaming for Observability

Karnagel, Tomas (Observe, Switzerland)

Query acceleration via auto-tuning in Amazon Redshift

Workshop on Big (and Small) Data in Science and Humanities 2

Location: WE5/04.004

Chair: Bernhard Seeger

We have scheduled 20 minutes for each presentation, including the discussion. This leaves some time at the end for a general discussion if required.

ODDA: Ontology-Driven Data Acquisition

Hanika, Caspar Felix; Sauerer, Dominik; Lenz, Richard (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

The Use Case of Ontology-Driven Data Acquisition for Machine Learning-Accelerated Catalyst and Reaction Design

Stangl, Philipp (1); Lenz, Richard (2); Haumann, Marco (3) (1: Friedrich-Alexander-Universität (FAU), Lehrstuhl für Chemische Reaktionstechnik, Erlangen, Germany; 2: Friedrich-Alexander-Universität (FAU), Lehrstuhl für Informatik 6 - Datenmanagement, Erlangen, Germany; 3: Research Centre for Synthesis and Catalysis, Department of Chemistry, University of Johannesburg, South Africa)

An overview of current ontologies for interdisciplinary ecosystem, biodiversity and agricultural research

Plamper, Philipp; Hauke, Thorsten; Groß, Anika (Hochschule Anhalt University of Applied Sciences, Germany)

Semantic technologies for interdisciplinary research: A case study on improving data synthesis and integration in the biodiversity domain

Al Mustafa, Tarek (1,3); Zander, Franziska (1,2); Schellenberger Costa, David (3,4); Kleinsteuber, Erik (1,3); Wirth, Christian (3,4); König-Ries, Birgitta (1,3) (1: Friedrich Schiller University Jena, Heinz Nixdorf Chair for Distributed Information Systems, Germany; 2: Friedrich Schiller University Jena, Senckenberg Jena Centre for Plant Form and Function (SJeP), Germany; 3: German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Leipzig, Germany; 4: University of Leipzig, Department of Special Botany and Functional Biodiversity, Germany)

Workshop on Data Engineering for Data Science 2

Location: WE5/00.022

Chair: Marina Tropmann-Frick

SeeME: A General, Reusable Graph Schema for Data Preprocessing of Eye-Tracking Data

Hausler, Dominique; Landes, Jennifer; Klettke, Meike (University of Regensburg, Germany)

Impact of Preprocessing on Classification Results of Eye-Tracking-Data

Landes, Jennifer (1); Klettke, Meike (1); Köppl, Sonja (2) (1: Universität Regensburg, Germany; 2: Hochschule Neu-Ulm)

SQLinked - A Hybrid Approach for Local and Database-Remote Program Execution

Heinz, Florian; Schildgen, Johannes (OTH Regensburg, Germany)

A Comprehensive Pre-validation Tool for Scientific Image Datasets

Bahry, Ella; Albrecht, Jan Philipp; Otto, Maximilian; Schmidt, Deborah (Max Delbreuck Center, Helmholtz Imaging, Berlin, Germany)

Workshop on ML4Sys and Sys4ML 2

Location: WE5/01.004

Stefan Hagedorn Steffen Kläbe (Actian) Experiences of Implementing In-Database TPCx-AI; Akanksha Vijayvergiya (Uni Passau) Time-Series Analysis for Life-Science Data; Jan-Micha Bodensohn, Liane Vogel (TU Darmstadt& DFKI) Large Language Models for Enterprise Data Engineering; Thaleia-Dimitra Doudali (IMDEA)

Workshop on Novel Data Management Ideas on Heterogeneous Hardware Architectures 2

Location: WE5/01.006

Tutorial: Understanding Application Performance on Modern Hardware: Profiling Foundations and Advanced Techniques

Mühlig, Jan; Kühn, Roland; Teubner, Jens (TU Dortmund University, Germany)

Tutorial: Unleashing the Intel Data Streaming Accelerator

Berthold, André; Schmidt, Lennart; Lehner, Wolfgang; Schirmeier, Horst (TU Dresden, Germany)

2025-03-04 12:30 — 2025-03-04 13:30

Lunch

2025-03-04 13:30 — 2025-03-04 15:00

Workshop on Advances in Cloud Data Management 3

Location: WE5/00.019

13:40 – 14:00 Ismail Oukid Snowflake; 14:00 – 14:20 Yongluan Zhou Copenhagen University; 14:20 – 14:40 Alexander Böhm SAP; 14:40 – 15:00 Thomas Bodner HPI Potsdam

The Fine Art of Work Skipping

Oukid, Ismail (Snowflake Inc., Germany)

Data Management in Event-Driven Microservice Architectures

Zhou, Yongluan (University of Copenhagen, Denmark)

The challenges of decomposing database systems in the cloud

Böhm, Alexander (SAP SE, Germany)

Data Processing on Elastic Cloud Resources

Bodner, Thomas; Rabl, Tilmann (Hasso Plattner Institute, University of Potsdam, Germany)

Workshop on Big (and Small) Data in Science and Humanities 3

Location: WE5/04.004

Chair: Birgitta König-Ries

We have scheduled 20 minutes for each presentation, including the discussion.
The workshop will end with a general discussion on the topic and concluding remarks.

