

ICDAM-2023
**4th International Conference on Data Analysis and
Management**

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*The Karkonosze University of Applied Sciences, Jelenia Gora, Poland, Europe
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Politécnico de Portalegre, Portugal, Europe

&

BPIT, GGSIPU, Delhi

Date: 23rd - 24th June 2023

******* CALL FOR PAPERS *******

SPECIAL SESSION ON

**RECENT TRENDS OF GENERATIVE DEEP LEARNING AND EXPLAINABLE
ARTIFICIAL INTELLIGENCE APPROACHES IN SMART CITIES AND INDUSTRY 4.0**

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EDITORIAL BOARD: (Optional)

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SESSION DESCRIPTION:

This session on *Recent Trends of Generative Deep Learning and Explainable Artificial Intelligence approaches in Smart Cities and Industry 4.0* focusses on inviting innovative research articles on the recent advancements made in Data Analysis in domains of Smart Cities and Industry 4.0. Generative Deep Learning is one of the most celebrated advancements of Artificial Intelligence in the present decade with

real-time models like DALL-E, IC-GAN etc. Unlike the discriminative models, Generative models are unsupervised abstractions of knowledge that are used for both learning and replicating the creativity of the common humane in arts. The performance of any model depends upon the quality of data. Neither the abundance of data without noise nor the availability of the sufficient number of records is met for solving real-time problems. Generative Deep Learning approaches provides a solution to meet the availability of the good quality of data. Although the modern IoT approaches increases connectivity, vulnerabilities and loop holes for cyber-attacks also increases. IoT devices involved in the network are constrained both in terms of memory and processing power. Even though the current AI practices solves some of the complex real-time problems, the unexplained model behavior poses a constraint for fine tuning the model performance, also to avoid false predictions. The solutions provided by Explainable Artificial Intelligence approaches demystifies the working of black box models. We focus on presenting both the intersections of Generative Approaches and XAI in Smart Cities and Industry 4.0 and the detailed study made on the applications of the technologies for solving many real-time problems through data-driven decisions. We hope the session highlights the ways of applying trending Artificial Intelligence practices for improved quality data-driven analytics and data analysis.

RECOMMENDED TOPICS:

Topics to be discussed in this special session include (but are not limited to) the following:

- Generative Deep Learning for Security in Smart Cities
- GAN based approaches for improving the quality of data in Smart Cities Applications
- Fusion of Generative Adversarial Networks and Computer Vision for Smart Cities Applications
- Approaches of Generative Deep Learning in modern Image Processing for Smart Cities Applications
- Generative Deep Learning based Data Compression Techniques and real time applications
- Data Analysis for Digital Twins and Internet of Things
- Data Mining approaches for mitigating Cyber-attacks in Smart Cities Environment
- Advanced Machine Learning and Deep Learning applications in Industry 4.0
- Explainability and Interpretability issues of conventional Machine Learning and Deep Learning practices in Industry 4.0 environment
- Applications of Explainable Artificial Intelligence techniques for increased accuracy Data Analysis
- Modern XAI Frameworks for analyzing text, image and numerical data
- Big Data Analytics in Smart Cities Environment for applications that includes transportation, healthcare, traffic management
- Light weight model design approaches for Edge Computing in resource constrained environments
- Scopes of Generative Deep Learning in Natural Language Processing Applications for Smart Cities
- Data Analysis and Cyber Physical Systems

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session ***Recent Trends of Generative Deep Learning and Explainable Artificial Intelligence approaches in Smart Cities and Industry 4.0.*** All submissions must be original and may not be under review by another publication. INTERESTED AUTHORS SHOULD CONSULT THE CONFERENCE'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS at <https://icdam-conf.com/downloads> . All submitted papers will be reviewed on a double-blind, peer-review basis.

NOTE: While submitting a paper in this special session, please specify ***Recent Trends of Generative Deep Learning and Explainable Artificial Intelligence approaches in Smart Cities and Industry 4.0*** at the top (above paper title) of the first page of your paper.

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