

**Yolanda Alysia Rankin, Ph.D.**  
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**Education**

*Northwestern University, Evanston, IL* *Sept. 2003 – Dec. 2008*

McCormick School of Engineering and Applied Science

Doctor of Philosophy in Computer Science

***Dissertation: Design and Evaluation of Massive Multiplayer Online Role Playing Games that Facilitate Second Language Acquisition***

Adviser: Bruce Gooch, Ph.D.

GPA: 3.867/4.0 Sum Cum Laude

*Kent State University, Kent, OH* *Aug. 1992 – Dec. 1994*

Master of Arts in Computer Science with emphasis in Computer operating systems

GPA: 3.25/4.0 Cum Laude

*Tougaloo College, Tougaloo, MS* *Aug. 1988 – May 1992*

Bachelor of Science in Mathematics with minor in Computer Science

GPA: 3.57/4.0 Magna Cum Laude

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**Professional Experience**

***Assistant Professor (August 2017 – present)***

***Florida State University School of Information***

- Currently exploring Black women's motivations for gaming and their gaming preferences and practices. Because games often serve as the entry point for stimulating students' interest in computing, it is imperative that we acknowledge that women of color play games too, and more importantly, that we examine how race, gender, class, sexuality and other socially constructed identities, commonly referred to as intersectionality, shape the gameplay experiences of women of color.
  
- Conducting empirical studies of the intersectional experiences of Black women in computing to devise strategies for increasing their recruitment and retention. Despite gender-focused efforts to increase the number of women receiving Bachelor's degrees in Computer Science, Information Technology, and other related fields, a closer look reveals that the percentage of Black women receiving Bachelor degrees in these fields in the United States has significantly dropped over a ten year period (2004 – 2014). To address issues of retention, we must examine the intersectional experiences and systems of oppression that hinder Black women's ability to persist in the field of computing.
  
- My prior research demonstrates that social interactions between native and non-native English speakers during gameplay promotes English as a Second Language (ESL) students' vocabulary acquisition (Rankin et al. 2009). Working in collaboration with the FSU Center for Intensive English Studies, I am conducting a pilot study of an online game designed to leverage conversation-based interactions between native and non-native English speakers. I am investigating the impact of in-game social

interactions on ESL students' English proficiency (i.e., expressive and receptive vocabulary) and literacy skills, including letter naming efficiency, morphological awareness, orthographic processing, and word reading. In addition, I am collecting chat logs of players' conversations and feedback about their gameplay experiences for data analysis to inform future design iterations of the online game.

***Assistant Professor (August 2012 – June 2017)***

***Spelman College Computer & Information Sciences Department***

- Co-developed a learning module of food-related activities in an introductory Computer Science (CS) course to create an equitable learning environment for African American women who have little if any programming experience.
- Used robotics as a platform for outreach within the greater Atlanta metropolitan area and in major U.S. cities to increase the number of underrepresented groups, specifically African Americans and females, in the computer science pipeline.

***Research Staff Member (August 2008 – August 2012)***

***IBM Almaden Research Center***

- Conceptualized the Client TouchPoint Modeling (CTM) process in which service delivery teams identify individual touchpoints with the client and visualize those touchpoints to support collaborative sense-making of aggregated touchpoints across the client account. Participatory design sessions with service delivery team members informed modifications to the design and functionality of the web-based CTM TouchPoint Game and the CTM Map Application prototypes.
- Designed a prototype of a virtual customer support center in Second Life that offers multiple options for customer support including intelligent *servicebots* who provide personalized attention to customers, a repository of solutions for previously reported problems to aid in self-service customer support and collaborative problem resolution among customers.
- Completed user studies to assist with the development of the Design Run-time Analysis (DRA) application, an interoperable design tool for multiple virtual world platforms that enables novices to rapidly prototype 3D virtual environments for the purpose of simulating business processes and problem scenarios.
- Contributed to Service Science System Theory by defining and applying the two dimensional Transactional-Interactional Model (TIM) of service engagements to correlate business value propositions to the intricate yet subtle interactions between the service provider and customer that increase or decrease value co-creation.
- Devised a conceptual model of value co-creation throughout the product development cycle of service applications based on the frequency of interactions between the service provider and the customer.