ADISS: Authority Data Integration Search System

Fruth, Leon; Gradl, Tobias; Henrich, Andreas (University of Bamberg, Germany)

Historic to FAIR: Leveraging LLMs for Historic Term Identification and Standardization

Fillies, Jan Felix Marten (1,2); Teich, Maximilian (3); Karam, Naouel (1,2); Paschke, Adrian (1,2,4); Rehbein, Malte (3) (1: Institute für angewandte Informatik (InfAI), Germany; 2: Freie Universität Berlin, Germany; 3: Chair of Computational Humanities, University of Passau, Germany;; 4: Fraunhofer FOKUS, Berlin, Germany)

Investigating Zero-shot Topic Labelling of Scientific Papers Using LLMs

Bruchertseifer, Jens (1); Neises, Patrick (2); Hinzmann, Maria (1); Schenkel, Ralf (1); Schöch, Christof (1) (1: Trier University, Germany; 2: Schloss Dagstuhl LZI dblp group, Germany)

Workshop on Data Engineering for Data Science 3

Location: WE5/00.022

Chair: Tanja Auge

Towards Complex Table Question Answering Over Tabular Data Lakes

Risis, Daniela (1,2); Bodensohn, Jan-Micha (1,2); Urban, Matthias (2); Binnig, Carsten (2,1) (1: DFKI; 2: Technische Universität Darmstadt)

The Kosmosis Use Case of Crypto Rug Pull Prevention by an Incrementally Constructed Knowledge Graph

Stangl, Philipp (1); Neumann, Christoph Peter (2) (1: Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany; 2: Ostbayerische Technische Hochschule Amberg-Weiden, Amberg, Germany)

Self-Refinement Strategies for LLM-based Product Attribute Value Extraction

Brinkmann, Alexander; Bizer, Christian (University of Mannheim, Germany)

Higher-Order SQL Lambda Functions

Schüle, Maximilian Emanuel (University of Bamberg, Germany)

Workshop on ML4Sys and Sys4ML 3

Location: WE5/01.004

Silvan Reiner (Uni Konstanz) ML4DB: Don't Learn What You Already Know; Johannes Wehrstein (TU Darmstadt) GRACEFUL: A Learned Cost Estimator For UDFs; Giorgio Vinciguerra (Uni Pisa) ; Immanuel Trummer (Cornell)

Workshop on Novel Data Management Ideas on Heterogeneous Hardware Architectures 3

Location: WE5/01.006

Tutorial: Programming Processing-in-Memory for Data Management

Sattler, Kai-Uwe; Jibril, Muhammad Attahir (TU Ilmenau, Germany)

Lightning Talk: Feasibility Analysis of Semi-Permanent Database Offloading to UPMEM Near-Memory Computing Modules

Friesel, Birte Kristina; Lütke Dreimann, Marcel; Spinczyk, Olaf (Universität Osnabrück, Germany)

Lightning Talk: Lazy DBMS Storage Design with Computational Storage

Baumstark, Alexander; Sattler, Kai-Uwe (TU Ilmenau, Germany)

2025-03-04 15:00 — 2025-03-04 15:30

Coffee Break

2025-03-04 15:00 — 2025-03-04 16:00

Community Meeting FG-DB

Location: WE5/00.022

Chair: Meike Klettke

2025-03-04 15:30 — 2025-03-04 17:00

Workshop on Advances in Cloud Data Management 4

Location: WE5/00.019

15:30 – 15:50 Sven Wagner-Boysen Databricks; 15:50 – 16:10 Maximilian Böther ETH Zürich; 16:10 – 16:30 Dominik Durner CedarDB

Databricks Lakeguard: Supporting fine-grained access control and multi-user capabilities for Apache Spark workloads

Wagner-Boysen, Sven (Databricks, Germany)

Decluttering the data mess in LLM training

Böther, Maximilian; Graur, Dan; Yao, Xiaozhe; Klimovic, Ana (ETH Zurich, Switzerland)

High-Performance Query Processing on Cloud Object Stores

Workshop on Novel Data Management Ideas on Heterogeneous Hardware Architectures 4

Location: WE5/01.006

Tutorial: SIMD for Everyone - A tutorial to TSL

Pietrzyk, Johannes; Krause, Alexander; Lehner, Wolfgang (TU Dresden, Germany)

Tutorial: Dreaming of Syscall-less I/O with io.uring - Some Assembly Required, Feaver Dreams and Nightmares included

Pestka, Constantin (1); Paradies, Marcus (2) (1: DLR - German Center for Aerospace, Germany; 2: LMU - Munich)

