

Rachelyn Farrell

AI researcher specializing in narrative technologies

INTERESTS

- Artificial Intelligence
- Knowledge Modeling
- Planning and Search
- Interactive Narrative
- Natural Language Processing
- Computational Creativity
- Human-Computer Interaction
- Creativity Support Tools

EDUCATION

Doctor of Philosophy in Computer Science

University of Kentucky - Lexington, KY

AUG 2017 - DEC 2022

- Dissertation: *Don't Give Me That Story! - A Human-Centered Framework for Usable Narrative Planning*
- Advisor: Prof. Stephen G. Ware

Master of Science in Computer Science

University of New Orleans - New Orleans, LA

AUG 2014 - MAY 2017

- Thesis: *Predicting User Choices in Interactive Narratives using Indexer's Pairwise Event Salience Hypothesis*
- Advisor: Prof. Stephen G. Ware

Bachelor of Science in Computer Science

University of Mississippi - Oxford, MS

AUG 2008 - MAY 2012

- Summa Cum Laude
- Minor in Linguistics

PROFESSIONAL EXPERIENCE

Research Scientist - Narrative Intelligence Lab

University of Kentucky - Lexington, KY

JAN 2023 - DEC 2023

Research Assistant - Narrative Intelligence Lab

University of Kentucky - Lexington, KY

AUG 2019 - DEC 2022

University of New Orleans - New Orleans, LA

AUG 2015 - JUL 2019

Research Assistant - Greater New Orleans Center for Information Assurance

University of New Orleans - New Orleans, LA

AUG 2014 - JUL 2015

Assistant Network Administrator - Dept. of Computer Science

University of Mississippi - Oxford, MS

JUN 2011 - AUG 2011

Teaching Assistant - Dept. of Computer Science

University of Mississippi - Oxford, MS

AUG 2010 - MAY 2011

PUBLICATIONS

All manuscripts are available at: <http://cs.uky.edu/~rfa237>

Journal Publications

1. **Rachelyn Farrell** and Stephen G. Ware. Large Language Models as Narrative Planning Search Guides. In IEEE Transactions on Games, vol. 17, no. 2, pp. 419-428, 2025.
2. Stephen G. Ware, Edward Garcia, Mira Fisher, Alireza Shirvani, and **Rachelyn Farrell**. "Multi-Agent Narrative Experience Management as Story Graph Pruning". In IEEE Transactions on Games, vol. 15, no. 3, pp. 378-387, 2022.
3. **Rachelyn Farrell**, Stephen G. Ware, and Lewis J. Baker. "Manipulating Narrative Salience in Interactive Stories using Indexer's Pairwise Event Salience Hypothesis". In IEEE Transactions on Games, vol. 12, no. 1, pp. 74-85, 2020.

Conference Publications

4. Stephen G. Ware, Lasantha Senanayake, **Rachelyn Farrell**. "Causal Necessity as a Narrative Planning Step Cost Function". In Proceedings of the 19th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 155-164, 2023.
5. **Rachelyn Farrell**, Mira Fisher, and Stephen G. Ware. "Salience Vectors for Measuring Distance between Stories". In Proceedings of the 18th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 95-104, 2022.

