Call for Papers

The Dark and Bright Sides of the Metaverse

57th Hawaii International Conference on System Sciences (HICSS-57)
Hilton Hawaiian Village Waikiki Beach Resort | January 3-6, 2024

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

Hiro Protagonist, a hacker and pizza delivery driver, fought his way 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 characterized as 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 normally 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 minitrack is the dark side, bright side and governance of the Metaverse. The minitrack welcomes both 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 threats
  - New attack vectors and surfaces
  - The Darkverse – illegal and criminal activities in the Metaverse
  - Anti-forensics techniques hackers can use in the Metaverse
  - Deception and deep fakes
  - Deviant behavior (e.g., harassment, bullying, stalking, trolls)
  - User surveillance, tracking, and censorship
  - Adverse physical, mental, and emotional effects (e.g., addiction, technostress, psychoses, misuse, etc.)

- The Bright Side of the Metaverse:
  - Novel and sustainable business models (e.g., meta-tourism)
  - User-centric monetization strategies
  - Cost reduction, operational effectiveness, and improved firm performance
  - Corporate training, distributed learning, collaboration, and improved team performance
  - Knowledge creation, retention, and dissemination
  - 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:
  - Intellectual property, copyright, and ownership
  - Data privacy, transparency, anonymity, and virtual identities
  - New standards, regulations, compliance, and governance mechanisms
  - Hardware (e.g., haptics, trackers) and software (e.g., talent, asset management) ecosystems
  - Complementary and enabling technologies (e.g., Blockchain, AI, NFT, XR, VR, AR, IoT, wearables)
  - Digital divide, accessibility, and diversity, equity and inclusion (DEI)
  - Digital personas, avatars, and virtual assets
  - Safeguarding and wellbeing of vulnerable populations

The minitrack aims to provide IS scholars a venue to share their research that rigorously addresses the aforementioned points. We hope to attract scholars from a range of disciplines and high-quality papers to form three sessions. Selected papers are going to have a fast-track submission opportunity in the Journal of Intellectual Capital.

Important Dates:
- April 15, 2023: Manuscript submission system reopened for HICSS-57
- June 15, 2023, 11:59 pm (HST): Manuscript submission deadline
- August 17, 2023, 11:59 pm (HST): Notification of acceptance/rejection
- September 22, 2023, 11:59 pm (HST): Submission of final manuscript for proceeding publication
- October 1, 2023, 11:59 pm (HST): Registration deadline (at least one author must register)
- January 3-6, 2024: HICSS-57 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
- Alper Yayla, University of Tampa, ayayla@ut.edu
- Merrill Warkentin, Mississippi State University, m.warkentin@msstate.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 man-in-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.