2025-03-04 16:15 — 2025-03-04 17:00

Community Meeting DBIS

Location: WE5/00.022

Chair: Felix Naumann

2025-03-04 17:30 — 2025-03-04 20:00

Guided (Smart) City Tour

2025-03-05 09:00 — 2025-03-05 09:30

Opening

Location: WE5/00.022

2025-03-05 09:30 — 2025-03-05 10:30

Keynote 1: Julia Stoyanovich

Location: WE5/00.022

Julia is an Institute Associate Professor of Computer Science and Engineering at the Tandon School of Engineering, Associate Professor of Data Science at the Center for Data Science, and Director of the Center for Responsible Ai. Julia's goal is to make "Responsible AI" synonymous with "AI". She works towards this goal by engaging in academic research, education and technology policy, and by speaking about the benefits and harms of AI to practitioners and members of the public.; Julia's research interests include AI ethics and legal compliance, and data management and AI systems. In addition to academic publications, she has written for the New York Times, the Wall Street Journal, and Le Monde. Julia has been teaching courses on responsible data science and AI to students, practitioners and the general public. She is a co-author of "Data, Responsibly", an award-winning comic book series for data science enthusiasts, and "We are AI", a comic book series for the general audience. Julia is engaged in technology policy and regulation in the US and internationally, having served on the New York City Automated Decision Systems Task Force, by

mayoral appointment, among other roles.; Julia received her M.S. and Ph.D. degrees in Computer Science from Columbia University, and a B.S. in Computer Science and in Mathematics & Statistics from the University of Massachusetts at Amherst. She is a recipient of the NSF CAREER Award and a Senior Member of the ACM.

2025-03-05 10:30 — 2025-03-05 11:00

Coffee Break

Student: Kick-Off

Location: WE5/02.116

2025-03-05 11:00 — 2025-03-05 12:30

MongoDB Escape Room

Location: WE5/01.006

Chair: Johannes Schildgen

Research 1: Query Processing 1

Location: WE5/00.022

Improving Unnesting of Complex Queries

Neumann, Thomas (TUM, Germany)

Reaching New Limits: Discovery of Multi-Dimensional Disjunctive Subsequence-Queries with Intervals

Frchaux, André; Kleest-Meißner, Sarah; Scheidt, Benjamin (Humboldt-Universität zu Berlin, Germany)

Re-imaged Joins with Reimagined Incremental Maintenance

Lyu, Wenhui (1); Graefe, Goetz (2) (1: University of Wisconsin–Madison, USA; 2: Google, Madison Wis., USA)

Complexity Analysis of Pipeline Execution Order Enumeration for Query Execution Plans

Landgraf, Lukas Kurt Günther (1,2); Wolf, Florian (2); Lehner, Wolfgang (1) (1: TU Dresden, Germany; 2: SAP SE, Walldorf, Germany)

An Evaluation of NVMe-over-Fabrics for Disaggregated Databases over Fast Networks

Luo, Jigao (1,2); Boeschen, Nils (2); Ziegler, Tobias (2); Binnig, Carsten (2,1) (1: DFKI, Germany; 2: Technische Universität Darmstadt)

2025-03-05 12:30 — 2025-03-05 14:00

Lunch

2025-03-05 13:30 — 2025-03-05 14:00

Datenbank-Spektrum Editor's Meeting

Location: WE5/01.006

Chair: Uta Störl

2025-03-05 14:00 — 2025-03-05 14:35

Fresh Thinking Talk 1 - Martin Potthast

Location: WE5/00.022

2025-03-05 14:40 — 2025-03-05 15:30

Industry 1

Location: WE5/00.019

Chair: Tilmann Rabl

Data-driven Database Engineering at Snowflake

Heimel, Max (Snowflake, Germany)

GLLM: Self-Corrective G-Code Generation using Large Language Models with User Feedback

Abdelaal, Mohamed (1); Lokadjaja, Samuel (2); Engert, Gilbert (2) (1: Software GmbH, Germany; 2: TU Darmstadt, Germany)

Guardrails for Code Assistants

Béraudier, Vincent (2); Griffin, Jay (3); Juillé, Hugues (2); Kong, Viu Long (2); Lang, Alexander (1) (1: IBM Germany; 2: IBM France; 3: IBM USA)

Research 2: Information Retrieval

Location: WE5/00.022

Adjusting Fairness and Diversity in Search Results: User-Driven Re-Ranking for Water Research Literature

Auer, Daphne Frederike; Naik, Divyasha Sunil; König-Ries, Birgitta (Friedrich Schiller University Jena, Germany)

Facts-of-the-Case: Answering Complex Patient Questions

Walther, Marina; Gertz, Michael (Heidelberg University, Institute of Computer Science, Im Neuenheimer Feld 205, 69120 Heidelberg, Germany)

