

# **30th DEXA Conferences and Workshops**

August 26<sup>th</sup> - 29<sup>th</sup>, 2019 Linz, Austria



**PROGRAMBOOK** 







## The 30<sup>th</sup> DEXA Conferences & Workshops 2019

26 – 29 August 2019 Johannes Kepler University Linz, Austria

### THE CONFERENCES

**DaWaK 2019** 21<sup>st</sup> International Conference on Big Data Analytics and Knowledge Discovery

DEXA 2019

30<sup>th</sup> International Conference on Database and Expert Systems Applications

#### **EGOVIS 2019**

8<sup>th</sup> International Conference on Electronic Government and the Information Systems Perspective

#### HoloMAS2019

9<sup>th</sup> International Conference on Industrial Applications of Holonic and Multi-Agent Systems

#### TrustBus 2019

16<sup>th</sup> International Conference on Trust, Privacy, and Security in Digital Business

#### THE WORKSHOPS

**BIOKDD 2019** 

10<sup>th</sup> International Workshop on Biological Knowledge Discovery from Data

#### **IWCFS 2019**

3<sup>rd</sup> International Workshop on Cyber-Security and Functional Safety in Cyber-Physical Systems

#### MLKgraphs2019

1st International Workshop on Machine Learning and Knowledge Graphs

#### TIR 2019

16<sup>th</sup> International Workshop on Technologies for Information Retrieval

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<u> ≈ 2019</u>

# Welcome Message





Gabriele Anderst-Kotsis

Welcome to the 30th DEXA 2019 Conferences & Workshops!

DEXA was founded 30 years ago by Prof. Dr. Roland Wagner and Prof. Dr. A Min Tjoa to meet a crucial need for an international conference to address the emerging trends of Databases and Expert Systems Applications at that time.

As the conference organizers, it is so gratifying to see the growth of DEXA from a gathering of innovative academics 30 years ago here in Austria into an impressive international assembly with over 5000 international participants and additional distinguished speakers and guests in the last 30 years. We are now back to Austria the country where the seed of DEXA was planted.

DEXA 2019 is thriving thanks to the fruitful cooperation of the Institute of Telecooperation, Johannes Kepler University Linz and the Software Competence Center Hagenberg (SCCH) who are now the new organizers of DEXA.



A Min Tjoa



Ismail Khalil

And as always, we endeavor to provide you with three distinct levels of experiences: **A Learning Experience**... which this year includes a very strong program of thought provoking 163 presentations and four distinguished keynote speeches in 43 sessions, A **Networking Experience**... giving you the opportunity to form productive collaborations and lasting friendships with like-minded academics around the globe which can be seen from this year participants coming from 50 countries and over 250 research and academic institutions, and **A Motivational Experience**... exposing our young and up-coming colleagues to the latest innovations in our fields as a springboard to their own research and discoveries.

With respect to the social program, we have a very interesting program this year which consists of a Welcome Reception and a Conference Dinner that we decided to take you to enjoy a stunning dinner at a ship cruising over the Danube with the picturous city night lights of Linz and the impressive industrial area of VOEST Alpine steel production.

As the conference organizers, we would like to express our sincere thanks to the DEXA conferences and workshops program committee chairs and all members of the program committees for carefully reviewing all paper submissions and for putting together this interesting program. We are convinced that you will be inspired by the presentations and talks constituting this year's program and hope that this will also lead to subsequent cooperation.

We are very grateful to our distinguished keynote speakers: Prof.Dr. Vladimír Mařík from Czech Technical University, Czech Republic; Prof.Dr. Dirk Draheim from Tallinn University of Technology, Estonia, Prof. Dr. Stefanie Rinderle-Ma, University of Vienna, Austria and Prof. Dr. Axel Polleres from WU Vienna, Austria.

We tried our best in arranging everything locally for your comfort. These people and many others behind the scenes created this special spirit which makes all of us feel like coming home every year when we meet at DEXA.

So welcome to Linz for 2019 DEXA conferences and workshops... Thank You for your participation... we sincerely hope you enjoy the conference.

Gabriele Anderst-Kotsis A Min Tjoa Ismail Khalil

# The Organization

#### **DEXA Conferences & Workshops Steering Committee:**

- Gabriele Anderst-Kotsis, Johannes Kepler University Linz, Austria
- A Min Tjoa, Software Competence Center Hagenberg, Austria
- Ismail Khalil, Johannes Kepler University Linz, Austria

#### **DEXA Conference General Chair:**

- A Min Tjoa, Software Competence Center Hagenberg, Austria
- Program Committee co-Chairs:
- Sharma Chakravarthy, University of Texas at Arlington, USA
- Sven Hartmann, Clausthal University of Technology, Germany
- Josef Küng, Johannes Kepler University Linz, Austria

#### DaWaK Conference General Chair:

• Thomas Natschläger, Software Competence Center Hagenberg (SCCH), Austria Program Committee co-Chairs:

- Carlos Ordonez, University of Houston, USA
- II-Yeol Song, Drexel University, USA

#### **EGOVIS Conference General Chair:**

- Roland Traunmüller, University Linz, Austria
- Program Committee co-Chairs:
- Andrea Kő, Corvinus University Budapest, Hungary
- Enrico Francesconi, Italian National Research Council, Publication Office of the EU, Italy

#### HoloMAS Conference co-Chairs:

- Petr Kadera, Czech Technical University in Prague, Czech Republic
- Vladimir Marik, Czech Technical University in Prague, Czech Republic
- George Rzevski, The Open University, UK
- Alois Zoitl, Johannes Kepler University, Linz, Austria

#### **TrustBus Conference General Chair:**

• Sokratis K. Katsikas, Norwegian University of Science and Technology, Norway & Open University of Cyprus, Cyprus

#### Program Committee co-Chairs:

- Stefanos Gritzalis, University of the Aegean, Greece
- Edgar R. Weippl, SBA Research, Austria

### **BIOKDD Workshop Chair:**

• Mourad Elloumi, LaTICE, University of Tunis, Tunisia

# The Organization

#### **IWCFS Workshop co-Chairs:**

- Atif Mashkoor, Software Competence Center Hagenberg, Austria
- Johannes Sametinger, Johannes Kepler University Linz, Austria
- Xabier Larrucea, Tecnalia Research & Innovation, Spain

#### MLKgraphs Workshop co-Chairs:

- Anna Fensel, University of Innsbruck, Austria
- Jorge Martinez-Gil, Software Competence Center Hagenberg, Austria
- Bernhard Moser, Software Competence Center Hagenberg, Austria

#### TIR Workshop co-Chairs:

- Christin Seifert, University of Twente, The Netherlands
- Benno Stein, Bauhaus-Universität Weimar, Germany
- Michael Granitzer, University of Passau, Germany

#### DEXA Conferences & Workshops Organizing Committee:

- Angela Kohl, Johannes Kepler University Linz, Austria
- Hesti Sudjana, Johannes Kepler University Linz, Austria
- Paul Wiesinger, Johannes Kepler University Linz, Austria

