

Dr. Fernando J. Rodríguez, Ph.D.

Assistant Professor (Lecturer)

Division of Games

University of Utah

Email: fernando.rodriguez@utah.edu

CURRICULUM VITAE

EDUCATION

Ph.D., Human-Centered Computing, August 2021

Dissertation Title: [Modeling Dialogue and Moments of Uncertainty in Collaborative Learning for Computer Science](#)

Department of Computer & Information Science & Engineering

University of Florida

Advisor: Dr. Kristy Boyer

M.S., Computer Science, May 2015

Department of Computer Science

North Carolina State University

Advisor: Dr. Kristy Boyer

B.S., Computer Engineering, May 2011

Department of Electrical and Computer Engineering

University of Puerto Rico, Mayagüez Campus

Magna Cum Laude

COURSES TAUGHT

University of Utah

Spring 2024

- EAE 1010, Survey of Games. Enrollment: 122
- EAE 4510, Capstone II. Co-taught with Greg Bayles. Enrollment: 210
- EAE 6110, Game Studio. Co-taught with Ryan Bown. Enrollment: 50

Fall 2023

- EAE 1010, Survey of Games. Enrollment: 256
- EAE 2900, Special Topics: Introduction to Game Scripting, Enrollment: 40
- EAE 4500, Capstone I. Co-taught with Greg Bayles. Enrollment: 212

Spring 2023

- EAE 1010, Survey of Games. Enrollment: 194
- EAE 4510, Capstone II. Co-taught with Roger Altizer. Enrollment: 208
- EAE 6110, Game Studio. Co-taught with Ryan Bown. Enrollment: 61

Fall 2022

- EAE 1010, Survey of Games. Enrollment: 160
- EAE 4500, Capstone I. Co-taught with Roger Altizer. Enrollment: 210
- EAE 6120, Advanced Game Studio I. Co-taught with Corrinne Lewis. Enrollment: 77

Spring 2022

- EAE 1010, Survey of Games. Enrollment: 119
- EAE 4510, Capstone II (formerly Senior Project II). Co-taught with Roger Altizer and Gabriel Olson. Enrollment: 182
- EAE 4900, Special Topics: Serious Games. Co-taught with Tallie Casucci. Met with EAE 6025. Enrollment: 28
- EAE 6025, Serious Games. Co-taught with Tallie Casucci. Met with EAE 4900. Enrollment: 7

Fall 2021

- COMP 1020, Programming for All 2. Enrollment: 56
- EAE 1010: Survey of Games. Co-taught with Corrinne Lewis. Enrollment: 156
- EAE 6100: Rapid Prototyping. Co-taught with Ryan Bown. Enrollment: 75

University of Florida (Fall 2020)

Fall 2020 - COP 3502: Programming Fundamentals I. Enrollment: 41

North Carolina State University (Summer 2015)

Summer 2015 - CSC 116: Introduction to Computing – Java. Enrollment: 24

COURSE PROPOSALS

University of Utah

EAE 2900: Introduction to Game Scripting (approved)

EAE 4900: Game-Based Learning (revised to Serious Games, met with graduate course section)

TEACHING AWARDS

Top Instructor Award, College of Engineering, University of Utah

Spring 2023 (for EAE 1010: Survey of Games)

Fall 2022 (for EAE 1010: Survey of Games)

Spring 2022 (for EAE 1010: Survey of Games)

RESEARCH PUBLICATIONS

Refereed Journal Publications

Kimberly Michelle Ying, **Fernando J. Rodríguez**, Alexandra Lauren Dibble, and Kristy Elizabeth Boyer. 2020. Understanding Women's Remote Collaborative Programming Experiences: The Relationship between Dialogue Features and Reported Perceptions. *Proceedings of the ACM on Human-Computer Interaction (CHI)*, 4, CSCW3 (December 2020), 29 pages.

Refereed Conference Publications

Alexia Charis Martin, Kimberly Michelle Ying, **Fernando J. Rodríguez**, Christina Suzanne Kahn, and Kristy Elizabeth Boyer. 2022. Intelligent Support for All? A Literature Review of the (In)equitable Design & Evaluation of Adaptive Pedagogical Systems for CS Education. *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education (SIGCSE)*. 996-1002.

Kimberly Michelle Ying, Alexia Charis Martin, **Fernando J. Rodríguez**, and Kristy Elizabeth Boyer. 2021. CS1's Students' Perspectives on the Computer Science Gender Gap: Achieving Equity Requires Awareness.

