

Research Scientist - Narrative Intelligence Lab  
University of Kentucky  
[rachelyn.farrell@uky.edu](mailto:rachelyn.farrell@uky.edu)  
[rac7hel.com](http://rac7hel.com)

# Rachelyn Farrell

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## INTERESTS

- Artificial Intelligence
- Intelligent Systems
- Language Models
- Knowledge Models
- Planning & Search Algorithms
- Multi-agent Systems
- Interactive Narrative
- Computational Creativity

## 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

## EXPERIENCE

### **Research Scientist - Narrative Intelligence Lab**

*University of Kentucky - Lexington, KY*

JAN 2023 - PRESENT

### **Research Assistant - Narrative Intelligence Lab**

*University of Kentucky - Lexington, KY*

AUG 2015 - DEC 2022

### **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*, 2022. doi: 10.1109/TG.2022.3177125. (forthcoming)
2. **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, March 2020.

### **Conference Publications**

3. **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.

4. 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.
5. **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.
6. 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.
7. 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.
8. 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.
9. **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.
10. **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.
11. **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.
12. **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.
13. **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**

14. **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**

15. 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.

## PROFESSIONAL SERVICE

### Conference Program Committee

- AIIDE 2022: 18th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, Pomona, CA, October 2022 – Artifact Evaluation Track
- AIIDE 2021: 17th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, Virtual, October 2021 – Artifact Evaluation Track
- AIIDE 2020: 16th AAAI International Conference on Artificial Intelligence and Interactive Digital Entertainment, Virtual, October 2020 – Research Track
- FDG 2020: 15th International Conference on the Foundations of Digital Games, Malta, September 2020 – Game AI track
- ICIDS 2019: 12th International Conference on Interactive Digital Storytelling, Snowbird, UT, November 2019 – Technologies track
  - Session Chair: *Authorship: Processes*

## 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 Mississippi*

Spring 2011

### **Computer Science Fall 2009 SAP Scholarship Award**

*University of Mississippi*

Fall 2009

### **Freshman Student Achievement Award**

*University of Mississippi*

Spring 2009

## 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