**Co-Organizers:** 

- Software Competence Center Hagenberg (SCCH)
- Johannes Kepler University Linz (JKU Linz)
- The International Organization for Information Integration and Web-based Applications & Services (@WAS Organization)

Keynote Talk 1 Monday, 26 August 2019, 13:30 – 14:30



#### AI in Manufacturing

by Vladimír Mařík, CIIRC, Czech Technical University, Czech Republic

#### Abstract

The Industry 4.0 paradigm strongly influences industrial manufacturing area and highlights Artificial Intelligence as a driving force for increasing production efficiency and developing new business models. Intelligent networks of virtual twins of all physical units engaged in production enable smart system integration as well as permanent system optimization. The agent-based approaches influence both the system and the SW architectures (typically SOA) and lead to such novel concepts like production as a service, smart services of products and smart services provided to products during the whole life-cycle etc. AI has been deployed in many critical tasks like planning and scheduling, big data analytics, optimization by negotiations, learning from experience, predictive maintenance, and system resilience. Experimental testbeds do play the key role in developing new manufacturing solutions. System integration and human-machine interfaces are supported by virtual and augmented reality tools. Interesting industrial use cases will be presented and discussed. Keywords. Artificial Intelligence, agent-based solutions, virtual twins, system integration, system optimization, production planning and scheduling, testbeds.

#### **Biography**

Scientific Director, Czech Institute of Informatics, Robotics, and Cybernetics (CIIRC) at the Czech Technical University, Prague, Czech Republic, since 2018.

Full Professor at CTU, appointed in 1990. Head of the Department of Cybernetics – EU Center of Research Excellence, Czech Technical University, 1999-2013

Founder and Director of the Rockwell Automation Research Center Prague, 1992-2009

Founder and Director of CIIRC in 2013-2018, 30 years experiences in leading research activities in industrial automation with the focus to applied Artificial Intelligence

Lead of the team of the Czech Industry 4.0 Initiative. Lead of the EU Project "Research and Innovation Center for Advanced Industrial Production – RECAIP- 2019-24" (50 mil EUR).

Awarded by Austrian "Honorary Cross for Science and Art" (2003) and the "Medal of Merit of the Czech Republic" (2017).

Keynote Talk 2 Tuesday, 27 August 2019, 11:00 – 12:00



How do Linked Data, Open Data, and Knowledge Graphs interplay? by Axel Polleres, Institute for Information Business, WU Vienna, Austria

#### Abstract

"A Knowledge Graphs is a graph of data with the intent to compose knowledge" ... this admittedly vague definition was the result of a recent Dagstuhl Seminar on the trending topic of Knowledge Graphs in industry and academia and its meaning for Knowledge Representation on the (Semantic) Web. In this talk I will tackle the question of what's actually new about Knowledge Graphs and how they can help us to get closer to a more natural understanding of data, particularly Open Data on the Web, from a personal perspective of +15 years of research on Semantic Web standards, Linked Data, and Open Data.

#### **Biography**

Axel Polleres heads the Institute of Information Business of Vienna University of Economics and Business (WU Wien) which he joined in Sept 2013 as a full professor in the area of "Data and Knowledge Engineering". Since January 2017 he is a member of the Complexity Science Hub Vienna Faculty. Between January and June 2018, he has been appointed as visiting professor at Stanford University under the Distinguished Visiting Austrian Chair Professors program hosted by The Europe Center in the Freeman Spogli Institute for International Studies at Stanford. He obtained his Ph.D. and habilitation from Vienna University of Technology and worked at University of Innsbruck, Austria, Universidad Rey Juan Carlos, Madrid, Spain, the Digital Enterprise Research Institute (DERI) at the National University of Ireland, Galway, and for Siemens AG's Corporate Technology Research division before joining WU Wien. Moreover, he actively contributed to international standardisation efforts within the World Wide Web Consortium (W3C) where he co-chaired the W3C SPARQL working group.

Keynote Talk 3 Wednesday, 28 August 2019, 11:00 – 12:00



**Future Perspectives of Association Rule Mining Based on Partial Conditionalization** by Dirk Draheim, Tallinn University of Technology, Estonia

#### Abstract

In today's practice, major chunks of data analytics are still done rather interactively (OLAP, MOLAP, with tools such as Cognos or SAP-BW, and with related techniques such as conjoint analysis); i.e., they lack the exploitation of machine learning (AI) approaches. A middle position with respect to this gap between interactive and automatic data analytics is taken by association rule mining, which explains the current huge success of tools such as Rapidminer. Unfortunately, current association rule mining suffers two categories of shortcomings (both theoretically and practically, i.e., in the tool landscape). First, association rule mining works only for discrete-valued columns, i.e., numerical-valued columns cannot be handled, which is a painful shortcoming in practical scenarios. What is needed, is what we call a 'grand pivot report', i.e., a full combinatorial multi-factor analysis against common aggregate functions. Such grand reports needed to come with appropriate, generalized measures of interestingness. Second, and even more critical, today's analysts are not systematically supported in avoiding all kinds of data misinterpretations such as the Yule-Simpson effect. In this talk we discuss, how partial conditionalization can be exploited to generalize association rule mining from conditional probabilities to conditional expected values, including the necessary theoretical measures of interest that are (i) adequate to support multi-factor impact analysis and are (ii) explicitly robust against data misinterpretation. (The theoretical foundations of this endeavor are laid down in the book "Generalized Jeffrey Conditionalization" that can be downloaded for free from: https://www.ttu.ee/?id=170467)

#### **Biography**

Dirk Draheim is full professor of information systems and head of the Information System Group at Tallinn University of Technology (Taltech). The Taltech IS Group is deeply involved into the design and implementation of the Estonian e-Governance ecosystem. Dirk holds a Diploma in computer science from Technische Universität Berlin, a PhD from Freie Universität Berlin and a habilitation from the University of Mannheim. Until 2006 he worked as a Researcher at Freie Universität Berlin. From 2006-2008 he was area manager for database systems at the Software Competence Center Hagenberg, Linz, as well as Adjunct Lecturer in information systems at the Johannes-Kepler-University Linz. From 2008-2016 he was head of the data center of the University of Innsbruck and, in parallel, Adjunct Reader at the Faculty of Information Systems of the University of Mannheim. Dirk is co-author of the Springer book "Form-Oriented Analysis" and author of the Springer books "Business Process Technology", "Semantics of the Probabilistic Typed Lambda Calculus" and "Generalized Jeffrey Conditionalization". His research interest is the design and implementation of largescale information systems. Dirk Draheim is member of the ACM.

Keynote Talk 4 Thursday, 29 August 2019, 11:00 – 12:00



# Process Technology as Key Driver for Smart Manufacturing

by Stefanie Rinderle-Ma, Faculty of Computer Science, University of Vienna, Austria

#### Abstract

The keynote reports on the journey of process technology in smart manufacturing: from connecting and controlling machines in the EU project ADVENTURE, over developing a modular LEGO factory demonstrating Industry 4.0 concepts to centurio.work [1] – the manufacturing orchestration engine applied in real-world settings. On this journey, we had to face several challenges that arise from the interplay of machines, data, systems, and humans. Examples comprise bridging the gap between software and the physical world, finding the right granularity for controlling the machines, connecting the machines along the process logic (hori- zontal integration), and integrating systems across the levels of the automation pyramid. Particularly horizontal and vertical integration bear several benefits, for example, the possibility to collect data not only in an isolated manner, e.g., per machine or per system, but in a connected way, following the process logic. This opens the door for advanced analysis of manufacturing data, employing a mix of techniques from cross-sectional and process mining [2].