- Devised a framework for tightly coupling an understanding of the culture and usage of existing technology with the design and management of services and technologies that accommodate social inclusion of marginalized populations in developing countries.

**Lucent Technologies, Naperville, IL  
Program Manager (2000-2001)**

**CDMA Overlay of TDMA:** To overlay Ameritech Wireless's CDMA network with TDMA for the mid-Ohio region and GO LIVE by 8/31/2000.

- **Approach:** Managed TDMA 2000 cutover deployment schedule, including shipment & delivery of cellular equipment, coordination of installation, and MSC growth engineering and cell engineering headcount, to meet contractual obligations.
- **Result:** Launched ahead of schedule the first TDMA/CDMA network overlay and exceeded customer expectations for the Cingular Wireless mid-Ohio market

**Customer Technical Advocate/ Primary Customer Technical Interface  
(1996 – 1999)**

**Y2K Compliancy:** To communicate Y2K compliancy requirements and assist wireless customers with successful deployment of Y2K wireless software

- **Approach:** Provided Y2K compliancy documentation and remote support during Y2K deployment of wireless services for BellSouth Mobility
- **Results:** Maintained consistent wireless service for thousands of customers in the metro Atlanta, GA area without any outages or technical difficulties

**Over the Air Service Provisioning (OTASP):** To deploy the OTASP feature for the Sprint PCS network

- **Approach:** Managed deployment plan, including schedule for field trials, headcount, User Acceptance Testing, and resolution of customer-reported issues for the OTASP feature for the Sprint PCS network
- **Result:** Successfully completed field trials in Massachusetts for OTASP to go live, making Sprint PCS the first mobile service provider to offer the OTASP nation wide

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**Books & Book Chapters**

1. **Rankin, Y. A.**, and Thomas, J. O. (Eds.). (2017). *Moving Students of Color from Consumers to Producers of Technology*. IGI Global. Retrieved from 10.4018/978-1-5225-2005-4
2. **Rankin, Y. A.** and Thomas, J. O. (2017). Leveraging Food as the Context for Developing Computational Algorithmic Thinking in an Entry Level College Course. In Y. A. Rankin & J. O. Thomas (Eds.) *Moving Students of Color from Consumers to Producers of Technology*. IGI Global Publishers Hershey, PA.
3. **Rankin, Y.A.** and Shute, M. W. (2010). Re-purposing a recreational video game as a serious game for second language acquisition. In J. Cannon-Bowers & C. Bowers (eds.) *Serious Game Design and Development: Technologies for Training and Learning*. (book chapter)
4. **Rankin, Y.A.** Re-purposing a Video Game to Facilitate Second Language Acquisition: games for second language acquisition. Verlag Dr. Muller, Saarbrucken, Germany (2011).

### **Selected Journal Articles**

1. **Rankin, Y.A.** and Thomas, J. O. (in press). Straighten Up and Fly Right: Rethinking intersectionality in HCI. *Interactions Vol. XX, No. X* November/December 2019, xx-xx.
2. Thomas, J. O. and **Rankin, Y.A.** (in press). Leveraging Food to Achieve 100% Retention in an Intro CS Course. *Journal of Computing Sciences in Colleges Vol. 32, No. 2* December 2016, 127-133.
3. Thomas, J. O., **Rankin, Y. A.**, Minor, R., and Sun, L. (2017). Exploring the Difficulties African-American Middle School Girls Face Enacting Computational Algorithmic Thinking over three Years while Designing Games for Social Change. *Computer Supported Cooperative Work: The Journal of Collaborative Computing and Work Practices, 26*, 389–421.
4. **Rankin, Y.A.** & Thomas, J. O. (2016). Leveraging Food to Achieve 100% Retention in an Intro CS Course. *Journal of Computing Sciences in Colleges Vol. 32, No. 2* December 2016, 127-133.
5. Thomas, J.O. and **Rankin, Y.A.** (2015). Mtoto: Supporting Greater Access to Pre-and Post-Natal Care for Women Living in Rural Developing Economies. *International Journal of Business, Humanities and Technology Vol. 5, No. 1*; February 2015, 51-61.

