



ICONIP 2022 - Special Session on

“Challenging Deepfake through Explainable AI”

Agile methods to combat increasing deepfakes

Deepfake detection has become an utmost important issue across the world especially looking at its impact on the society. While deepfake technology has already made its place in society, the construction of interpretable and easily explainable models is essential to restore the trust of humans.

This special issue will address the increasing demand of explainable AI techniques to combat deepfakes. This dedicated session is expected to publish high quality research articles under ICONIP 2022, an annual flagship conference organized by the Asia Pacific Neural Network Society (APNNS).

Topics of interest include, but are not limited to

Deep Learning Techniques to Analyze and Detect Deepfakes

- Deep CNNs in the Detection of Deepfake
- Generative Adversarial Networks for Deepfake Detection
- Spatial, Spectral, and Temporal techniques
- Deep Reinforcement Learning in Deepfake Detection
- Deepfake Detection Techniques under Adversarial Attacks
- Ensemble of Deep Learning Models to generalize Deepfake Detection Capability.

Explainable AI to Combat Deepfake

- Combatting Deepfake by Audio/ Visual Interpretability
- Rationalizing Neural Predictions for Deepfake Detection
- Attention-based Explainable Deepfake Detection
- AI Methods for Learning Semantic
- Guided Backpropagation for visualizing CNN features
- Use of popular explainable AI methods, such as Deep Taylor, Integrated Gradients, for Deepfake Detection
- Local Interpretable Model-Agnostic Explanations (LIME) models for Deepfake Detection.

Blockchain Technology and Deepfake

- Distributed Ledgers and Consensus Methods to prevent Deepfake
- Blockchain and Smart Contracts to Combat Deepfakes
- Blockchain Security and Privacy Threats through Deepfake

Hybrid Approaches to Combat Deepfakes

- Human individualities to detect Deepfake Attacks
- New Datasets for AI Synthesized Media Detection
- Social Impacts of Deepfake
- Resilience against the use of Deepfakes during Social Interaction and probable new dimensions

Important Dates and Links

Submission Deadline: 11:59 PM (AoE), June 15, 2022
Notification Date: 11:59 PM (AoE), August 15, 2022
Camera-Ready Deadline: 11:59 PM (AoE), August 31, 2022

Online Submission through EasyChair:
<https://easychair.org/conferences/?conf=iconip2022>
 Contact iconip.2022@gmail.com for any query

For complete details please visit <https://iconip2022.apnns.org/>

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