#### References:

[1] Florian Pauker, Juergen Mangler, Stefanie Rinderle-Ma, Christoph Pollak, centu-rio.work - Modular Secure Manufacturing Orchestration, BPM Industrial Track, pp. 164–171 (2018) http://ceur-ws.org/Vol-2196/ BPM\_2018\_paper\_33.pdf

[2] Matthias Ehrendorfer, Juergen-Albrecht Fassmann, Juergen Mangler, Stefanie Rinderle-Ma: Combining Conformance Checking and Classification of XES Log Data for the Manufacturing Domain. CoRR abs/1904.05883 (2019)

#### **Biography**

Stefanie Rinderle-Ma is a full professor at the Faculty of Computer Science, University of Vienna (Austria) where she leads the Research Group Workflow Systems and Technology (WST). Stefanie received her PhD and habilitation degree in Computer Science from Ulm University (Germany). Her research areas are distributed and flexible process technology, process and data science, as well as digitalized compliance management. Application areas comprise manufacturing and (health) care.

Mono	day, 26 August 2019	
12.00	Registration	<b>Room</b> Hall C
13.00	<b>Opening Session</b> Welcome Speech by Gabriele Anderst-Kotsis, Steering Committee DEXA Conferences & Workshops 2019	HS7
13.30	<b>Keynote Talk</b> <b>"Al in Manufacturing"</b> by <i>Vladimír Mařík</i> , CIIRC, Czech Technical University, Czech Republic	HS7
14.30	Coffee Break	Hall B+C
15.00	<ul> <li>Paper Presentation DEXA Sessions 1A</li> <li>Session Chair: Dirk Draheim</li> <li>Decision Support Systems- <ul> <li>Fairness-enhancing interventions in stream classification Vasileios losifidis, Thi Ngoc Han Tran, Eirini Ntoutsi</li> </ul> </li> <li>Early turnover prediction of new restaurant employees from their attendance records and attributes Koya Sato, Mizuki Oka, Kazuhiko Kato</li> <li>An Efficient Premiumness and Utility-based Itemset Placement Scheme for Retail Stop Parul Chaudhary, Anirban Mondal, P. Krishna Reddy</li> <li>Data Lakes: Trends and Perspectives Franck Ravat, Yan Zhao</li> <li>An Efficient Greedy Algorithm for Sequence Recommendation Idir Benouaret, Sihem Amer-Yahia, Senjuti Basu Roy</li> <li>Discovering Diverse Popular Paths using Transactional Modeling and Patter Mining P. Revanth Rathan, P. Krishna Reddy, Anirban Mondal</li> </ul>	HS7
	<ul> <li>HoloMAS Session 1B</li> <li>Session Chair: Vladimir Marik</li> <li>-Invited Talk-</li> <li>IEC 61499 and the Promise of Holonic Systems Robert W.Brennan and Geolin Lyu</li> <li>-Methodologies &amp; Frameworks-</li> <li>A Intelligent Multi-Agent Platform for Designing Digital Ecosystems George Rzevski</li> <li>Contribution To The Theory Of Uncertain Systems Alliances Mirko Novák, Petr Vysoký, Zdeněk Votruba</li> <li>The Framework for Designing Autonomous Cyber-Physical Multi-Agent Systems for Adaptive Resource Management V.I.Gorodetsky, S.S.Kozhevnikov, D.Novichkov, P.O.Skobelev</li> </ul>	HS6

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#### MLKgraph Session 1C Session Chair: Jorge Martinez-Gil

 Emotion Analysis using Heart Rate Data
 Luis Alberto Barradas Chacon, Artem Fedoskin, Ekaterina Shcheglakova, Sutthida Neamsup, Ahmed Rashed

- Towards Explaining Deep Neural Networks through Graph Analysis Vitor Horta, Alessandra Mileo
- Analyzing Trending Technological Areas of Patents Mustafa Sofean

#### **BioKDD Session 1D**

#### Session Chair: Mourad Elloumi

- Speeding-Up the Dynamic Programming Procedure for the Edit Distance of Two Strings Giuseppe Lancia, Marcello Dalpasso
- An approach for LPF Table Computation Supaporn Chairungsee, Thana Charuphanthuset
- Smart Persistence and Accessibility of Genomic and Clinical Data Eleonora Cappelli, Emanuel Weitschek, Fabio Cumbo
- Efficient Transformation of Protein Sequence Databases to Columnar Index Schema Roman Zoun, Kay Schallert, David Broneske, Ivayla Trifonova, Xiao Chen, Robert Heyer, Dirk Benndorf, Gunter Saake

#### **IWCFS Session 1E**

Session Chair: Atif Mashkoor

- Welcome Note from Workshop Chair
- Deriving An Optimal Noise Adding Mechanism for Privacy-Preserving Machine Learning Mohit Kumar, Michael Rossbory, Bernhard Moser, Bernhard Freudenthaler
- Resilient Security of Medical Cyber-physical Systems
   Aakarsh Rao, Nadir Carreón, Roman Lysecky, Jerzy Rozenblit, Johannes Sametinger
- Securing Smart Homes Johannes Sametinger
- Linking Trust to Cyber-Physical Systems Dagmar Auer, Markus Jäger, Josef Küng

## 17.00 **DEXA Welcome Reception**

Hall B+C

HS4

HS3

HS5

Tueso	lay, 27 August 2019	
08.00	Registration	Hall C
09.00	Paper Presentation DEXA Sessions 2A	HS7
	Session Chair: A Min Tjoa	
	-Big Data Management and Analytics-	
	<ul> <li>Optimization of Row Pattern Matching over Sequence Data in Spark SQL Kosuke Nakabasami, Hiroyuki Kitagawa, Yuya Nasu</li> <li>Rainfall Estimation from Traffic Cameras Remmy Zen, Dewa Made Sri Arsa, Ruixi Zhang, Ngurah Agus Sanjaya ER, Stephane Brest</li> <li>Towards Identifying De-Anonymisation Risks in Distributed Health Data Silos Nikolai J. Podlesny, Anne V.D.M. Kayem, Christoph Meinel</li> <li>An Attribute-Based Fine-Grained Access Control Mechanism for HBase Liangqiang Huang, Yan Zhu, Xin Wang, Faisal Khurshid</li> </ul>	ssan
	DaWaK Session 2B	HS6
	Session Chair: Carlos Garcia-Alvarado	
	Welcome Note	
	-Applications-	
	• Detecting the Onset of Machine Failure Using Anomaly Detection Methods Mohammad Riazi, Osmar Zaïane, Tomoharu Takeuchi, Anthony Maltais, Johannes Gün Micheal Lipsett	ther,
	A Hybrid Architecture for Tactical and Strategic Precision Agriculture      Environ California California Conference District	
	<ul> <li>Enrico Gallinucci, Matteo Golfarelli, Stefano Rizzi</li> <li>Urban analytics of big transportation data for supporting smart cities</li> </ul>	
	Carson Leung, Peter Braun, Calvin Hoi, Joglas Souza, Alfredo Cuzzocrea	
	HoloMAS Session 2C	HS5
	Session Chair: Alois Zoitl	
	<ul> <li>Invited Talk-</li> <li>Engineering and Validating Cyber-Physical Energy Systems: Needs, Status Quo, and Research Trends Thomas I.Strasser and Filip Pröstl Andrén</li> </ul>	
	-Agent-based Production Scheduling and Control-	
	• Plan Executor MES: Manufacturing Eecution System Combined with a Planner for Industry 4.0 Production Systems Petr Novák, Jiří Vyskočil, and Petr Kadera	
	MLKgraph Session 2D	HS4
	Session Chair: Anna Fensel	
	• The Use of Class Assertions and Hypernyms to Induce and Disambiguate Word Sense Artem Revenko, Victor Mireles	S

