# Juliana (Juli) Hirt

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## Professional Appointments

**Graduate Research Assistant**, University of Wisconsin–Milwaukee 2022–Present
Conducted qualitative and quantitative research in information science, including survey design, data collection, modeling, and analysis.

**Senior Data Engineer**, West Bend Mutual Insurance 2024
Designed and implemented cost-conscious ingestion pipelines for centralized enterprise data stores. Mentored associates in distributed computing paradigms and CI/CD practices.

**Senior Analytics Engineer**, Northwestern Mutual 2021–2024
Designed and developed data science pipelines for compliance monitoring. Led migration of analytical workflows from on-premise infrastructure to cloud-based platforms.

**Insight Engineering Team Lead**, Crisis Prevention Institute 2020–2021
Developed enterprise-wide data consumption and reporting platforms. Supported marketing analytics through consolidated customer profiling and data integration.

## Teaching Experience

**Adjunct Instructor**, University of Wisconsin–Milwaukee 2019–2022
INFOST 410 — Database Information Retrieval Systems
INFOST 310 — Human Factors in Information Seeking and Use
INFOST 495 — Information Internship

## Publications

### Peer-reviewed journal articles

[Submitted] **Hirt, J.**, Thomas, B.J., & Adebayo, J.O. (2026) Space for Play: Developing a Roadmap for Tabletop Roleplaying Games in Libraries. *Library Trends*.

[Submitted] **Hirt, J.**, Park, H., Yan, X., & Wolfram, D. (2026). The Progress Toward FAIR Adoption for Research Data in STEM Fields. *Scientometrics*.

[Submitted] Lee, W.-C., Cho, H., **Hirt, J.**, & Thach, H. (2026). Enhancing video game metadata: Empirical insights from gamer-reported data. *Journal of Documentation*.

[Submitted] Lee, W.-C. & **Hirt, J.**. (2026). Supporting Ethical AI Use in Reference and User Services: Designing a Resource Guide for Librarians. *RUSQ: A Journal of Reference and User Experience*.

[Accepted] Boateng, H., Edwards, D. A., **Hirt, J.**, Mienkovska, A., Petrucci, A., & Waliwanjosaariya, L. (2026). Using spread spectrum with narrow band channels. *Mathematics in Industry Reports*.

Cho, H., Lee, W.-C., Thach, H., & **Hirt, J.** (2025). Evaluating video game moods and their separability based on user-generated reviews. *Journal of Documentation, 81*(2), 545–565. https://doi.org/10.1108/JD-10-2024-0247

Lee, W.-C., Huang, L.-M.C., & **Hirt, J.** (2025). Embracing emojis: Prototyping mood-enhanced information systems for fiction readers. *Journal of Documentation, 81*(2), 313–329. https://doi.org/

10.1108/JD-05-2024-0100

Lee, W.-C., Huang, L.-M.C., & **Hirt, J.** (2024). From amused to 😆: Enriching mood metadata by mapping textual descriptors to emojis for fiction reading. *Journal of Documentation, 80*(2), 552–571. https://doi.org/10.1108/JD-08-2023-0146

**Peer-reviewed conference proceedings**

[Accepted] Park, H., **Hirt, J.**, Yan, X., & Wolfram, D. (2026). Does data FAIRness provide a citation advantage? *30th Annual International Conference on Science and Technology Indicators (STI-ENID 2026)*, Antwerp, Belgium.

[Accepted] **Hirt, J.** & Lee, W.-C. (2026). From signals to structure: Enriching event metadata for optimized data ingestion. *International Society for Knowledge Organization (ISKO) 2026*, São Paulo, Brazil.

**Hirt, J.** & Lee, W.-C. (2025). Adventurers and algorithms: AI and the evolution of TTRPG gameplay. In *Proceedings of the Annual Conference of the Canadian Association for Information Science / Actes du congrès annuel de l'ACSI*. https://doi.org/10.29173/cais1888

Lee, W.-C., **Hirt, J.**, & Cho, H. (2024). From fandom to fadeaway: Unpacking factors contributing to anime dropout. *Proceedings of the Association for Information Science and Technology, 61*, 989–991. https://doi.org/10.1002/pra2.1163

**Professional publications (non-peer-reviewed)**

[Accepted] Adriazola, J., Cao, F., Chugunova, M., Fok, P.-W., **Hirt, J.**, Le, J., Monarkar, B., Nguyen, H., Nguyen, V. H., Osinubi, K., Raghunathan, N. N., Raval, K., Rogers, L., Yang, H., Youn, S., Yu, X., & Zyskin, M. (2026). Towards a fast optimal Kalman filter. *SIAM Mathematical Problems in Industry*.

Babou, T., Capece, J., Gideon, U., **Hirt, J.**, Le, J., Tamanna, T., Yang, H., Youn, S., & Yu, X. (2026). *A kinetic Monte Carlo (kMC) model for the dynamics of infectious diseases*. SIAM Graduate Student Mathematical Modeling Camp.

