The concept of Metaverse, a hybrid digital world of reality and virtualization based on traditional cyberspace and combined with many emerging mature technologies, has recently been emphasized by many researchers. The Metaverse is not a simple virtual space but a sustainable virtual reality system that includes the Internet, hardware devices, and user avatars, combining digital duplicates of real-world objects and objects created virtually.

The following are some of the core elements of the Metaverse:

1. Immersive experience: By wearing virtual reality (VR) devices, using augmented reality (AR) technology, or using a computer or smartphone in everyday life, users can enter a life-like virtual world. The virtual world gives users an immersive experience and a sense of human and social presence through user-created avatars (digital twins).

2. Permanent Data Synchronization: Just as in real life, the Metaverse provides users with an experience that is synchronized with real life. All activities in the virtual world coexist with the real world and are constantly changing. Even when the user leaves the virtual world, the virtual world does not pause or disappear; it is a continuous experience.

3. Cross-platform space: The ultimate goal of the Metaverse is that one day, users can experience traveling through different virtual worlds and travel around the world with an ideal identity and costume just by creating a set of avatars. Currently, the digital avatars on the Metaverse platform can already travel to and from different spaces, but they cannot conduct activities between different platforms yet.

4. Virtual Economy: The Metaverse also needs an economic system to maintain the operation of virtual worlds. Currently, the management and operation of digital assets vary from platform to platform, with non-identicalized tokens (NFTs) being the most common type.

This workshop will discuss and summarize some recent innovative products and services in the Metaverse fields. Potential topics include, but are not limited to:

- Innovative VR and AR services
- Web 3.0 applications and services
- Artificial intelligence applications in Metaverse
- Metaverse usage behaviors
- Blockchain and NFT applications

Session organizers:

Prof. Kuo-Lun Hsiao National Taichung University of Science and Technology, Taiwan Email: <u>klhsiao@gm.nutc.edu.tw</u>

Prof. Hsiu-Sen Chiang National Taichung University of Science and Technology, Taiwan Email: <u>hschaing@nutc.edu.tw</u>

Important dates

Workshop paper submission deadline: April 30, 2024 Workshop paper notification: May 18, 2024 Workshop Camera ready and related full registration: May 31, 2024

Submission

- Submissions will be handled through the workshop organizers.
- Submitted as a PDF file.
- The workshop organizers of ISASD will manage the review process and will accept submitted papers either as Full Paper (having a maximum of 10 pages) or as Short Paper (having a maximum of 4 pages).

Please email the papers to Professor Kuo-Lun Hsiao, Department of Information Management, National Taichung University of Science and Technology, Taichung, Taiwan E-mail: <u>klhsiao@gm.nutc.edu.tw</u>