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	• Question Formulation and Question Answering for Knowledge Graph Completion	
	Maria Khvalchik, Christian Blaschke, Artem Revenko	
	• On Conditioning GANs to Hierarchical Ontologies Hamid Eghbal-zadeh, Lukas Fischer, Thomas Hoch	
	• Concluding remarks	
	BioKDD Session 2E	HS3
	Session Chair: Mourad Elloumi	
	• K–Means Based One-Class SVM Classifier	
	Loai Abedalla, Murad Badarna, Waleed Khalifa, Malik Yousef	
	<ul> <li>Classification of Pre-Cursor microRNAs from Different Species Using a New Set of Fea Malik Yousef, Jens Allmer</li> </ul>	tures
	Molecular Subtyping in Human Disease Using the Paraclique Algorithm	
	Ronald D. Hagan, Michael A. Langston	
	IWCFS Session 2F	HS2
	Session Chair: Johannes Sametinger	
	• Making (Implicit) Security Requirements Explicit for Cyber-Physical Systems:	
	A Maritime Use Case Security Analysis	
	Tope Omitola, Abdolbaghi Rezazadeh, Michael Butler • Security Risk Mitigation of Cyber Physical Systems: A Case Study of a Flight Simulator	
	Maryam Zahid, Irum Inayat, Atif Mashkoor, Zahid Mehmood	
	• Information Disclosure Detection in Cyber-Physical Systems	
	Fabian Berner, Johannes Sametinger	
	Concluding Remarks	
10.30	Coffee Break	Hall B+C
11.00	Keynote Talk "How do Linked Data, Open Data, and Knowledge Graphs interplay?"	HS7
	By Axel Polleres, Institute for Information Business, WU Vienna, Austria	
12.00	Lunch	Mensa
12.00		IVIEIISa
13.00	Paper Presentation	
	DEXA Sessions 2G	HS7
	Session Chair: Josef Küng	
	-Authenticity, Privacy, Security and Trust + Consistency, Integrity, Quality of Data-	
	Differentially Private Non-parametric Machine Learning as a Service     Ashish Dandokar, Dahahasta Basy, Stanbaro Brassan	
	Ashish Dandekar, Debabrota Basu, Stephane Bressan  • PURE: A Privacy Aware Rule-Based Framework over Knowledge Graphs	
	Marlene Goncalves, Maria-Esther Vidal, Kemele M. Endris	
	• FFT-2PCA: a new Feature Extraction Method for Data-Based Fault Detection	
	Matheus Maia de Souza, João Cesar Netto, Renata Galante	
	ADaQL to Monitor Data Quality in Machine Learning Applications	
	Lisa Ehrlinger, Verena Haunschmid, Davide Palazzini, Christian Lettner	

 Automated Detection and Monitoring of Advanced Data Quality Rules Felix Heine, Carsten Kleiner, Thomas Oelsner • Effect of Imprecise Data Income-flow Variability on Harvest Stability: A Quantile-based Approach Zied Ben Othmane, Cyril De Runz, Amine Ait Younes, Vincent Mercelot **DaWaK Session 2H** HS6 Session Chair: Calvin S.H. Hoi -Patterns-• Frequent Item Mining When Obtaining Support is Costly Joe Wing-Ho Lin, Raymond Chi-Wing Wong • Mining Sequential Pattern of Historical Purchases for E-Commerce Recommendation Raj Bhatta, Christie Ezeife, Mahreen Nasir Butt Discovering and Visualizing Efficient Patterns in Cost/Utility Sequences Philippe Fournier-Viger, Jiaxuan Li, Jerry Chun-Wei Lin, Tin Truong-Chi Efficient Row Pattern Matching using Pattern Hierarchies for Sequence OLAP Yuya Nasu, Hiroyuki Kitagawa, Kosuke Nakabasami Statistically Significant Discriminative Patterns Searching Hoang Son Pham, Gwendal Virlet, Dominique Lavenier, Alexandre Termier **HoloMAS Session 2I** HS5 Session Chair: George Rzevski -Agent-based Production Scheduling and Control- Multi-agent supply planning methods allowing the real-time performance of the supply network management systems Alexander Tsarev Operationalization of a Machine Learning and Fuzzy Inference-Based Defect Prediction **Case Study in a Holonic Manufacturing System** Phillip M. LaCasse, Wilkistar Otieno and Francisco P.Maturana Cloud-based Digital Twin for Industrial Robotics Timon Hoebert, Wilfried Lepuschitz, Erhard List, Munir Merdan -MAS in Various Areas- Plant Layout Optimization Using Evolutionary Algorithms Jiří Kubalík, Petr Kadera, Václav Jirkovský, Lukáš Kurilla, and Šimon Prokop • Experimentation of Negotiation Protocols for Consensus Problems in Smart Parking Systems Bruno Rafael Alves, Gleifer Vaz Alves, André Pinz Borges, Paulo Leitão Development of resource-demand networks for Smart Cities 5.0 Sergei Kozhevnikov, Petr Skobelev, Ondrej Pribyl and Mirosla HS4 **EGOVIS Session 2J** Session Chair: Andrea Ko Vacancy mining to design personalized learning analytics for future employees Ildikó Szabó, Réka Vas Towards a data-driven approach for fraud detection in the social insurance field: A case study in Upper Austria

Johannes Himmelbauer, Jorge Martinez-Gil, Michael Ksen, Katharina Linner, Sieglinde Plakolm

# • A Reverse Data-centric Process Design Methodology for Public Administration Processes Péter József Kiss, Gábor Klimkó **BioKDD Session 2K** Session Chair: Mourad Elloumi • mirLSTM: A Deep Sequential Approach to MicroRNA Target Site Binding Prediction Ahmet Paker, Hasan Oğul • A Review of Quasi-Perfect Secondary Structure Prediction Servers Mirto Musci, Gioele Maruccia, Marco Ferretti

