# ER 2022

# 41st International Conference on Conceptual Modeling

# Hyderabad, India

# Dates: 17-20 October 2021

Call for Papers

We solicit submission of original research, as well as experience and vision papers, from both researchers and practitioners, welcoming any topic where conceptual modeling is a major theme. Submissions that draw attention to the role conceptual modeling can play in areas where it has not traditionally been applied are especially welcome, since the overall theme of ER 2022 is

Conceptual modeling to support Big Data Analytics and AI

Topics of interest span the entire spectrum of conceptual modeling including research and practice in all related areas. Topics include theories of concepts and ontologies underlying conceptual modeling, modeling languages, methods and tools for developing and communicating conceptual models, and techniques for transforming conceptual models into effective implementations. Big data analytics demands modeling complex data into a variety of models and accommodate 5V’s (Volume, Velocity, Variety, Value and Veracity). Can the conceptual modeling community raise to the occasion to meet the Big Data Analytics needs? Conceptual modeling helps deep understanding of data and knowledge that is the backbone of AI systems. The modern Data Driven AI systems have less representation schemes for the input data and the output. Techniques make the conceptual understanding of the data movement through deep learning models help develop and apply these learning models.

Submission Guidelines

Since the proceedings will be published by Springer in the LNCS series, authors must submit manuscripts using the LNCS style (see [style files and details](https://www.springer.com/gp/computer-science/lncs/conference-proceedings-guidelines)). The page limit for submitted papers (as well as for final, camera-ready papers) is 14. Manuscripts not submitted in the LNCS style or exceeding the page limit will not be reviewed and will be automatically rejected. Springer has provided a [LaTeX template in Overleaf](https://www.overleaf.com/latex/templates/springer-lecture-notes-in-computer-science/kzwwpvhwnvfj%23.WuA4JS5uZpi) for your convenience.

Submission Link

https://...

Program Chairs

Sharma Chakravarthy, The University of Texas at Arlington, USA

Mukesh Mohania, IIIT Delhi, India

Jolita Ralyté, University of Geneva, Switzerland

Topics of Interest

Specific examples of topics of interest include, but are not limited to, conceptual modeling as applied to:

**Foundations**

* Foundations and Concept Formalization
* Knowledge representation, knowledge graphs and related techniques
* Ontological and Cognitive Foundations
* Multi-level Modeling
* Justification and Evaluation of Models

**Data/Object Management**

* Data Semantics and Integrity Constraints
* Integration of Conceptual Models and Database Schemas
* Schema Evolution and Management of Database Constraints
* NoSQL and NewSQL Databases
* Big Data and Conceptual Modeling
* Conceptual Modelling for Data Integration and On-Chain & Off-Chain Information Integration
* Data Warehousing, Data Mining, Business Intelligence and Analytics
* Spatial, Temporal, and Multimedia Aspects in Conceptual Models
* Metadata and Applications Semi-structured Data and XML
* Modeling Information Fusion applications
* Conceptual Modelling in Blockchain Data Management and Smart Contracts

**Engineering**

* Agile Development
* Interleaving Modeling and Development Domain Specific Conceptual Modeling Languages, Methods and Frameworks
* Requirements Engineering
* Reverse Engineering and Round-Trip Engineering
* Patterns and Reuse
* Methodologies and Tools for Conceptual Design
* Conceptual Models for Microservices
* Quality and Metrics of Conceptual Models
* Game Theoretical Models

**Business Information Systems**

* Enterprise Models
* Enterprise Architectures
* Service-Oriented Architectures and Business Process Modeling
* Models at Runtime
* Models to Support IT Management
* Modeling Distributed Ledger Systems
* **Advanced and Cross-Disciplinary Applications, Conceptual Modeling, Information Systems and Knowledge Graphs**Data Economics
* Machine Learning, Deep Learning
* Industry 4.0, Factory of the Future
* Digital Twins
* Internet of Things, FOG and Edge Computing
* Bioinformatics, Ambient Assistance
* Cyber Security and Privacy
* Social Networks
* Mobile Computing
* Serious Games and Pedagogical Models
* Semantic Web, Cloud Computing, and Web Information Systems
* Information Retrieval, Filtering, Classification, Summarization, and Visualization
* Multimodal Conversational AI

**Experience**

* Empirical Studies of Conceptual Modeling
* Experience Applying Conceptual Modeling
* Impact of Conceptual Modeling in Real-world Applications

Important Dates

Paper abstracts due: April 4, 2022

Full Paper due: April 11, 2022

Author notification: June 15, 2022

Camera ready papers due: June 29, 2022

A paper submitted to ER 2022 may not be under review for any other conference or journal during the time it is being considered for ER 2022. Submitted papers must demonstrate awareness of the state-of-the-art literature in conceptual modeling by properly citing relevant papers in the field.