

# Curriculum Vitae

## Yolanda Alysia Rankin

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### General Information

University address: School of Information  
College of Communication and Information  
Shores Building 0101G  
Florida State University  
Tallahassee, Florida 32306-2100

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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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### Awards

Woodrow Wilson Early Career Enhancement Fellowship (2016).

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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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## Research and Original Creative Work

### Publications

#### Invited Journal Articles

**Rankin, Y. A.,** & Thomas, J. O. (2019). Straighten Up and Fly Right: Rethinking Intersectionality in HCI. *ACM Interactions*, 26(6), 64-68.  
doi:<https://doi.org/10.1145/3363033>

#### Refereed Journal Articles

Thomas, J., & **Rankin, Y. A.** (2019). Exploring Collaborative Talk Among African-American Middle-School Girls in the Context of Game Design for Social Change. *Journal of the Consortium for Computing Sciences in Colleges*, 35(4), 80-89.

Thomas, J. O., **Rankin, Y.,** Minor, R., & 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. Retrieved from <https://doi.org/10.1007/s10606-017-9292-y>  
doi:10.1007/s10606-017-9292-y

**Rankin, Y. A.,** & Thomas, J. O. (2016). Leveraging food to achieve 100% student retention in an intro CS course. *Journal of Computing Sciences in College*, 32(2), 127-134.

#### Edited Books

**Rankin, Y. A.,** & 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

## Refereed Proceedings

**Rankin, Y. A., & Thomas, J. O.** (2020). The Intersectional Experiences of Black Women in Computing. In *SIGCSE '20 ACM Technical Symposium on Computer Science Education* (7 pages). Association Computing Machinery.

**Rankin, Y. A., Agharazidermani, M., & Thomas, J. O.** (2020). The Role of Familial Influences in African American Women's Persistence in Computing. In *IEEE Research on Equity & Sustained Participation in Engineering, Computing, & Technology* (8 pages). IEEE.

**Rankin, Y. A., & Han, Na-eun.** (2019). Exploring the Plurality of Black Women's Gameplay Experiences. In Stephen Brewster, & Geraldine Fitzpatrick (Eds.), *ACM CHI Conference on Human Factors in Computing Systems* (12 pages). Glasgow, UK: Association of Computing Machinery (ACM).

**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). Retrieved from 10.1145/3287324.3287484

## Presentations

### Refereed Papers at Conferences

**Rankin, Y. A., Thomas, J. O., & Irish, I.** (presented 2019, March). *Food for Thought: Supporting African American Women's Computational Algorithmic Thinking in an Intro CS Course*. Paper presented at Special Interest Group in Computer Science Education (SIGCSE), Association of Computing Machinery (ACM), Minneapolis, MN. (International) Retrieved from 10.1145/3287324.3287484

### Refereed Presentations at Conferences

Payton, J., Burge, J. D., Denner, J., Latulipe, C., & **Rankin, Y. A.** (presented 2019, February). *The Reality of Inclusion: The Role of Relationships, Identity, and Academic Culture in Inclusive and Equitable Practices for Broadening Participation in Computing Education*. Presentation at Special Interest Group in Computer Science Education (SIGCSE), Association of Computing Machinery (ACM), Minneapolis, MN. (International) Retrieved from [http://delivery.acm.org/10.1145/3290000/3287337/p494-payton.pdf?ip=144.174.212.29&id=3287337&acc=OPEN&key=5CC3CBFF4617FD07%2E9C028E23195BD832%2E3A17AD49C02CB49B%2E6D218144511F3437&\\_\\_acm\\_\\_=1552621432\\_7](http://delivery.acm.org/10.1145/3290000/3287337/p494-payton.pdf?ip=144.174.212.29&id=3287337&acc=OPEN&key=5CC3CBFF4617FD07%2E9C028E23195BD832%2E3A17AD49C02CB49B%2E6D218144511F3437&__acm__=1552621432_7)

Jadud, M., Burge, J., Forbes, J., Latulipe, C., **Rankin, Y. A.**, Searle, K., & Shapiro, B. (presented 2019, February). *Toward an Anti-Racist Theory of Computational Curricula*. Presentation at Special Interest Group in Computer Science Educational Technical Symposium, Association of Computing Machinery (ACM), Minneapolis, MN. (International) Retrieved from 10.1145/3287324.3293738

## Refereed Workshops

Smith, A. D. R., Ahmed, A. A., Garcia, A. A., Dosono, B., Ogbonnaya-Ogburu, I., To, A., **Rankin, Y. A.**, & Toyama, K. (in press). What's Race Got To Do With It? Engaging in Race in HCI. In *ACM CHI Human Factors in Computing Systems* (8 pages). Association of Computing Machinery.

