

Internet and the Digital Economy Minitrack: The Metaverse for Work and Play

Hiro Protagonist, a hacker and pizza delivery driver, fought to neutralize a deadly virus in the *Metaverse* in the cyberpunk novel Snow Crash (Stephenson, 1992). Almost coincidentally, as Snow Crash turned 30, one of the biggest companies in the world, Facebook, changed its name to Meta to reflect its focus on the Metaverse. Despite its infancy, the Metaverse has generated significant interest from users, practitioners, and researchers. Given its potential to transform the future of work and the consumer landscape by creating immersive experiences, Big Tech companies are investing not only in the underlying technology to enable the Metaverse but also in accompanying virtual products and services to create immersive experiences for users and help build intellectual capital within and between organizations (Lowry et al., 2025).

The Metaverse is a decentralized, shared, immersive, and persistent virtual environment. It is afforded by socially constructed and materially enabled IT artifacts that allow users to have unique identities represented by their avatars and authentic interactions with other users, human-like AI agents, and virtual assets (Davis, 2009; Seymour et al., 2021; Shin, 2022). In other words, the Metaverse is a connection between the real and virtual world where one can work, study, play, shop, travel, socialize, and accomplish many other daily activities similar to the physical world. (Owens et al., 2011). The Metaverse offers various opportunities, from creating new revenue streams for businesses to reducing operational costs (Wang et al., 2022), enabling distributed training (Hendriks et al., 2024), and fostering intellectual capital (Bhagwatwar et al., 2018). The Metaverse is also an extension of the physical world, with opportunities beyond what the physical world offers to individuals (Steffen et al., 2019). Especially with the immersion capabilities of the current powerful standalone head-mounted extended reality (XR) displays (Dincelli & Yayla, 2022), one can experience what is not usually possible, such as spending a day in ancient Greece, walking on Mars, or exploring the mysteries of Kīlauea, in the Metaverse.

While many opportunities exist for the Metaverse, it also has diverse challenges that may prevent successful adoption, such as surveillance, user tracking, deviant behavior (e.g., bullying and stalking) (Lowry et al., 2017), design issues, unintended consequences such as addiction, technostress, anxiety, and cognitive overload (Suh & Prophet, 2018), and the new security and privacy threats (Vondrek et al., 2022). Our experiences from e-commerce, social media, and the Internet during the past decades necessitate a proactive approach to governance, regulations, design principles, data collection, physical-virtual world connection, and similar issues during the inception of the Metaverse. Consequently, this mini track explores the transformative potential of the Metaverse, emphasizing opportunities for innovation, immersive experiences, and emerging

business models. At the same time, it addresses critical challenges, including risks, unintended consequences, and the need for effective governance and regulatory frameworks. By addressing both opportunities and challenges, this mini track aims to offer valuable insights into the impact of the Metaverse on users and organizations, as well as the policies and regulations necessary to ensure its responsible and ethical development.

The minitrack welcomes both theoretical and empirical studies employing diverse methodological approaches. Topics of interest include, but are not limited to, the following:

• Challenges and Risks in the Metaverse:

- Cybersecurity and privacy threats
- New attack vectors and surfaces (e.g., adversarial AI, biometric data breaches)
- The Darkverse illegal and criminal activities in the Metaverse (e.g., illicit markets, cybercrimes, money laundering)
- \circ Anti-forensics techniques used by hackers to evade detection in the Metaverse
- \circ $\;$ Deception and deep fakes (e.g., AI-generated misinformation and identity fraud) $\;$
- o Deviant behavior (e.g., harassment, bullying, stalking, organized trolling, radicalization)
- Ethical concerns and implications for freedom of expression in the Metaverse (e.g., user surveillance, tracking, and censorship)
- o Adverse physical, mental, and emotional effects (e.g., addiction, technostress, cyberpsychoses, misuse)
- Unintended consequences of AI-driven moderation and personalization (e.g., algorithmic biases and digital discrimination)
- Weaponization of virtual spaces (e.g., the use of the Metaverse for social engineering, radicalization, and digital warfare)
- Psychological manipulation (e.g., exploitative game mechanics, behavioral reinforcement, and persuasive design for engagement, surveillance, or deception)

• Opportunities and Innovations in the Metaverse:

- Novel and sustainable business models (e.g., meta-tourism, Metaverse in eCommerce)
- User-centric monetization strategies (e.g., play-to-earn, digital economies, tokenization)
- o Cost reduction, operational efficiency, and improved firm performance through Metaverse adoption
- o Corporate training, distributed learning, and virtual collaboration for improved team performance
- o Knowledge creation, retention, and dissemination in immersive environments
- Metaverse applications (meta-apps) for healthcare (e.g., telemedicine, virtual therapy, rehabilitation)
- o Mental and physical health benefits (e.g., meta-fitness, stress reduction, gamified wellness programs)
- Opportunities for vulnerable populations (e.g., improving accessibility for elderly individuals and people with disabilities)
- Positive behavioral reinforcement through gamification (e.g., reward systems for healthy habits, ecoconscious behavior, and social good initiatives in virtual environments)

• Governance and Regulation of the Metaverse:

- Intellectual property, copyright, and ownership
- Data privacy, transparency, anonymity, and virtual identities
- New standards, regulations, compliance, and governance mechanisms for the Metaverse
- Hardware (e.g., haptics, trackers) and software (e.g., digital twins, asset management) ecosystems
- Integration with enabling technologies (e.g., Blockchain, AI, NFT, XR, VR, AR, MR, IoT, wearables)
- \circ Digital divide, accessibility, and diversity, equity, and inclusion (DEI)
- Digital personas, avatars, and virtual assets
- Safeguarding and well-being of vulnerable populations (e.g., children, neurodivergent individuals, marginalized communities)
- Fairness in virtual environments
- Ethical AI and algorithmic accountability
- Metaverse governance frameworks and decentralized decision-making
- Public vs. private governance models
- Game-theoretic approaches to Metaverse policy and governance

The minitrack aims to provide IS scholars with a venue to share their research that rigorously addresses the abovementioned points. We hope to attract scholars from a range of disciplines and high-quality papers to form two sessions. Selected papers are going to have a fast-track submission opportunity at the <u>Journal of Intellectual Capital</u>.

Important Dates:

- April 15, 2025: Manuscript submission system reopened for HICSS-58
- June 15, 2025, 11:59 pm (HST): Manuscript submission deadline
- August 17, 2025, 11:59 pm (HST): Notification of acceptance/rejection
- September 22, 2025, 11:59 pm (HST): Submission of final manuscript for proceeding publication
- October 1, 2025, 11:59 pm (HST): Registration deadline (at least one author must register)
- January 6-9, 2026: HICSS-59 conference dates

Please see the HICSS website for more information: <u>https://hicss.hawaii.edu/</u> Submit full manuscripts for review: <u>http://hicss.hawaii.edu/tracks-and-minitracks/authors/</u>

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