DPQL: Applications for Holistic Data Profiling

Seeger, Marcian; Papenbrock, Thorsten (University of Marburg, Germany)

2025-03-05 15:30 — 2025-03-05 16:00

Coffee Break

2025-03-05 16:00 — 2025-03-05 17:10

Research 3: Query Processing 2

Location: WE5/00.022

Optimizing Linearized Join Enumeration by Adapting to the Query Structure

Birler, Altan (1); Stoian, Mihail (2); Neumann, Thomas (1) (1: Technische Universität München; 2: UTN)

Adaptive sorting for large keys, strings, and database rows

Kuhr, Marius (1); Seeger, Bernhard (1); Wild, Sebastian (1); Graefe, Goetz (2) (1: University of Marburg, Germany; 2: Google, Madison, Wisconsin, USA)

FASTlabel: Making Supervised Query Optimizer Hinting Practical

Thiessat, Kira; Habich, Dirk; Lehner, Wolfgang (TU Dresden, Germany)

Lightweight Memory Access Monitoring for Dynamic Data Placement in Tiered Memory Systems

Baumstark, Alexander (1); Paradies, Marcus (2); Sattler, Kai-Uwe (1) (1: TU Ilmenau, Germany; 2: LMU München, Germany)

Tutorial 1: Efficient Execution of UDF Queries in Modern Data Engines
(Alkis Simitsis)

Location: WE5/01.006

User-defined functions (UDFs) have been widely used to overcome the expressivity limitations of SQL and complement its declarative nature with functional capabilities. UDFs are particularly useful in today's applications that involve complex data analytics and machine learning algorithms and logic. However, UDFs pose significant performance challenges in query processing and optimization, largely due to the mismatch of the UDF execution and SQL processing environments. In this tutorial, we present state-of-the-art methods and systems towards efficient execution of UDF queries (i.e., SQL queries with UDFs), including a broad scope of solutions ranging from algebraic, cost-based optimization to low level, physical query optimization, compilation, and execution. We also describe limitations and open issues, and discuss promising future research directions. Speakers: Alkis Simitsis (Athena Research Center), Yannis Foufoulas (Athena Research Center)

2025-03-05 17:10 — 2025-03-05 17:30

Demo/Student Paper Minute Madness

Location: WE5/00.022

2025-03-05 18:00 — 2025-03-05 20:00

Demo Reception

Location: WE5/00.043

Chair: Alexander van Renen

RAGONITE: Iterative Retrieval on Induced Databases and Verbalized RDF for Conversational QA over KGs with RAG

Saha Roy, Rishiraj; Hinze, Chris; Schlotthauer, Joel; Naderi, Farzad; Hangya, Viktor; Foltyn, Andreas; Hahn, Luzian; Kuech, Fabian (Fraunhofer IIS, Germany)

Monitoring of Heterogeneous Datastores in Poly- and MultiStores

Schmidt, Mareike; Kronziel, Jannik; Ungethüm, Annett (University of Hamburg, Germany)

A Data Quality Dashboard for (Security) Knowledge Graphs

Pizhuk, Davyd (1); Ehrlinger, Lisa (2); Denk, Gandalf (3); Geist, Verena (1) (1: Software Competence Center Hagenberg; 2: Hasso Plattner Institute, Germany; 3: LINES Security GmbH)

A Demonstration of Skyrise: A Serverless Query Processor

Bodner, Thomas; Rabl, Tilmann (Hasso Plattner Institute, University of Potsdam, Germany)

A Showcase of LLMs in Action: SQL Generation from Natural Language (Demo Paper)

Schildgen, Johannes; Heinz, Florian (OTH Regensburg, Germany)

Discovering Suitable Anonymization Techniques: A Privacy Toolbox for Data Experts

Fieschi, Andrea (1,2); Hirmer, Pascal (1); Stach, Christoph (2) (1: Mercedes-Benz AG, Germany; 2: University of Stuttgart, Germany)

Segmify: A Deep Learning-Based Interactive Tool for Real-Time Cell Segmentation and Morphological Analysis

Tawadros, Despina (1,2); Wiese, Lena (1,2) (1: Fraunhofer ITEM, Germany; 2: Goethe University Frankfurt, Germany)

Generating Federated REST API Servers

Hansert, Patrick; Bai, Bozhou; Le, Ngoc Anh; Michel, Sebastian (RPTU Kaiserslautern-Landau, Germany)

ReCLAIM: An Integrated Platform for Data on Nazi-Looted Cultural Assets

Janetzki, Zero Susann; Krühler, Antonio; Garberding, Luise; Karbstein, Romy; Mecking, Carl Friedrich; Sturtzkopf, Konstantin; Walker, Sebastian; Wilhelm, Jan; Mohammed, Sedir; Naumann, Felix (Hasso Plattner Institute, Germany)

Upcycling UnivIS: Discovering Study Planning 2.0

Ochs, Michaela; Hirmer, Tobias; Henrich, Andreas (University of Bamberg, Germany)