Lee, W.-C., **Hirt, J.**, & Luo, M. (2025). *Ethical AI and Librarianship: A Resource Guide*. https://sites.uwm.edu/ethical-ai-lib

## Data Sets & Software

Babou, T., Capece, J., Gideon, U., **Hirt, J.**, Le, J., Tamanna, T., Yang, H., Youn, S., & Yu, X. (2026). Software for kinetic Monte Carlo (kMC) simulation for modeling coronavirus spread (v1.0.0) [Computer software]. Zenodo. https://doi.org/10.5281/zenodo.20659487

**Hirt, J.**(2026). FAIR-Checker API integration pipeline [Computer software]. Zenodo. https://doi.org/10.5281/zenodo.18734665

Lee, W.-C., Huang, L.-M., & **Hirt, J.**(2023). Emojis and emotion categories for fiction. [Data set]. https://dc.uwm.edu/sois_facpubs/21

## Presentations

**Peer-reviewed conference posters**

[Accepted] Park, H., **Hirt, J.**, Yan, X., & Wolfram, D. (2026). Does data FAIRness provide a citation advantage? 30th Annual International Conference on Science and Technology Indicators (STI-ENID

2026), Antwerp, Belgium.

Lee, W.-C., **Hirt, J.**, & Cho, H. (2025). AI-assisted creativity: Shaping reader perspectives and evolving information needs. iConference 2025, Indianapolis, Indiana. https://hdl.handle.net/2142/126214

Lee, W.-C., **Hirt, J.**, & Cho, H. (2024). From fandom to fadeaway: Unpacking factors contributing to anime dropout. Association for Information Science and Technology (ASIS&T) Annual Conference 2024, Calgary, Alberta.

**Non-peer-reviewed conference posters**

[Accepted] **Hirt, J.**, Lee, W.-C., & Gottesman, A. (2026). Myth, magic, and machine learning: Ethical inquiry into AI-assisted tabletop roleplaying games. Association of Library and Information Science Educators (ALISE) 2026 Annual Conference, Buffalo, NY, United States.

Lee, W.-C., **Hirt, J.**, & Luo, M. (2026). Cultivating AI literacy in libraries: A resource guide for librarians and users. American Library Association Annual Conference.

Lee, W.-C., **Hirt, J.**, & Adebayo, J. O. (2024). Unveiling ethical concerns in AI: Early insights from a systematic review. AI Ethics Symposium: From Policy to Practice (NMDSI Symposium), Milwaukee, Wisconsin.

**Conference talks**

**Hirt, J.** & Lee, W.-C. (2026). From signals to structure: Enriching event metadata for optimized data ingestion. International Society for Knowledge Organization (ISKO) 2026, São Paulo, Brazil.

**Hirt, J.** & Lee, W.-C. (2025). Adventurers and algorithms: AI and the evolution of TTRPG gameplay. Canadian Association for Information Science Conference (CAIS) 2025, Halifax, Nova Scotia.

Lee, W.-C., **Hirt, J.**, & Cho, H. (2025). AI-assisted creativity: Shaping reader perspectives and evolving information needs. iConference, Indianapolis, Indiana.

**Invited talks**

**Hirt, J.**(November 12, 2026), *Structuring the Stream: Knowledge Organization for Event-Driven Data Ingestion*. Guest Lecture - Doctoral Seminar in Knowledge Organizatio, University of Wisconsin-Milwaukee, WI.

**Hirt, J.**(October 16, 2026), *From Concepts to Queues: Recasting Gärdenfors' Conceptual Spaces for Data Ingestion*. University of Pittsburgh AWM Chapter Meeting, University of Pittsburgh, Pittsburgh, PA.

## Awards & Honors

Society for Industrial and Applied Mathematics (SIAM), Mathematical Problems in Industry (MPI), 2026.

Society for Industrial and Applied Mathematics (SIAM), Graduate Student Mathematical Modeling Camp (GSMMC), 2026.

Graduate Student Excellence Fellowship (GSEF), University of Wisconsin–Milwaukee. 2026–2027.

2026 Northwestern Mutual Data Science Institute (NMDSI), Symposium on Data Science and Statistics (SDSS) Student Scholarship

Graduate Student Excellence Fellowship (GSEF), University of Wisconsin–Milwaukee. 2025–2026.

## Grants

Northwestern Mutual Data Science Institute (NMDSI). Project Lead. *Dungeons, dragons, and data: AI ethics in the realm of tabletop roleplaying.* Summer 2025.

American Library Association (ALA). Contributor. *Ethical AI and librarianship: A resource guide.* 2024.

Northwestern Mutual Data Science Institute (NMDSI). Contributor. *Ethical AI: Challenges and opportunities.* Fall 2024.

## Service

Association for Women in Mathematics (AWM) — Member

Mathematical Association of America (MAA) — Member

MAA SIGMAA-REC — Member

Society for Industrial and Applied Mathematics (SIAM) — Member

UW-M AWM Chapter — Website Coordinator

UW-M Digital Cultures Collaboratory (DCC) — Member, Public Communications Director, Symposium Chair

UW-M Knowledge Organization Research Group in Information Studies (KORGIS) — Member, Website Coordinator

UW-M SIAM Chapter — Member