Proceedings of the Annual Conference on Research in Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT). 1-9.

- Kimberly Michelle Ying, **Fernando J. Rodríguez**, Alexandra Lauren Dibble, and Kristy Elizabeth Boyer. 2021. Confidence, Connection, and Comfort: Reports from an All-Women's CS1 Class. *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE)*. 699-705.
- Kimberly Michelle Ying, **Fernando J. Rodríguez**, Alexandra Lauren Dibble, and Kristy Elizabeth Boyer. 2020. Gender Differences in Stress, Perceived Competence, and Perceived Choice during Remote Collaborative Problem Solving. *Proceedings of the International Conference of the Learning Sciences (ICLS)*. 799-800.
- Andrew Emerson, Andy Smith, **Fernando J. Rodríguez**, Eric N. Wiebe, Bradford W. Mott, Kristy Elizabeth Boyer, and James C. Lester. 2020. Cluster-Based Analysis of Novice Coding Misconceptions in Block-Based Programming. *Proceedings of the 51st ACM Technical Symposium on Computer Science Education (SIGCSE)*. 825-831.
- Phoebe Martinez, John Lopez, **Fernando J. Rodríguez**, Joseph B. Wiggins, and Kristy Elizabeth Boyer. 2020. Novice Debugging in Block-Based and Hybrid Environments. *Proceedings of the 51st ACM Technical Symposium on Computer Science Education (SIGCSE)*. 1291.
- Andrew Emerson, Andy Smith, Cody Smith, **Fernando J. Rodríguez**, Eric N. Wiebe, Bradford W. Mott, Kristy Elizabeth Boyer, and James C. Lester. 2019. Predicting Early and Often: Predictive Student Modeling for Block-Based Programming Environments. *Proceedings of the 12th International Conference on Educational Data Mining (EDM)*. 39-48.
- Hannah E. Chipman, **Fernando J. Rodríguez**, and Kristy Elizabeth Boyer. 2019. "I Impressed Myself with How Confident I Felt": Reflections on a Computer Science Assessment for K-8 Teachers. *Proceedings of the 50th ACM Technical Symposium on Computer Science Education (SIGCSE)*. 1081-1087.
- Jennifer Tsan, **Fernando J. Rodríguez**, Kristy Elizabeth Boyer, and Collin Lynch. 2018. "I Think We Should...": Analyzing Elementary Students' Collaborative Processes for Giving and Taking Suggestions. *Proceedings of the 49th ACM Technical Symposium on Computer Science Education (SIGCSE)*. 622-627.
- Fernando J. Rodríguez**, Kimberly Michelle Price, Joseph Isaac Jr., Kristy Elizabeth Boyer, and Christina Gardner-McCune. 2017. How Block Categories Affect Learner Satisfaction with a Block-Based Programming Interface. *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*. 201-205.
- Fernando J. Rodríguez**, Kimberly Michelle Price, and Kristy Elizabeth Boyer. 2017. Expressing and Addressing Uncertainty: A Study of Collaborative Problem-Solving Dialogues. *Proceedings of the 12th International Conference on Computer Supported Collaborative Learning (CSCL)*. 207-214.
- Exemplary Paper: Fernando J. Rodríguez**, Kimberly Michelle Price, and Kristy Elizabeth Boyer. 2017. Exploring the Pair Programming Process: Characteristics of Effective Collaboration. *Proceedings of the 48th ACM Technical Symposium on Computer Science Education (SIGCSE)*. 507-512.
- Fernando J. Rodríguez**, Kristy Elizabeth Boyer. 2015. Discovering Individual and Collaborative Problem-Solving Modes with Hidden Markov Models. *Proceedings of the 17th International Conference on Artificial Intelligence in Education (AIED)*. 408-418.
- Philip Sheridan Buffum, Allison G. Martínez-Arocho, Megan Hardy Frankosky, **Fernando J. Rodríguez**, Eric N. Wiebe, and Kristy Elizabeth Boyer. 2014. CS Principles Goes to Middle School: Learning How to Teach "Big Data". *Proceedings of the 45th ACM Technical Symposium on Computer Science Education (SIGCSE)*. 151-156.
- Fernando J. Rodríguez**, Natalie D. Kerby, and Kristy Elizabeth Boyer. 2013. Repairing Disengagement in Collaborative Dialogue for Game-Based Learning. *Proceedings of the 16th International Conference on Artificial Intelligence in Education (AIED)*. 807-810.