## Theoretical and Practical Analyses in Metagenomic Sequence Classification Hend Amraoui, Mourad Elloumi, Francesco Marcelloni, Faouzi Mhamdi, Davide Verzotto

### 15.00 Coffee Break

#### 15.30 Paper Presentation

### **DEXA Sessions 2L**

Session Chair: Le Hieu Hanh

#### -Information Processing + Data Structures and Data Management-

- Context-Aware Multi-Criteria Recommendation Based on Spectral Graph Partitioning Rim Dridi, Lynda Tamine, Yahya Slimani
- SilverChunk: An Efficient In-Memory Parallel Graph Processing System Tiangi Zheng, Zhibin Zhang, Xuegi Cheng
- A modular approach for efficient simple question answering over knowledge base Happy Buzaaba, Toshiyuki Amagasa
- Scalable Machine Learning in the R Language Using a Summarization Matrix Siva Uday Sampreeth Chebolu, Carlos Ordonez, Sikder Tahsin Al-Amin
- ML-PipeDebugger: A Debugging Tool for Data Processing Pipelines Felix Kossak, Michael Zwick
- Discord Monitoring for Streaming Time-series Shinya Kato, Daichi Amagata, Shunya Nishio, Takahiro Hara
- Extractive Document Summarization using Non-Negative Matrix Factorization Alka Khurana, Vasudha Bhatnagar

#### **DaWaK Session 2M**

Session Chair: Yassine Ramdan

#### -RDF and Streams-

- Democratization of OLAP DSMS Carlos Garcia-Alvarado, Joy Kent, Li Liu, Jay Hum
- Multidimensional Integration of RDF datasets Jam Jahanzeb Khan Behan, Oscar Romero, Esteban Zimanyi
- RDFPartSuite: Bridging Physical and Logical RDF Partitioning Jorge Galicia, Amin Mesmoudi, Ladjel Bellatreche
- Mining quantitative temporal dependencies between interval-based streams Amine El Ouassouli, Lionel Robinault, Marian Scuturici

**Conferences & Workshops Program Schedule** 



HS3

Hall B+C

HS7

HS6

### **HoloMAS Session 2N**

Session Chair: Petr Skobelev

## -Data and Knowledge-

- Semi-automatic Tool for Ontology Learning Tasks Ondřej Šebek, Václav Jirkovský, Nestor Rychtyckyj, and Petr Kadera
- Agent-based Approach for Decentralized Data Analysis in Industrial Cyber-Physical Systems Jonas Queiroz, Paulo Leitão, José Barbosa, and Eugénio Oliveira
- Data Exchange Ontology for Interoperability Facilitation within Industrial Automation Domain Václav Jirkovský and Petr Kadera
- Information Exchange and Integratin within Industrial Automation Domain Václav Jirkovský, Marek Obitko and Petr Kadera

## **EGOVIS Session 20**

Session Chair: Gábor Klimkó

• e-Participation in the exploration of innovations: confronting Aedes aegypti and microcephaly in Brazil

Thaísa Barcellos Pinheiro Nascimento, Everton Leonardo de Almeida, André Grützmann, André Luiz Zambalde, Paulo Henrique de Souza Bermejo, Alyce Cardoso Campos, Teresa Cristina Monteiro Martins

• Indicators of Municipal Public Management: Study of multiple Performance Measurement Systems

Marcus de Oliveira, Renato Neder, Paulo de Souza, Cristano Maciel, Naíse Freire, José Marcelo de Almeida, Cassyra Vuolo, Alexandre dos Anjos, Débora Pedrotti

- Two Decades of Online Information and Digital Services: Quality Improvements to Municipality Websites and User Preferences Hanne Sørum
- Crowdsourcing Urban Issues in Smart Cities: a Usability Assessment of the Crowd4City System Ana Gabrielle Ramos Falcão, Pedro Farias Wanderley, Tiago Henrique da Si Leite, Cláudio de Souza Baptista, José Eustáquio Range Queiroz, Maxwell Guimarães de Oliveira, Júlio Henrique Rocha

### **TIR Session 2P**

Session Chair: Michael Granitzer

- Introducing the Notion of 'Contrast' Features for Language Technology Marina Santini, Benjamin Danielsson, Arne Jönsson
- LinelT: Similarity Search and RecommendationTool for Photo Lineup Assembling Hana Trojanova, Ladislav Peska
- Advanced Behavioral Analyses Using Inferred Social Networks: a Vision Irena Holubova, Martin Svoboda, Tomas Skopal, David Berhauer, Ladislav Peska

## 17.30 End of 2nd day

HS4

HS3



HS5

Wedn	nesday, 28 August 2019	
08.00	Registration	Hall C
09.00	Paper Presentation DEXA Sessions 3A Session Chair: Aaron Chen Gang	HS7
	-Distributed, Parallel, P2P, Grid and Cloud databases-	
	<ul> <li>Looking into the Peak Memory Consumption of Epoch-based Reclamation in Scalable In-Memory Database Systems Hitoshi Mitake, Hiroshi Yamada, Tatsuo Nakajima</li> <li>Energy Efficient Data Placement and Buffer Management for Multiple Replication Satoshi Hikida, Le Hieu Hanh, Haruo Yokota</li> <li>Querying Knowledge Graphs with Natural Languages Xin Wang, Lan Yang, Yan Zhu, Huayi Zhan, Yuan Jin</li> <li>Explaining Query Answer Completeness and Correctness with Partition Patterns Fatma-Zohra Hannou, Bernd Amann, Mohamed-Amine Baazizi</li> </ul>	e
	DaWaK Session 3B	HS6
	Session Chair: Erik Selin	
	-Big Data Systems-	
	<ul> <li>Leveraging the Data Lake - Current State and Challenges Corinna Giebler, Christoph Gröger, Eva Hoos, Holger Schwarz, Bernhard Mitschang</li> <li>SDWP: A New Data Placement Strategy for Distributed Big Data Warehouses in Hado Yassine Ramdane, Nadia Kabachi, Omar Boussaid, Fadila Bentayeb</li> <li>Improved Programming-Language Independent MapReduce on Shared-Memory Syst Erik Selin, Herna Viktor</li> <li>Evaluating Redundancy and Partitioning of Geospatial Data in Document-Oriented Data Warehouses Marcio Ferro, Rinaldo Lima, Robson Fidalgo</li> </ul>	
	EGOVIS Session 3C	HS5
	Session Chair: Csaba Csáki	
	<ul> <li>Crowdfunding of Science and Open Data: Opportunities, Challenges, and Policies Ludovica Paseri</li> <li>Open Data Ecosystems: A Comparison of Visual Models Csaba Csaki</li> <li>The Societal Benefits of Open Government Data with particular emphasis on Geospatial Information Henning Sten Hansen, Lise Schrøder</li> </ul>	
10.30	Coffee Break	Hall B+C
11.00	Keynote Talk "Future Perspectives of Association Rule Mining Based on Partial Conditionalization"	HS7