Interactive specification and visualization of group movement patterns in urban traffic data streams

Morgen, Andreas (1); von Willich, Julius (2); Kilb, Tim (2); Seeger, Bernhard (1) (1: University of Marburg, Germany; 2: Technical University of Marburg, Germany)

Disaggregated Pipeline Grouping LIVE

Geyer, Andreas; Krause, Alexander; Habich, Dirk; Lehner, Wolfgang (Technische Universität Dresden, Germany)

Plaquette: Visualizing Redundancies in Relational Data

Köhnen, Christoph; Zumbrägel, Jens; Scherzinger, Stefanie (University of Passau, Germany)

History-Based Active Learning

Kastner, Johannes; Mack, Felix; Sommer, Felix; Fischer, Peter M. (Universität Augsburg, Germany)

ReProVide: Query Optimisation and Near-Data Processing on Reconfigurable SoCs for Big Data Analysis

Hahn, Tobias; Langohr, Maximilian; Meißner, Stefan; Döring, Benedikt; Wildermann, Stefan; Meyer-Wegener, Klaus; Teich, Jürgen (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)

Incremental Stream Query Merging In Action

Chaudhary, Ankit (1,2); Zhu, Ninghong (2); Mons, Laura (2); Zeuch, Steffen (1,2); Pandey, Varun (2); Markl, Volker (1,2) (1: BIFOLD; 2: TU Berlin, Germany)

Compression in Main Memory Database Systems: Cost and Performance Trade-Offs of Workload-Driven Data Encoding

Boissier, Martin; Weisgut, Marcel; Rabl, Tilmann (Hasso Plattner Institute, Germany)

Data Science Challenge Poster Reception

Location: WE5/00.033

Chair: Marco Grawunder

Poster Reception

Location: WE5/00.033

Chair: Rainer Gemulla

Utilising Large Language Models for Adversarial Attacks in Text-to-SQL: A Perpetrator and Victim Approach

Sahitaj, Ariana (1); Nilles, Markus (2); Schenkel, Ralf (2); Schmitt, Vera (1) (1: Technical University Berlin, Germany; 2: University of Trier, Germany)

Data Model Creation with MetaConfigurator

Neubauer, Felix; Pleiss, Jürgen; Uekermann, Benjamin (University of Stuttgart, Germany)

Designing a FAIR Research Data Management System – Insights from a User Needs Study

Diemt, Sabine (FernUniversität in Hagen, Germany)

Entwurf und Implementierung eines Workflow-Editors für die Geodatenverarbeitung

Kremer, Lutz (Philipps-Universität Marburg, Germany)

Evaluation of the HTAP Benchmark HyBench

Lange, Tom (Technische Universität Dresden, Germany)

OPSC: Catching the “Oops” in JDBC PreparedStatements with Static Code Analysis

Kirz, Thomas James (University of Passau, Germany)

Robust Plan Selection using Cardinality Distribution Models

Meng, Jonas Fan-cheng (University of Konstanz, Germany)

SMART: Self-supervised Model aligning APIs and RDF using Transformers

Valette, Elena Nathalie; Zeimet, Tobias; Fernau, Henning; Schenkel, Ralf (Universität Trier, Germany)

Transactional YCSB: Benchmarking ACID-Compliant NoSQL Systems with Multi-Operation Transactions

Beckermann, Benedikt Maria (1,2) (1: Schloss Dagstuhl – Leibniz-Zentrum für Informatik; 2: Universität Trier)

Achilles’ SPEar: Using Metamorphic Testing to Find Bugs in Stream Processing Engines

Kroner, Magnus Erk (Technische Universität Berlin, Germany)

Benchmarking the RDF and Property Graph Model in the Temporal Dimension - A Case Study with Finbench

Hahn, Theo (1,2); Hofer, Marvin (1); Rahm, Erhard (1,2) (1: ScaDS.AI, Humboldtstraße 25, 04105 Leipzig, Germany; 2: University Leipzig, Augustuspl. 10, 04109 Leipzig, Datenbanken, Germany)

CheDDaR: Checking Data – Data Quality Report

Diestelkämper, Indra (1); Diestelkämper, Ralf (2); Restat, Valerie (1) (1: University of Hagen; 2: Flinkback GmbH)

2025-03-06 09:00 — 2025-03-06 10:00

Industry-Keynote Alexander Böhm (SAP)

Location: WE5/00.022

Alexander Böhm is a Distinguished Engineer at SAP and one of the chief architects for the SAP HANA database management system. His specific focus is on system performance and core database topics. He drives strategic, tactical, and operational projects, including design; and architectural changes of the database kernel for key stakeholders, i.e. SAP S/4HANA. Additionally, he is overseeing the evolution of

the HANA core database management system with respect to novel hardware and technology as well as cloud-based system deployments. Before re-joining SAP in 2024, Alexander was a Principal Engineer at Google Cloud and the Uber-Techlead for Google's AlloyDB for PostgreSQL system.

