# IEEE International Conference on Omni-layer Intelligent Systems

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August 1-3, 2022 https://coinsconf.com



Call for Papers

# **Track: Artificial Intelligence, Machine Learning, and Analytics**

This track aims to provide a forum for the exchange of ideas and discussions on the topic of Artificial Intelligence, Machine Learning, and Analytics. This tracks gather problems, algorithms, modern architectures as well as current and future challenges in this topic. The track is therefore open to high quality submissions from researchers working in learning problems using different methodologies on multiple data sources.

Topics of interest of this track include, but are not limited to, the following:

#### A) Artificial intelligent and Machine learning Fundamentals

Machine learning, artificial intelligence, and predictive analytics Platforms, architecture and infrastructure for efficient data analytics Data, Text, Stream, Process & Network Mining Times Series Models
Bayesian Learning

Ensemble Learning Transfer Learning Reinforcement Learning RNN, CNN & GAN Markov-Chain & Monte-Carlo-Simulation

Datasets and Evaluation

Adaptive Systems Generalization as search

Ontologies and Knowledge sharing Brain-inspired representations learning

Business Intelligence and Data Mining techniques

Intelligent algorithms for Fog and cloud-based Internet of Things

#### B) Image Processing and Video Analytics

3D computer vision

Action and behavior recognition Biometrics, face, gesture, body pose

Image retrieval Motion and tracking

Neural generative models, auto encoders, GANs Recognition (object detection, categorization)

Representation learning, deep learning

Scene analysis and understanding Segmentation, grouping and shape

Transfer, low-shot, semi- and un- supervised learning

Video analysis and understanding

Vision + language, vision + other modalities

Vision applications and systems

Visual reasoning and logical representation

#### C) Speech Recognition and Understanding

Automatic speech recognition

Spoken language understanding

Speech-to-text systems

Spoken dialog systems

Multilingual language processing

Robustness in automatic speech recognition

Spoken document retrieval

Speech-to-speech translation

Text-to-speech systems

Spontaneous speech processing

Speech summarization

New applications of automatic speech recognition

## Special Track Co-Chairs

Alberto Cano, Virginia Commonwealth University, USA

Jose Maria Luna, University of Cordoba, Spain

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