Dirk Draheim, Tallinn University of Technology, Estonia

### 12.00 Lunch

#### 13.00 Paper Presentation DEXA Sessions 3D

Session Chair: Vasudha Bhatnagar

### -Knowledge Discovery-

- Multiviewpoint-based Agglomerative Hierarchical Clustering Yuji Fujiwara, Hisashi Koga
- Triplet-CSSVM: Integrating Triplet-Sampling CNN and Cost-Sensitive Classification for Imbalanced Image Detection Jiefan Tan, Yan Zhu, Qiang Du
- Discovering Partial Periodic High Utility Itemsets in Temporal Databases T. Yashwanth Reddy, Uday Kiran Rage, Masashi Toyoda, P. Krishna Reddy, Masaru Kitsuregawa
- Using Mandatory Concepts for Knowledge Discovery and Data Structuring Samir Elloumi, Sadok Ben Yahia, Jihad Al Ja'am
- Topological Data Analysis with \epsilon-net Induced Lazy Witness Complex Arafat Naheed Anjum, Basu Debabrota, Bressan Stephane
- Analyzing Sequence Pattern Variants in Sequential Pattern Mining and its Application to Electronic Medical Record Systems Hieu Hanh Le, Tatsuhiro Yamada, Yuichi Honda, Masaaki Kayahara, Muneo Kushima, Kenji Araki, Haruo Yokota

## DaWaK Session 3E

Session Chair: Mahreen Nasir Butt

## -Graphs and Machine Learning-

- Scalable Least Square Twin Support Vector Machine Learning Bakshi Rohit Prasad, Sonali Agarwal
- Finding Strongly Correlated Trends in Dynamic Attributed Graphs Philippe Fournier-Viger, Chao Cheng, Zhi Cheng, Jerry Chun-Wei Lin, Nazha Selmaoui-Folcher
- Text-based Event Detection: Deciphering Date Information Using Graph Embeddings Hilal Genc, Burcu Yilmaz
- Efficiently Computing Homomorphic Matches of Hybrid Pattern Queries on Large Graphs Xiaoying Wu, Dimitri Theodoratos, Dimitrios Skoutas, Michael Lan go

## **DEXA Session 3F**

Session Chair: Ladjel Bellatreche

-Management and Processing of Knowledge + Data Structures and Data Management-

- Statistical Processing of Stopwords on SNS Yuta Nezu, Takao Miura
- Multiple Choice Question Answering in the Legal Domain Using Reinforced Co-occurrence Jorge Martinez-Gil, Bernhard Freudenthaler, A Min Tjoa
- Probabilistic Algorithm to Predict Missing Facts from Knowledge Graphs André Gonzaga, Mirella Moro, Mário Alvim
- Semantic Oppositeness Embedding Using an Autoencoder-based Learning Model Nisansa de Silva, Dejing Dou

HS7

Mensa

HS6

HS5

	<ul> <li>COMET: A Contextualized Molecule-based Matching Technique Mayesha Tasnim, Diego Collarana, Damien Graux, Mikhail Galkin, Maria-Esther Vidal</li> <li>Lopper: An Efficient Method for Online Log Pattern Mining based on Hybrid Clusterin Jiawei Liu, Zhirong Hou, Ying Li</li> </ul>	ig Tree
	EGOVIS Session 3G	HS4
	<ul> <li>Session Chair: Jean Vincent Fonou Dombeu</li> <li>Value Innovation in the Public Sector: Concept, Determining Factors and Framework Teresa Cristina Monteiro Martins, André Luiz Zambalde, Paulo Henrique de Souza Berry Grützmann, Everton Leonardo de Almeida, Thaísa Barcellos Pinheiro do Nascimento</li> <li>Factors Affecting e-ID Public Acceptance: A Literature Review Valentyna Tsap, Ingrid Pappel, Dirk Draheim</li> <li>OntoMetrics Evaluation of Quality of e-Government Ontologies Jean Vincent Fonou Dombeu, Serestina Viriri</li> </ul>	
15.00	Coffee Break	Hall B+C
15.30	Paper Presentation DEXA Sessions 3H	HS7
	Session Chair: Anirban Mondal	
	-Temporal, Spatial, and High Dimensional Databases + web services-	
	<ul> <li>Correlation Set Discovery on Time-series Data Daichi Amagata, Takahiro Hara</li> <li>Anomaly Subsequence Detection with Dynamic Local Density for Time Series Chunkai Zhang, Yingyang Chen , Ao Yin</li> <li>Trajectory Similarity Join for Spatial Temporal Database Tangpeng Dan, Changyin Luo, Yanhong Li, Chenyuan Zhang</li> <li>Composing Distributed Data-intensive Web services using Distance-guided Memetic Soheila Sadeghiram, Hui Ma, Gang Chen</li> <li>Using EDA-Based Local Search to improve the performance of NSGA-II for Multiobjective Semantic Web Service Composition Chen Wang, Hui Ma, Gang Chen</li> <li>Adaptive Caching for Data-Intensive Scientific Workflows in the Cloud Gaëtan Heidsieck, Daniel de Oliveira, Esther Pacitti, Christophe Pradal, François Tardieu Patrick Valduriez</li> </ul>	
	DaWaK Session 3I	HS6
	Session Chair: Jam Behan	
	-Databases and Final Discussion-	
	<ul> <li>From Conceptual to Logical ETL Design using BPMN and Relational Algebra Judith Awiti, Alejandro Vaisman, Esteban Zimányi</li> <li>Accurate Aggregation Query-Result Estimation and Its Efficient Processing on Distributed Key-Value Store Kosuke Yuki, Atsushi Kevaki, Jun Mivazaki, Masahide Nakamura</li> </ul>	

• Discussion of trends, selected papers and future of DaWaK

#### **DEXA Session 3J**

Session Chair: Alberto Barradas

#### -Semantic Web and Ontologies + web services-

- Reverse Partitioning for SPARQL Queries: Principles and Performance Analysis Jorge Galicia, Amin Mesmoudi, Ladjel Bellatreche, Carlos Ordonez
- Novel Node Importance Measures to Improve Keyword Search over RDF Graphs Elisa Menendez, Marco Antonio Casanova, Luiz André Paes Leme, Mohand Boughanem

HS5

HS4

HS3

- Querying in a Workload-aware Triplestore based on NoSQL Databases
- Luiz Henrique Zambom Santana, Ronaldo dos Santos Mello
- PFed: Recommending Plausible Federated SPARQL Queries Florian Hacques, Hala Skaf-Molli, Pascal Molli, Sara EL Hassad
- Representing and Reasoning about Precise and Imprecise Time Points and Intervals in Semantic Web: Dealing with Dates and Time Clocks Nassira Achich, Fatma Ghorbel, Fayçal Hamdi, Elisabeth Metais, Faiez Gargouri
- Keyword Search based Mashup Construction with Guaranteed Diversity Huanyu Cheng, Ming Zhong, Jian Wang, Tieyun Qian