6. Stephen G. Ware and **Rachelyn Farrell**. "Salience as a Narrative Planning Step Cost Function". In Proceedings of the IEEE Conference on Games, pp. 433-440, 2022.
7. **Rachelyn Farrell** and Stephen G. Ware. "Narrative Planning for Belief and Intention Recognition". In Proceedings of the 16th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 52-58, 2020.
8. Stephen G. Ware, Edward T. Garcia, Alireza Shirvani, and **Rachelyn Farrell**. "Multi-Agent Narrative Experience Management as Story Graph Pruning". In Proceedings of the 15th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 87-93, 2019.
9. Alireza Shirvani, **Rachelyn Farrell**, and Stephen G. Ware. "Combining Intentionality and Belief: Revisiting Believable Character Plans". In Proceedings of the 14th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 222-228, 2018.
10. Alireza Shirvani, Stephen G. Ware, and **Rachelyn Farrell**. "A Possible Worlds Model of Belief for State-Space Narrative Planning". In Proceedings of the 13th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 101-107, 2017.
11. **Rachelyn Farrell** and Stephen G. Ware. "Causal Link Semantics for Narrative Planning using Numeric Fluents". In Proceedings of the 13th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 193-199, 2017.
12. **Rachelyn Farrell** and Stephen G. Ware. "Influencing User Choices in Interactive Narratives using Indexter's Pairwise Event Salience Hypothesis". In Proceedings of the 13th International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 37-42, 2017.
13. **Rachelyn Farrell** and Stephen G. Ware. "Predicting User Choices in Interactive Narratives using Indexter's Pairwise Event Salience Hypothesis". In Proceedings of the 9th International Conference on Interactive Digital Storytelling, pp. 147-155, 2016.
14. **Rachelyn Farrell**, Scott Robertson, and Stephen G. Ware. "Asking Hypothetical Questions about Stories using QUEST". In Proceedings of the 9th International Conference on Interactive Digital Storytelling, pp. 136-146, 2016.
15. **Rachelyn Farrell** and Stephen G. Ware. "Fast and Diverse Narrative Planning through Novelty Pruning". In Proceedings of the 12th International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 37-43, 2016.

Symposium and Consortium Papers

16. **Rachelyn Farrell**. "Experience Management with Beliefs, Desires, and Intentions for Virtual Agents". In Proceedings of the 14th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 290-292, 2018. (doctoral consortium abstract)

Demonstrations

17. Ben Samuel, Aaron Reed, Emily Short, Samantha Heck, Barrie Robison, Landon Wright, Terence Soule, Mike Treanor, Joshua McCoy, Anne Sullivan, Alireza Shirvani, Edward T. Garcia, **Rachelyn Farrell**, Stephen G. Ware, Katherine Compton. "Playable Experiences at AIIDE 2018". In Proceedings of the 14th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, pp. 275-280, 2018.

Technical Reports

18. Stephen G. Ware, **Rachelyn Farrell**. A Collection of Benchmark Problems for the Sabre Narrative Planner. Narrative Intelligence Lab, 2023.

AWARDS

Thaddeus B. Curtz Memorial Scholarship

University of Kentucky

Spring 2021

Computer Science 50th Anniversary 1-Year Fellowship

University of Kentucky

Fall 2019

Privateer Graduate Scholarship Award

University of New Orleans

Fall 2014

Outstanding Computer and Information Science Senior Award

University of Mississippi

Spring 2012

Outstanding Computer and Information Science Junior Award

University of Mississippi

Spring 2011

Computer Science Fall 2009 SAP Scholarship Award

University of Mississippi

Fall 2009

Freshman Student Achievement Award

University of Mississippi

Spring 2009

GUEST LECTURES

Play Schemas: Games as Narrative Play; as the Play of Simulation; and as Social Play

University of Kentucky

CSCI 485: Intro to Game Development

October 2019

Play Schemas: Games as the Play of Meaning

University of New Orleans
CSCI 4670/5670: Fundamentals of Game Development
September 2018

Lisp Programming

University of New Orleans
CSCI 4525/5525: Introduction to Artificial Intelligence
March 2016

Adversarial Search

University of New Orleans
CSCI 4525/5525: Introduction to Artificial Intelligence
January 2016

PROFESSIONAL SERVICE

Organizational Committees

- 20th Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2024 - Lexington, KY
 - Registration Chair

Program Committees

- 19th Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2023 - Salt Lake City, UT
 - Session Chair - *Plan, Activity, and Goal Recognition*
- 18th Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2022 - Pomona, CA
 - Artifact Evaluation Track
- 17th Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2021 - Virtual
 - Artifact Evaluation Track
- 16th Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE) 2020 - Virtual
 - Research Track
- 15th International Conference on the Foundations of Digital Games (FDG) 2020 - Malta
 - Game AI Track
- 12th International Conference on Interactive Digital Storytelling (ICIDS) 2019 - Snowbird, UT
 - Technologies track
 - Session Chair - *Authorship: Processes*