

Internet and the Digital Economy Minitrack: The Dark and Bright Sides of the Metaverse

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.

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, 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 such as bullying and stalking (Lowry et al., 2017), design issues, unintended consequences (e.g., addiction, technostress, anxiety), 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, the focus of this mini track is the dark side, bright side, and governance of the

Metaverse. The minitrack welcomes theoretical and empirical studies that use a variety of methodological approaches. Topics of interest include, but are not limited to, the following:

- The Dark Side of the Metaverse:
 - Cybersecurity and privacy risks
 - Emerging attack vectors and surfaces
 - The Darkverse illegal and criminal activities in the Metaverse
 - o New anti-forensics techniques hackers can employ in the Metaverse
 - Deception and deep fakes
 - o Deviant behaviors such as harassment, bullying, stalking, and trolling
 - User surveillance, tracking, and censorship issues
 - Adverse physical, mental, and emotional effects (e.g., addiction, technostress, psychoses, misuse, etc.)
 - o Ethical considerations and dilemmas in the Metaverse
- The Bright Side of the Metaverse:
 - o Innovative and sustainable business models (e.g., meta-tourism)
 - User-centric monetization strategies
 - o Cost reduction, operational effectiveness, and enhanced firm performance
 - o Corporate training, distributed learning, collaboration, and team performance improvements
 - Knowledge creation, retention, and dissemination strategies
 - Metaverse applications (meta-apps) for healthcare
 - Mental and physical health benefits (e.g., meta-fitness)
 - Opportunities for vulnerable populations (e.g., elderly, people with disabilities)
- Governing the Metaverse:
 - o Intellectual property, copyright, and ownership
 - o Data privacy, transparency, anonymity, and virtual identities
 - o Establishment of new standards, regulations, compliance, and governance mechanisms
 - Evolving hardware (e.g., haptics, trackers) and software (e.g., talent, asset management) ecosystems
 - Organizational implications of spatial computing
 - o Complementary and enabling technologies (e.g., Blockchain, AI, NFT, XR, VR, AR, IoT, wearables)
 - Digital divide, accessibility, and diversity, equity, and inclusion (DEI)
 - Managing digital personas, avatars, and virtual assets
 - Safeguarding and promoting the well-being of vulnerable populations
 - o The convergence of AI and the Metaverse

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, 2024: Manuscript submission system reopened for HICSS-58
- June 15, 2024, 11:59 pm (HST): Manuscript submission deadline
- August 17, 2024, 11:59 pm (HST): Notification of acceptance/rejection
- September 22, 2024, 11:59 pm (HST): Submission of final manuscript for proceeding publication
- October 1, 2024, 11:59 pm (HST): Registration deadline (at least one author must register)
- January 7-10, 2025: HICSS-58 conference dates

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

Minitrack Co-chairs:

- Ersin Dincelli (primary contact), University of Colorado Denver, ersin.dincelli@ucdenver.edu
- Merrill Warkentin, Mississippi State University, m.warkentin@msstate.edu
- Paul Benjamin Lowry, Virginia Tech, pblowry@vt.edu

References:

- Bhagwatwar, A., Massey, A., & Dennis, A. (2018). Contextual priming and the design of 3D virtual environments to improve group ideation. Information Systems Research, 29(1), 169-185.
- Davis, A., Murphy, J., Owens, D., Khazanchi, D., & Zigurs, I. (2009). Avatars, people, and virtual worlds: Foundations for research in metaverses. Journal of the Association for Information Systems, 10(2), 1.
- Dincelli, E., & Yayla, A. (2022). Immersive virtual reality in the age of the Metaverse: A hybrid-narrative review based on the technology affordance perspective. Journal of Strategic Information Systems, 31(2), 101717.
- Lowry, P. B., Moody, G. D., & Chatterjee, S. (2017). Using IT design to prevent cyberbullying. Journal of Management Information Systems, 34(3), 863-901.
- Seymour, M., Yuan, L. I., Dennis, A., & Riemer, K. (2021). Have we crossed the uncanny valley? Understanding affinity, trustworthiness, and preference for realistic digital humans in immersive environments. Journal of the Association for Information Systems, 22(3), 9.
- Shin, D. (2022). The actualization of meta affordances: Conceptualizing affordance actualization in the metaverse games. Computers in Human Behavior, 133, 107292.
- Steffen, J. H., Gaskin, J. E., Meservy, T. O., Jenkins, J. L., & Wolman, I. (2019). Framework of affordances for virtual reality and augmented reality. Journal of Management Information Systems, 36(3), 683-729.
- Stephenson, N. (1992). Snow Crash. New York: Bantam Books.
- Owens, D., Mitchell, A., Khazanchi, D., & Zigurs, I. (2011). An empirical investigation of virtual world projects and metaverse technology capabilities. ACM SIGMIS Database, 42(1), 74-101.
- Vondrek, M., Baggili, I., Casey, P., & Mekni, M. (2022). Rise of the Metaverse's immersive virtual reality malware and the manin-the-room attack & defenses. Computers & Security, 102923.
- Wang, L., Lowry, P. B., Luo, X., & Li, H. (2022). Moving consumers from free to fee in platform-based markets: An empirical study of multiplayer online battle arena games. Information Systems Research. 1-22.