#### **EGOVIS Session 3K**

#### Session Chair: Dirk Draheim

- Designing an Effective Long-Term Identity Management Strategy for a Mature e-State Silvia Lips, Krista Aas, Ingrid Pappel, Dirk Draheim
- Toward Value Creation in e-Governance through Digitalization an industry-based approach Domonkos Gaspar, Katalin Ternai

#### **DEXA Session 3L**

Session Chair: Haruo Yakato

#### -Information Retrieval-

- Research Paper Search Using a Topic-based Boolean Query Search and a General Query-based Ranking Model
  - Satoshi Fukuda, Yoichi Tomiura, Emi Ishita
- Succinct BWT-based Sequence prediction Rafael Ktistakis, Philippe Fournier-Viger, Simon Puglisi, Rajeev Raman
   TRR: Reducing Crowdsourcing Task Redundancy
- Shaimaa Galal, Mohamed E. El-Sharkawi
- Software Resource Recommendation for Process Execution based on the Organization's Profile Miller Biazus, Carlos Habekost dos Santos, Larissa Narumi Takeda, Marcelo Fantinato, José Palazzo Moreira de Oliveira, Jan Mendling, Lucineia Heloisa Thom
- An Experiment to Analyze the Use of Process Modeling Guidelines to Create High-Quality Process Models
   Diego Torales Ávila, Raphael Piegas Cigana, Marcelo Fantinato, Hajo A. Reijers, Jan Mendling, Lucineia Heloisa Thom

#### 18.30 Conference Dinner

Dinner Cruising along the River Danube

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# Thursday, 29 August 2019

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	<ul> <li>Privacy Policy Specification Framework for Addressing End-Users' Privacy Requirement Nazila Gol Mohammadi, Jens Leicht, Nelufar Ulfat-Bunyadi, Maritta Heisel</li> <li>A data utility-driven benchmark for de-identification methods Oleksandr Tomashchuk, Dimitri Van Landuyt, Daniel Pletea, Kim Wuyts, Wouter Joosen</li> </ul>	nts
10.30	Coffee Break	Hall B+C
11.00	Keynote Talk "Process Technology as Key Driver for Smart Manufacturing" Stefanie Rinderle-Ma, Faculty of Computer Science, University of Vienna, Austria	HS7
12.00	Lunch	Mensa
13.00	Paper Presentation	
	TrustBus Sessions 4F	HS6
	Session Chair: Vasiliki Diamantopoulou	
	<ul> <li>DEFeND Architecture: a Privacy by Design Platform for GDPR Compliance         Luca Piras, Mohammed Ghazi Al-Obeidallah, Andrea Praitano, Aggeliki Tsohou,             Haralambos Mouratidis, Beatriz Gallego-Nicasio Crespo, Jean Baptiste Bernard, Marco             Emmanouil Magkos, Andrès Castillo Sanz, Michalis Pavlidis, Roberto D'Addario,             Giuseppe Giovanni Zorzino     </li> <li>General Data Protection Regulation and ISO/IEC 27001:2013: Synergies of         activities towards organisations' compliance     </li> <li>Vasiliki Diamantopoulou, Aggeliki Tsohou, Maria Karyda</li> <li>The interrelation of game elements and privacy requirements for         the design of a system: A metamodel         Aikaterini-Georgia Mavroeidi, Angeliki Kitsiou, Christos Kalloniat     </li> </ul>	Fiorani
	TrustBus Sessions 4G	HS5
	Session Chair: Edgar Weippl	
	<ul> <li>Gender Inference for Facebook Picture Owners         Bizhan Alipour, Abdessamad Imine, Michael Rusinowitch     </li> <li>Unifying cyber threat intelligence         Florian Menges, Christine Sperl, Günther Pernul     </li> <li>Decentralised and Collaborative Auditing of Workflows         Antonio Nehme, Vitor Jesus, Khaled Mahbub, Ali Abdallah     </li> </ul>	

## 15.00 CLOSING at room HS7

# **Sessions Summary**

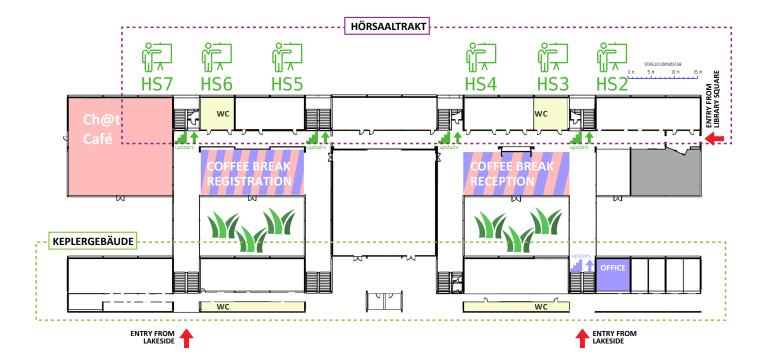
Day Time	Monday 26.08 2019	Tuesday 27.08 2019	Wednesday 28.08 2019	Thursday 29.08 2019
09.00 to 10.30		Sessions: DEXA S.2A DaWaKRoom HS7S.2BHS6HoloMASHS5S.2CHS4MLKgraphS.2DBioKDDHS3S.2EIWCFS S.2F	Sessions:RooDEXA S.3AmDaWaK S.3BHS7EGOVISHS6S.3CHS5	Sessions: DEXA S.4ARoom HS7DEXA S.4BHS7DEXA S.4CHS6DEXA S.4CHS5TrustBUSHS4S.4DHS4
10.30			Coffee Break @Hall B & C, ground Fl	
11.00		Keynote Talk 2 By <i>Axel Polleres</i> <i>(HS7)</i>	Keynote Talk 3 By <i>Dirk Draheim</i> <i>(HS7)</i>	Keynote Talk 4 By <i>Stefanie Rinderle-Ma</i> <i>(HS7)</i>
12.00	<b>REGISTRATION</b> @Hall B, ground Fl. Keplergebäude Bldg.	Lunch @Mensa		
<b>13.00</b> <i>13.30</i> <i>14.30</i>	<ul> <li>Opening (HS7)</li> <li>Keynote Talk 1 By <i>Vladimír Mařík</i> (HS7)</li> <li>Coffee Break <i>@Hall B &amp; C, ground Fl.</i></li> </ul>	Sessions:RoomDEXA S.2GHS7DaWaKHS6S.2HHS5HOLOMASS.2iHS4EGOVISHS3S.2JBioKDDS.2KS.2K	Sessions:RooDEXA S.3DmDaWaK S.3EHS7DEXA S.3FHS6EGOVISHS5S.3GHS4	Sessions: Room TrustBUS HS6 S.4F HS5 TrustBUS S.4G
15.00	<u>Sessions:</u> <u>Room</u>	Coffee Break @Hall B & C, ground Fl.		CLOSING (HS 7)
15.30 to 17.30	DEXA S.1A HS 7 HoloMAS HS 6 S,1B HS 5 MLKgraph S.1C HS 4 BioKDD HS 3 S1.D IWCFS S.1E	Sessions: DEXA S.2LRoom HS7DaWaKHS7DaWaKHS6S.2MHS5HoloMASS.2NHS4EGOVISHS3S.2OTIR S.2P	Sessions:RooDEXA S.3HmDaWaK S.3IHS7DEXA S.3JHS6EGOVISHS5S.3KHS4DEXA S.3LHS3	
	Hall B&C		Conforance Dinner	
18.30 to 23.00			Conference Dinner Cruising Danube River <i>Boarding the ship</i> 18:30	

Term: HS = Hörsaal/ Seminar room Mensa = University Canteen

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# **Lecture Rooms Plan**



The Lecture rooms are located in the Hörsaaltrakt (lecture Rooms Wing), Keplergebäude Building



Location of DEXA Conferences and Workshops in the Keplergebäude Building, Johannes Kepler University Linz. The meeting rooms are located in the Hörsaaltrakt (Lecture Rooms Wing).