**Rankin, Y.** (2018, July). *14th Workshop on Spoken Dialogue Systems for PhDs, PostDocs & New Researchers*. Workshop delivered at ACM Spoken Dialog Systems, Melbourne, Australia. (International) Retrieved from <https://drive.google.com/file/d/1lf3pGPC2EuzcQHzUpj-eUVcOJVQEnbxH/view>

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## Contracts and Grants

### Contracts and Grants Funded

Thomas, J. & **Rankin, Y. A.**, (Feb 2020–Dec 2020). *The Firsts: Exploring the Intersectional Experiences of Black Women in Computing Who Were First to be Conferred Ph.D.s in Computing/Computer Science at Colleges/Universities*. Funded by ACM Special Interest Group in Computer Science Education. Total award \$5,000.

**Rankin, Yolanda Alysia** (PI). (Jan 2020–Dec 2021). *Examining Factors that Build a Sisterhood in Computing (BaSiC)*. Funded by National Science Foundation. (1937759). Total award \$342,566.

**Rankin, Y. A.**, & Tibi, S. (Nov 2018–Dec 2019). *Designing a Chat-based Video Game for Language Learning*. Funded by FSU CCI. (NC-2018-001). Total award \$25,000.

**Rankin, Yolanda Alysia** (PI). (May 2018–Aug 2018). *FYAP: Building a Sisterhood in Computer Science*. Funded by FSU CRC. (None). Total award \$20,000.

**Rankin, Yolanda Alysia** (PI). (Aug 2017–Apr 2020). *EAGER and Cyberlearning: In-Game Social Interactions to Facilitate Language Learning*. Funded by National Science Foundation. (1757397). Total award \$259,436.

### Contracts and Grants Pending

**Rankin, Yolanda Alysia** (PI). (Nov 2019). *Collaborative Research: Supporting the Development of Computational Algorithmic Thinking Capabilities in African American Elementary Students*. Submitted to National Science Foundation.

Hughes, Roxanne (PI), **Rankin, Yolanda Alysia** (Co-PI), & Wendorf Muhamad, Jessica (Co-PI). (Nov 2019). *Developing a Coding Identity Framework to Guide Informal Coding Educational Programs*. Submitted to National Science Foundation.

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## Teaching

### Courses Taught

Des & Dev of Edu Vid Games (LIS4905)  
Perspective on Information Technology (LIS4708)  
Game Study Data Collection (LIS6911)  
Game Prototyping (LIS4905)  
Perspectives in Information Technology (LIS4708)  
Perspectives in Information Technology (LIS4708)  
Literature review of game-based SLA (LIS6911)  
Qualitative Analysis of Interviews (LIS6911)  
Perspectives on Information Technology (LIS4708)

### Doctoral Committee Member

Payrovnaziri, S. N., doctoral student.

### Bachelor's Committee Member

Cole, M., student. *Possibilistic Vehicle Route Planning Simulation*.

### Supervision of Student Research Not Related to Thesis or Dissertation

Jenkins, E. (Oct 2018–present).

Kingston, J. (Oct 2018–present).

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## **Service**

### **Florida State University**

#### **School of Information Department Service**

Member, Operations Committee (2018–present).

Member, Doctoral Committee (2019–2020).

Member, Doctoral Committee (2018–2019).

### **The Profession**

#### **Reviewer or Panelist for Grant Applications**

National Science Foundation (2019).

#### **Service to Professional Associations**

Technical Committee Member, Served as reviewer for RESPECT paper submissions, IEEE Research on Equity & Sustainable Participation in Engineering, Computing & Technology (2019–2020).

Associate Chairperson, Associate Chairperson for the Learning, Education & Families Subcommittee for the ACM CHI 2020 Conference, ACM CHI Human Factors in Computing Systems (2019–2020).

Reviewer, Responsible for reviewing multiple papers for the ACM CHI 2019 Conference, ACM CHI Conference on Human Factors in Computing Systems (2018–2019).

Reviewer, Reviewed multiple papers for the RESPECT conference, IEEE RESPECT Conference (2018–2019).

Specific Application Areas Associate Chair, Responsible for reviewing paper submissions for the ACM CHI 2018 Specific Application Areas Conference Track, Association of Computing Machinery Computer Human Interaction Conference on Human Factors in Computing Systems (2017–2018).



Conference Proceedings Co-Chair, Responsible for overseeing the review process of research paper submissions, experience paper submissions, posters and lightning talks for the 2018 RESPECT Conference. My work resulted in a 30% acceptance rate for papers, Research on Equity and Sustained Participation in Computing, Engineering & Technology (RESPECT) (2017–2018).

### **The Community**

Volunteer, I work with the afterschool program one day a week to engage elementary, middle school and high school students in the design and evaluation of game-based technology for learning, Boys & Girls Club of Big Bend (2019–2020).

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### **Current Membership in Professional Organizations**

ACM Computer Human Interaction  
Association of Computing Machinery  
Black Women in Computing  
Special Interest Group in Computer Science Education