2025-03-06 10:00 — 2025-03-06 10:30

Best Student Paper

Location: WE5/00.022

2025-03-06 10:30 — 2025-03-06 11:00

Coffee Break

2025-03-06 11:00 — 2025-03-06 12:30

Industry 2

Location: WE5/00.019

Chair: Bernhard Mitschang

Optimizing correlated aggregate subqueries in Firebolt

Senac, Andrés; Alexandrov, Alexander; Haffner, Immanuel; Li, Zhen; Wagner, Benjamin (Firebolt Analytics, Germany)

Fishbowl: AlloyDB's Extensible Database Hammering Framework

Eluri, Amarnadh Sai; Lozinski, Jordan; Schlegel, Benjamin; Sherkat, Reza (Google, United States of America)

Enabling Smart Manufacturing with Visual Analytics for Plant Workers

Burkhardt, Dirk; Ristow, Gerald (Software GmbH, Germany)

Beyond Big Data — The Ocient Hyperscale Data Warehouse

Stolze, Knut; Park, Andrew; Arnold, Jason (Ocient, Inc.)

Beyond the Data Warehouse: Modern and fast Data Analytics in Actian Vector

Kläbe, Steffen (1); Hagedorn, Stefan (1); Gropengießer, Francis (1); Schweser, Thomas (1,2) (1: Actian, a division of HCLSoftware; 2: Technische Hochschule Rosenheim, Germany)

Data Products: Overcoming the Boundaries of Data Platforms to Facilitate Data Sharing in Enterprises

Schneider, Jan (1); Schuiki, Laura (1); Giebler, Corinna (2); Lutsch, Arnold (2); Hoos, Eva (2); Schwarz, Holger (1) (1: University of Stuttgart, Germany; 2: Robert Bosch GmbH, Germany)

Back to the Roots: Decision Trees within Modern Database Systems

Wolfschmidt, Lena Renate (2); Schüle, Maximilian Emanuel (1) (1: University of Bamberg, Germany; 2: HUK-COBURG)

Location: WE5/00.022

Graph-based QSS: A Graph-based Approach to Quantifying Semantic Similarity for Automated Linear SQL Grading

Köberlein, Leo; Probst, Dominik; Lenz, Richard (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany)

Enhancing In-Memory Spatial Indexing with Learned Search

Pandey, Varun (1); van Renen, Alexander (3); Tzirita Zacharatou, Eleni (4); Kipf, Andreas (3); Sabek, Ibrahim (5); Ding, Jialin (6); Markl, Volker (1,2); Kemper, Alfons (7) (1: Technische Universität Berlin; 2: Berlin Institute for the Foundations of Learning and Data (BIFOLD); 3: Technische Universität Nürnberg; 4: IT University of Copenhagen; 5: University of Southern California; 6: Amazon Web Services; 7: Technische Universität München)

Automated Configuration of Schema Matching Tools: A Reinforcement Learning Approach

Miazga, Michał Patryk (1); Abitz, Daniel (1,2); Täschner, Matthias (1); Rahm, Erhard (1,3) (1: Center for Scalable Data Analytics and Artificial Intelligence (ScaDS.AI) Dresden/Leipzig, Universität Leipzig, Germany; 2: University Computing Centre, Research and Development, Leipzig University, 04109 Leipzig, Dittrichring 18-20, Germany; 3: Department of Computer Science, Leipzig University, Leipzig, Germany)

Scalable Computation of Shapley Additive Explanations

Le Page, Louis; Dionysio, Christina; Boehm, Matthias (Technische Universität Berlin, Germany)

Extending K-Means Clustering with Ptolemy's Inequality

Pernklau, Max; Averitchev, Nikita; Beecks, Christian (FernUniversität in Hagen, Germany)

2025-03-06 12:30 — 2025-03-06 14:00

Lunch

2025-03-06 14:00 — 2025-03-06 14:35

Fresh Thinking Talk 2 - Ulrike Lucke

Location: WE5/00.022

2025-03-06 14:40 — 2025-03-06 15:30

Industry 3

Location: WE5/00.019

Chair: Stefan Mandl

AI-powered Analytics with Amazon Redshift

Gildhoff, Hinnerk (AWS, Germany)

EdgeMLOps: Operationalizing ML models with Cumulocity IoT and thin-edge.io for Visual quality Inspection

Chaturvedi, Kanishk (1); Gasthuber, Johannes (2); Abdelaal, Mohamed (3) (1: Cumulocity GmbH, Germany; 2: Siemens AG, Germany; 3: Software GmbH, Germany)

Data Contracts to Leverage (De-)centralized Data Management in Manufacturing Industries: An Experience Report

Oppold, Sarah; Fritz, Manuel; Woltmann, Lucas (Carl Zeiss SMT GmbH, Germany)

