Portfolio: rac7hel.com

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 Indexter'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. 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, num. 3, pp. 378-387, 2022.
2. **Rachelyn Farrell**, Stephen G. Ware, and Lewis J. Baker. "Manipulating Narrative Salience in Interactive Stories using Indexter's Pairwise Event Salience Hypothesis". In IEEE Transactions on Games, vol. 12, no. 1, pp. 74-85, 2020.

Conference Publications

3. 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.
4. **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.
5. 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.

6. **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.
7. 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.
8. 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.
9. 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.
10. **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.
11. **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.
12. **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.
13. **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.
14. **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.

Preprints

15. **Rachelyn Farrell** and Stephen G. Ware. Planning Stories Neurally. *TechRxiv*. March 14, 2024. DOI: 10.36227/techrxiv.171085113.35202301/v1.

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.

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

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 Misssissippi
Spring 2011

Computer Science Fall 2009 SAP Scholarship Award
University of Mississippi
Fall 2009

Freshman Student Achievement Award
University of Mississippi
Spring 2009

PROFESSIONAL SERVICE

Conference Program Committee

- AIIDE 2023 (Salt Lake City, UT)
    - Session Chair: *Plan, Activity, and Goal Recognition*
- AIIDE 2022 (Pomona, CA) - Artifact Evaluation Track
- AIIDE 2021 (Virtual) - Artifact Evaluation Track
- AIIDE 2020 (Virtual) - Research Track
- FDG 2020 (Malta) - Game AI track
- ICIDS 2019 (Snowbird, UT) - Technologies track
    - Session Chair: *Authorship: Processes*

ORGANIZATIONS

Upsilon Pi Epsilon, International Honor Society for the Computing and Information Disciplines
Vice President, Mississippi Gamma Chapter
2011-2012

Association for Computing Machinery
Member since 2010