Refereed Workshop Publications

Fernando J. Rodríguez, Cody R. Smith, Andy Smith, Kristy Elizabeth Boyer, Eric N. Wiebe, Bradford W. Mott, and James C. Lester. 2019. Toward a Responsive Interface to Support Novices in Block-Based Programming. *Proceedings of the 2019 IEEE Blocks and Beyond Workshop*. 9-14.

Fernando J. Rodríguez, Kimberly Michelle Price, Mickey Vellukunnel, and Kristy Elizabeth Boyer. 2017. Toward Conversational Agents that Support Learning: A Look at Human Collaborations in Computer Science Problem Solving. *Proceedings of the Conversational UX Design CHI 2017 Workshop*. 4 pages.

Fernando J. Rodríguez, Natalie D. Kerby, and Kristy Elizabeth Boyer. 2013. Informing the Design of a Game-Based Learning Environment for Computer Science: A Pilot Study on Engagement and Collaborative Dialogue. *Proceedings of the 1st Workshop on AI-Supported Education for Computer Science (AIEDCS)*. 30-39.

PRESS RELEASES

Study Finds Clues on How to Keep Kids Engaged with Educational Games. Matt Shipman. *CienciaPR*, July 24, 2013. <https://www.cienciapr.org/en/external-news/study-finds-clues-how-keep-kids-engaged-educational-games/>

World of Codecraft: 3-D Game Teaches Kids 'Big Ideas' of Programming. Klint Finley. *Wired*, July 19, 2013. <https://www.wired.com/2013/07/programming-game-engagement/>

How educational games are best played two-by-two. Colin Campbell. *Polygon*, July 16, 2013. <https://www.polygon.com/2013/7/16/4529688/how-educational-games-are-best-played-two-by-two>

RESEARCH MENTORING

Jono Jenkins, Spring 2024

B.S. in Games, 2024

Currently conducting honor's thesis research as part of the Honor's College program

Thesis topic: Player's perceptions of AI opponent strategies/playstyles

Will Loxley, Fall 2022 – Spring 2023

B.S. in Games, 2023

Conducted research as part of the Undergraduate Research Opportunity Program (UROP)

Resulted in presentation at the Utah Conference on Undergraduate Research (UCUR) and submission to Range: Undergraduate Research Journal

Working on future conference publications based on work

Research title: Disabled, Not Disqualified: Ableism in Recruitment and Retention in Game Development

James Spackman, Spring 2023

B.S. in Games, 2023

Conducted honor's thesis research as part of the Honor's College program

Thesis title: Game Feel Development Analysis of Student Game Final Project

Ray Parker, Spring 2023

B.S. in Games, 2023

Conducted honor's thesis research as part of the Honor's College program

Thesis title: Identifying and Navigating Engineering Pitfalls in Video Game Production

Gabriela Anderson, Spring 2023

B.S. in Games, 2023

Conducted honor's thesis research as part of the Honor's College program

Thesis title: Analysis of Game Development Methodologies Used by a Small Studio

Jaithra Bhatia, Spring 2022

B.S. in Games, 2023

Conducted honor's thesis research as part of the Honor's College program

Thesis title: A Comparison of Artificial Intelligence Techniques Used for Implementing Non-Player Characters within Video Games

Christina Suzanne Khan, Fall 2020 – Spring 2021

B.A. in Digital Arts and Sciences, 2023

Collaborated on NSF funded project, involving educational data collection and analyses

Resulted in co-authored conference publication with student as fourth author

Alexandra Lauren Dibble, Spring 2019 – Summer 2020

B.A. in Computer Science, 2023

Collaborated on NSF funded project, involving educational data collection and analyses

Resulted in co-authored conference publication with student as third author

Resulted in co-authored journal publication with student as third author

Alexia Charis Martin, Spring 2019 – Summer 2020

B.A. in Computer Science, 2022

Collaborated on NSF funded project, involving educational data collection and analyses

Resulted in co-authored conference publication with student as fourth author

Phoebe Martinez, Summer 2019

B.A. in Computer Science with Minor in Psychology, 2020

Met three times a week to supervise undergraduate summer research project

Resulted in co-authored conference short publication with student as first author

John Lopez, Summer 2019

B.S. in Computer Science, 2020

Met three times a week to supervise undergraduate summer research project

Resulted in co-authored conference short publication with student as second author