Research 5: Data Engineering Pipelines

Location: WE5/00.022

Multi-Layer Privacy-Preserving Record Linkage with Clerical Review based on gradual information disclosure

Rohde, Florens (1,2); Christen, Victor (1,2); Franke, Martin (1,2); Rahm, Erhard (1,2) (1: Leipzig University, Germany; 2: ScaDS.AI Dresden/Leipzig, Leipzig, Germany)

Embracing Change: Incremental Updates of Discovered Event Queries

Sattler, Rebecca; Kleest-Meißner, Sarah; Lange, Steven; Schmid, Markus L.; Schweikardt, Nicole; Weidlich, Matthias (Humboldt Universität zu Berlin, Germany)

Identifying Semantic Components for PBE-based Transformation Discovery

Men, Dakai; Chen, Binger; Abedjan, Ziawasch (BIFOLD & TU Berlin, Germany)

2025-03-06 15:30 — 2025-03-06 16:00

Coffee Break

Student: Debriefing

Location: WE5/02.116

2025-03-06 16:00 — 2025-03-06 17:30

Research 6: Time Series and Use Cases

Location: WE5/00.022

Fast, Parameter-free Time Series Anomaly Detection

Blagov, Kristiyan; Muñoz-Cuza, Carlos Enrique; Boehm, Matthias (Technische Universität Berlin, Germany)

Relationship Discovery for Heterogeneous Time Series Integration: A Comparative Analysis for Industrial and Building Data

Weber, Lucas; Lenz, Richard (Friedrich-Alexander-Universität Erlangen-Nürnberg, Computer Science 6)

Caching Partition Identifiers for Fast Geometric Pattern Matching

Poppinga, Martin; Ungethüm, Annett; Rarey, Matthias (Universität Hamburg, Germany)

Practical Problems in Customer Data - A Use-Case-Driven Classification

Deinhard, Jan-Lucas (1,2); Lenz, Richard (1) (1: Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany; 2: Siemens Healthineers AG)

Benchmark of n-Dimensional Array File Formats in Data Analytics Environments

Osterthun, Arne; Pohl, Matthias (German Aerospace Center (DLR) - Institute of Data Science, Jena, Germany)

Tutorial 2: Closing the Gap Between Theory and Practice in Query Optimization (Thomas Neumann)

Location: WE5/00.019

Chair: Thomas Neumann

Query optimization, and in particular the problem of join ordering, has a huge impact on the performance of database systems. Accordingly, it has been widely studied in the literature, but there is a, perhaps surprising, gap between techniques that have been proposed in venues like PODS and the techniques that are used in typical systems. There are several reasons for that, but one of them is that many theoretical approaches look at asymptotic complexity, while systems tend to primarily care about the performance of a query for a given database instance in absolute terms. This tutorial looks at the differences and tries to bring both worlds closer together.

2025-03-06 19:00 — 2025-03-06 23:30

Dinner

Location: Hegelsaal

2025-03-07 09:00 — 2025-03-07 09:40

Research 7: Machine Learning 2

Location: WE5/00.022

Incremental SliceLine for Iterative ML Model Debugging under Updates

Zoeppfel, Frederic Caspar; Dionysio, Christina; Boehm, Matthias (TU Berlin + BIFOLD, Germany)

Assessing the Impact of Image Dataset Features on Privacy-Preserving Machine Learning

Lange, Lucas; Heykeroth, Maurice-Maximilian; Rahm, Erhard (Leipzig University & ScaDS.AI Dresden/Leipzig, Germany)

2025-03-07 09:40 — 2025-03-07 10:10

Dissertation Awards

Location: WE5/00.022

Chair: Klaus Meyer-Wegener

Modern Data Analytics in the Cloud Era

Kläbe, Steffen; Sattler, Kai-Uwe (TU Ilmenau, Germany)

Scalable Data Management using GPUs with Fast Interconnects

Lutz, Clemens; Markl, Volker; Neumann, Melanie (TU Berlin / BIFOLD, Germany)

2025-03-07 10:10 — 2025-03-07 10:30

News from DFG: Valentina Damerow

Location: WE5/00.022

Chair: Daniela Nicklas

Lecture + Discussion: Dr. Valentina Damerow; The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) is the central self-governing research funding organisation in Germany and an important source of third-party funding for basic research at universities in all disciplines. It not only funds individual research grants, which can be applied for at any time and regardless of the topic, but also collaborative research or scientific careers. Dr. Valentina Damerow is Programme Director at the DFG's Head Office in the informatics team and is therefore closely involved in the work of the Permanent Review Board for Informatics (Fachkollegium). She will first give a brief overview of current funding opportunities relevant to computer science and the current review process. Subsequently, current developments (e.g. on the development of the subject area structure) and general questions about the work of the DFG can be discussed.