Address JKU Linz: Altenberger Straße 69, Linz 4040, Austria.

Website: https://www.jku.at/en/

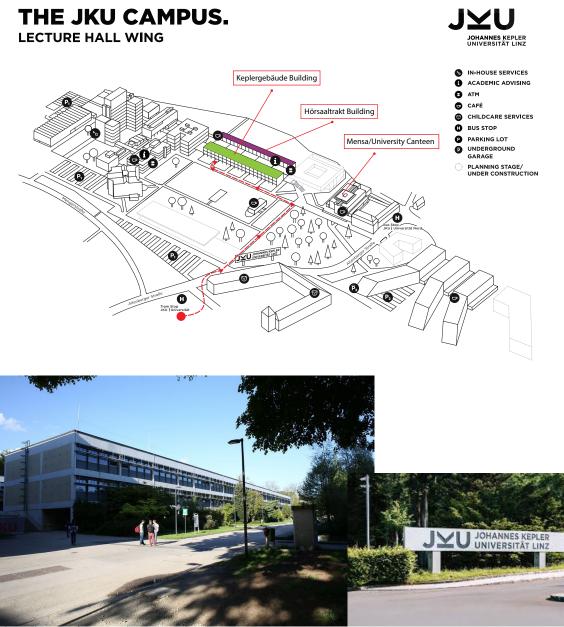


photo: Johannes Kepler University Linz

#### **Transportation to JKU Linz**

The most convenience way to get to JKU Linz is by tram ("Straßebahn"). Take tram line 1 or 2 in the direction "Universität". From the main train station (Hauptbahnhof), it takes about 30 minutes.

# **Social Events**



## **Welcome Reception**

Monday, 26 August 2019, 17:00 – 19:00 at Keplergebäude Building Groud Fl., JKU Linz

All DEXA 2019 participants are cordially invited to a welcome reception on Monday, August 26, at JKU campus, Hörsaaltrakt, Hall B+C (same as coffee break area). Drinks and snacks will be served from 5pm to 7pm.



photo: Johannes Kepler University Linz

If the weather permits, you will be able to take a stroll along the lake of the campus enjoying your drinks outdoor. But be aware of the duck population at the lake which might show strong interest in your snacks ...



photo: Johannes Kepler University Linz

# **Social Events**

## **Conference Dinner**

Wednesday, 28 August 2019, 18:30 - 23:00 , Danube River Cruise

DEXA 2019 Conference Dinner will entertain you with a cruise along the river Danube. **Boarding of the ship** will start at **18:30** at the boarding gate of **"Wurm & Noe Donauschiffahrt"** near the Lentos Museum. Please make sure to arrive in time and have your Dinner ticket with you. Due to limited seat capacity, there is absolutely no boarding without a ticket. **The ship will depart at 19:00**, going up the Danube until Ottensheim and moving back down the Danube where you will see the city night lights of Linz and the impressive industrial area of VOEST Alpine steel production. During the Dinner, Best Paper Awards will be presented and we will also announce the dates and venues for DEXA 2020. The cruise will end at about 23.00 arriving at the same gate as for boarding.



#### How to go :

To go to the boarding gate of **"Wurm & Noe Donauschiffahrt"** which is located near the Lentos Museum in Linz City Center. The best way to go there from University is by Tram. Take tram linie 1 (to Auswissen) or tram linie 2 (to Solar City) from haltestele/the stop "Universität" near JKU. Get off the tram at "Hauptplatz" in the city center (this is just after crossing the Danube bridge) then walk toward Lentos Museum. The entrance to the Boarding gate is behind the Lentos Museum building (at the river bank).



Buy Tram tiket Maxi Euro 4.6 for 24hours so it can be used for return trip. Buy at ticket pending machine at Haltestelle.

# **General Information**





## **Registration Desk**

The Registration Desk is located at the Hall C at Keplergebäude Building Groud Fl. Opening hours: Mon, 26 Aug; 12.00 – 17.00 Tue, 27 Aug; 08.00 – 17.00 Wed, 28 Aug; 08.00 – 17.00 Thu, 29 Aug; 08.00 – 15.00

**Coffee** 

# Coffee Breaks & Lunches

Coffee Break will be served at the Hall B & C during the conference days. Morning Coffee Break between 10.30 – 11.00 Afternoon Coffee Break at 15.00 – 15.30 (except on Monday, 26 Aug from 14.30 – 15.00) Lunch will be at Mensa (University Canteen) which located in the Uni Center Building (next to the Library). Lunch Voucher will be given to participants (if entitled to) during the registration. Please always wear/bring your ID badge throughout the conference programs, coffee breaks and lunches. Don't forget to bring Lunch Voucher as Lunch admission



### Smoking Policy

Smoking only permitted in the restricted area and outside the building. No smoking inside the buildings.



## Mobile Phone Courtesy

All mobile phones and other equipment with audible alarms should be turned off in all sessions as a courtesy to the presenters and to the other attendees.



## **Presentation Equipments**

The conference organizer will provide a standard presentation equipment i.e. Projector and flipchart. All presenters are recommended to bring their personal laptop for presentation including any adaptors required for the laptop, otherwise please inform the organizer earlier before presentation schedule.



## WLAN Access

Free WiFi is available in the entire campus by using "eduroam" access. For those who are not have access to eduroam please contact registration desk for WiFi connection.



## **Electricity Supply**

Electricity in Austria is supplied at 220V. Please make sure to bring your own travel adapter if needed. We cannot guarantee the availability of the appropriate adaptor or transformer.



### Public transport in Linz

Commuting within Linz City is very easy. Excursion by foot while pedestrian ways are available almost in every streets and parks. Public transportation Buses & Trams ("Straßebahn"), connecting the suburb to the city central ("Zentrum"). Tickets are available at the ticket vending machines of LINZ AG Linien: MAXI (24-hour ticket,  $\in$  4.50), MIDI (more than 4 stops,  $\in$  2.30), MINI (up to 4 stops,  $\notin$  1.20), which valid to be use for both Linz AG Linien Buses & Trams.

For further information see Linz AG Linien (https://www.linzag.at/portal/de/privatkunden/ unterwegs)



**30<sup>th</sup> DEXA Conferences and Workshops** August 26<sup>th</sup> - 29<sup>th</sup>, 2019 Linz, Austria

www.dexa.org