Hannah E. Chipman, Summer 2018

B.S. in Computer Science with Minor in Education, 2019

Met three times a week to supervise undergraduate summer research project

Resulted in co-authored conference publication with student as first author

Janet Ruppert, Summer 2017

B.S. in Management Information Systems, 2018

Met three times a week to advise undergraduate summer research project

Kimberly Michelle Price, Summer 2016

M.S. in Digital Arts and Sciences, 2018

Mentored as new graduate student member of research group

Frequent collaborator on conference and journal publications

Alyssa Nelson, Spring 2016

B.S. in Computer Science, 2016

Met weekly to advise undergraduate independent research

Raquel Lawrence, Summer 2015

B.S. in Computer Science, 2016

Met weekly to advise undergraduate summer research project

Allison G. Martínez-Arocho, Summer 2014

B.S. in Computer Science, 2015

Met weekly to advise undergraduate summer research project

PROFESSIONAL SERVICE ACTIVITIES

Director of Undergraduate Studies, University of Utah

Assistant Director of Undergraduate Studies, Fall 2023 – present

MEAE – Game Engineering Track Admissions Committee, Entertainment Arts and Engineering Program, University of Utah

MEAE – Game Engineering Track Admissions Committee Member, Fall 2021 – present

Learning Outcomes Management Committee, Entertainment Arts and Engineering Program, University of Utah

Learning Outcomes Management Committee Chair, Fall 2023 – present

Learning Outcomes Management Committee Member, Fall 2021 – Spring 2023

Tenure-Line Faculty Search Committee, Entertainment Arts and Engineering Program, University of Utah

Tenure-Line Faculty Search Committee Member, Fall 2023 – present

Tenure-Line Faculty Search Committee Member, Fall 2022 – Spring 2023

NSF REU Site Coordination, University of Florida

Research Experience on Intelligent Multimodal Human-Computer Interaction for Undergraduates (IMHCI-REU), Spring 2017 – Fall 2019

Human-Centered Computing Cohort, University of Florida

HCC Social Committee Member, Fall 2018 – present

HCC Prospective Graduate Students Social Planning, Spring 2017

HCC Holiday Party Planning, Fall 2016

STARS (Students & Technology in Academia, Research & Service) Alliance for Broadening Participation in Computing, North Carolina State University

Introductory Computer Science Tutoring Coordinator, Fall 2013 – Spring 2015

SPARCS (Students in Programming, Robotics, and Computer Science) Coordinator, Fall 2012 – Fall 2015

LASA (Latin American Student Association), North Carolina State University

Social Activities Chair, Fall 2014 – Spring 2015

IEEE WIE (Women in Engineering) Affinity Group, University of Puerto Rico, Mayagüez Campus

Vice-President, Fall 2009 – Spring 2010

Technical Activities Chair, Fall 2008 – Spring 2009

Sales Coordinator, Fall 2007 – Spring 2008

ACADEMIC RESEARCH SERVICE ACTIVITIES

Conference Program Committee Member

The 54th ACM Technical Symposium on Computer Science Education (SIGCSE TS), 2022

The 53rd ACM Technical Symposium on Computer Science Education (SIGCSE TS), 2021

The 11th International Conference on Educational Data Mining (EDM), 2018

Journal Submission Reviewing

IEEE Transactions on Games, 2022

IEEE Transactions on Games, 2021

Conference Submission Reviewing

The 12th Edition of the Intelligent Narrative Technologies Workshop (INT), 2020

The 13th International Conference on Educational Data Mining (EDM), 2020

The 21st International Conference on Artificial Intelligence in Education (AIED), 2020

The 51st ACM Technical Symposium on Computer Science Education (SIGCSE), 2019

The 57th Annual Meeting of the Association for Computational Linguistics (ACL), 2019

The 12th International Conference on Educational Data Mining (EDM), 2019

The 20th International Conference on Artificial Intelligence in Education (AIED), 2019

The 13th Workshop on Innovative Use of NLP for Building Educational Applications (BEA), 2018

The 19th International Conference on Artificial Intelligence in Education (AIED), 2018

The 13th AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2017

The 9th International Conference on Educational Data Mining (EDM), 2016

The 30th AAAI Conference on Artificial Intelligence (AAAI), 2016

WORK EXPERIENCE

Assistant Professor (Lecturer), University of Utah, Fall 2021 – present

Assistant Instructor (Lecturer), University of Utah, Fall 2021

Research Assistant, University of Florida, Summer 2016 – Summer 2021

Research Assistant, North Carolina State University, Spring 2012 – Spring 2013

Teaching Assistant for Computational Applied Logic, North Carolina State University, Fall 2011

IT Customer Care Internship, Verizon Wireless, Summer 2010

Cooperative Associate, Pennsylvania Power and Light, Summer 2009