2025-03-07 10:30 — 2025-03-07 11:00

Coffee Break

2025-03-07 11:00 — 2025-03-07 12:00

Keynote 2: Kai-Uwe Sattler

Location: WE5/00.022

Kai-Uwe Sattler leads the Database and Information Systems group at the Department of Computer Science and Automation of the TU Ilmenau, Germany. He received his Diploma (M.Sc.) in Computer Science from the University of Magdeburg, Germany. In 1998, he received his Ph.D. in Computer Science (magna cum laude) from the same university.; From 1998 to September 2003 he was a member of the Database research group (head: Prof. Gunter Saake) at the University of Magdeburg. From October 2001 until March 2002, he worked as a visiting assistant professor at the UC Davis, U.S.A. During summer term 2002 he held a replacement professorship at the TU Dresden and during winter term 2002/3 at the University of Halle.; In June 2003, he received his Habilitation (venia legendi) in Computer Science from the University of Magdeburg. He joined the Department of Computer Science and Automation of the TU Ilmenau in October 2003 as Professor.; Kai-Uwe Sattler served

as Dean of the Department from 2011 to 2017. From June 2017 to 2020 he served as Vice President for Research.; In December 2020 he was elected as President of the TU Ilmenau. Currently, he is also the coordinator of the priority program "Scalable Data Management for Future Hardware (SPP 2037)" funded by the DFG.

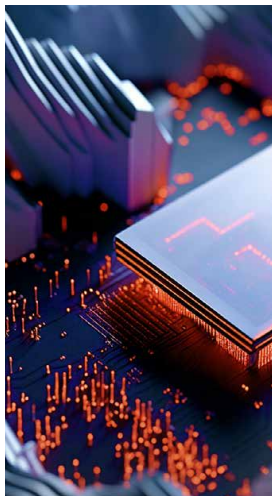
2025-03-07 12:00 — 2025-03-07 12:30

Closing

Location: WE5/00.022

2025-03-07 12:30 — 2025-03-07 13:30

Lunch



The Thurgau Institute for Digital Transformation (TIDIT) is part of the Digital and Innovation Campus Thurgau (DICT). It is one of four institutes supported by the Thurgau Foundation for Science and Research (TSWF).

At TIDIT, we work on current topics of applied basic research in the field of computer science. In this way, we actively contribute to the digital transformation in the Canton of Thurgau and Eastern Switzerland. As an affiliated institute, TIDIT is linked to the University of Konstanz and the HTWG Konstanz.

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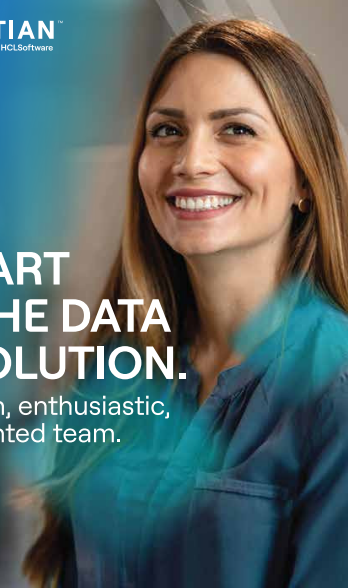


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 - Demo Program: Alexander van Renen, Varun Pandey (UTN)
 - Data Science Challenge: Wolfram Wingerath, Marco Grawunder (University of Oldenburg)
 - Proceedings: Alexis Engelke (TUM)
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Program at a Glance

Overview Mo, 3.3.25		Tu, 4.3.2025	We, 5.3.2025	Th, 6.3.2025	Fr, 7.3.2025		
Location: Lagarde 1, Bamberg		Location: ERBA, An der Weberei 5, Bamberg					
08:00		Registration	Registration		Registration		
08:30	Registration				Registration		
09:00		Workshops Session 1	Opening		Research 7		
09:30			Keynote		Industry-Keynote	Dissertation Awards	
10:00					Best Student Paper		
10:30			Break	Break	Break		Break
11:00		Workshops Session 2	Research 1	MongoDB-Escape	Research 4	Industry 2	Closing Keynote
11:30							
12:00						Closing	
12:30	DaSCIT Symposium		Lunch (Bags)	Lunch		Lunch (Bags)	
13:00		Workshops Session 3					
13:30				FTT1	FTT2		
14:00				Research 2	Industry 1	Research 5	Industry 3
14:40			Break	Break	Break	Break	
15:00		Workshops Session 4/FG-Treffen	Research 3 + Minute Madness	Tutorial 1	Research 6	Tutorial 2	
15:30							
16:00							
16:30							
17:00			Break			Safe journey!	
17:30		Smart City Guided City Tour	Reception: Demo / Student Poster / Data Science Challenge				
18:00	Smart City Reception						
18:30							
19:00							
19:30		Distributed Bamberg Dinner (self-paid)	Dinner with Award Ceremonies				
20:00							
20:30							
23:30							