### **Conference Papers**

1. Y.A. Rankin and N. Han (2019). Exploring the Plurality of Black Women's Gaming Experiences. In Conference Proceedings of ACM CHI May 4-9, 2019, Glasgow, UK.
2. **Rankin, Y. A.**, Thomas, J. O., & Irish, I. (2019). Food for Thought: Supporting African American Women's Computational Algorithmic Thinking in an Intro CS Course. In Elizabeth K. Hawthorne, Manuel A. Perez-Quinones, Sarah Heckman, & Jian Zhang (Eds.), *Special Interest Group in Computer Science Education* (pp. 641-646). Association of Computing Machinery (ACM).
3. **Rankin, Y.A.** (2015). Diversity by Design: Designing Inclusive Language Learning Video Games. In Conference Proceedings for ACM SIGCHI 2015 Case Studies, San Jose, CA May 7 – 12, 2016.
4. **Rankin, Y.A.**, Thomas, J. and Irish, I. (2014). From Producers to Consumers: African American Middle School Students as Game Designers. In Conference Proceedings of the Foundation of Digital Games 2014, April 3-7, 2014, Cozymel, Mexico.
5. **Rankin, Y.A.**, Morrison, D. and Gooch, B. (2009). Time Will Tell: In-game social interactions between linguistically diverse players. In Conference Proceedings for Foundational Development of Games '09, Nassau, Bahamas.
6. **Rankin, Y.**, McNeal, M., Shute, M. and Gooch, B. (2008). User-centered game design: evaluating massive multiplayer online role playing games for second language acquisition. **3rd Place Best Paper Award**. In Conference Proceedings of ACM Sandbox '08, Los Angeles, CA.
7. **Rankin, Y.**, Gold, R., and Gooch, B. (2006). Evaluating interactive gaming as a language learning tool. In Conference Proceedings for ACM SIGGRAPH 2006 Educators Program, Boston, Massachusetts July 30 - August 03, 2006

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## Awards

1. 2018 Florida State University School of Information Outstanding Junior Faculty Research Award
2. 2016 Woodrow Wilson Career Enhancement Fellowship

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## Research Grants

1. NSF EAGER Grant 1757397 Computer-based Social Interactions that Facilitate Language Learning for \$259,436
2. Florida State University College of Communication & Information Research Grant for \$23,950

3. Florida State University First Year Assistant Professor 2018 Grant for \$20K
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## **Service Activities**

### **Professional Level**

- Review Panel for National Science Foundation Computer & Information Science & Engineering (CISE) Directorate
- 2018 IEEE Research on Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT) Papers Co-Chair
- 2018 Association of Computing Machinery Conference on Human Factors in Computing Systems (CHI) Associated Chairperson for Special Topics Committee
- Coordinator of iAAMCS Distinguished Fellow Writing Workshops 2014 & 2015
- Association of Computing Machinery Richard Tapia Conference 2015 Poster Session Chairperson

### **College Level**

- Florida State University School of Information Doctoral Committee member 2018 - 2019
- Florida State University School of Information Operations Committee member 2018 - 2019
- Spelman College Student Affairs elected committee member 2014 – present
- Association of Computing Machinery Student Chapter Adviser – 2014 - present
- Co-advisor for SpelBots 2012 – 2014
- Advisor for CS sophomores for 2014 – 2015
- Advisor for CS freshmen 2013 – 2014

### **Community Level**

- Facilitated game design workshops for African American middle school girls June 2013 – May 2015
- Facilitated robotics camps for African American middle school and high school students June 2013