

# Moving Students of Color from Consumers to Producers of Technology

Part of the Advances in Educational Marketing, Administration, and Leadership Book Series

Yolanda Rankin (Spelman College, USA) and Jakita Thomas (Spelman College, USA)

## Description:

In recent years, diversity in learning environments has become a pivotal topic of conversation for educators. By enhancing underrepresented students' computational thinking skills, it creates more room for future career opportunities.

**Moving Students of Color from Consumers to Producers of Technology** is a comprehensive reference source that provides innovative perspectives on the need for diversity in computer science and engineering disciplines and examines best practices to build upon students' knowledge bases. Features coverage on an expansive number of topics and perspectives, such as, computational algorithmic thinking, STEM diversity, and distributed mentorship.

## Readers:

This publication is ideally designed for academicians, researchers, and students interested in efforts to broaden participation in computer science careers fields for underrepresented students.

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## Topics Covered:

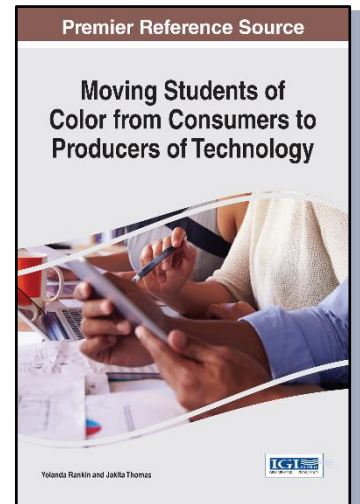
- Computational Algorithmic Thinking (CAT)
- Digital Youth Network (DYN)
- Distributed Mentorship
- Diverse Populations
- Online Learning
- STEM Diversity
- Synchronous Blending Learning Environments

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**Yolanda Rankin** is an Assistant Professor in the department of Computer and Information Sciences at Spelman College. Her research interests fall along three trajectories: 1. identifying effective pedagogical strategies and best practices for Computer Science education; 2. designing digital media such as video games to promote Second Language Acquisition; and 3. engaging members of underserved populations and communities in participatory design of information-based technologies. Yolanda is the proud recipient of the prestigious 2016 – 2017 Woodrow Wilson Foundation Fellowship in support of her research involving the design of intelligent computer game characters that facilitate novice Spanish speakers' conversational proficiency. In addition, Yolanda has written her first book about using video games to augment English as Second Language students' proficiency in mainstream English. Yolanda accumulated more than twelve years of industry experience before choosing to pursue a career in academia. She developed software tools that enable geographically distributed employees to work together to provide customers quality IT services and currently holds two patents for game-based virtual services as a result of her tenure at IBM Research Lab Almaden. Additionally, Yolanda has experience as a project manager for the development of an optical-based system at Luxcore Networks and as a customer technical liaison for the development of wireless services and products for multiple service providers. As a software engineer at Lucent Technologies-Bell Labs, Yolanda developed IS41 features and applications deployed for multiple wireless networks. Her industry experience enables her to integrate industry practices in the classroom setting. Yolanda also co-founded the Aspire2B non-profit organization which provides information about career opportunities and preparation in the STEM fields to African American students K-12. Helping African American students to perceive themselves as producers rather than just consumers of technology motivates much of Yolanda's research and teaching. Yolanda completed her Ph.D. in Computer Science at Northwestern University, her M.A. in Computer Science at Kent State University and her B.S. in Mathematics at Tougaloo College, a Historically Black College/University located in Mississippi.

**Jakita O. Thomas** is a Philpott Westpoint Stevens Associate Professor of Computer Science and Software Engineering at Auburn University in Auburn, AL. Dr. Thomas is also Director of theCULTuRally & SOcially Relevent (CURSOR) Computing Lab. Her research interests include exploring the development of computational algorithmic thinking, promoting access to healthcare information and services for under-served populations, improving reasoning using expert cases, scientific reasoning, complex cognitive skills learning, and computer-supported collaborative learning. She received a Bachelor of Science degree in Computer & Information Science with a minor in Mathematics from Spelman College in 1999. In 2006, Dr. Thomas was conferred a Ph.D. in Computer Science with a specialization in the Learning Sciences and Technology from the Georgia Institute of Technology in Atlanta, GA, where she was a Presidential Fellow, National Physical Science Consortium Fellow, tutor, mentor, and Research Assistant. Prior to her current position at Auburn University, Dr. Thomas was a faculty member in the Computer & Information Science department at Spelman College (2010 - 2016) and a Research Staff Member in the Service Design and People and Practices groups at IBM Research - Almaden in San Jose, CA (2005 - 2010). Dr. Thomas is a member of the International Society of the Learning Sciences, Association of Computing Machinery, Society of Industrial and Applied Mathematics, African-American Ph.Ds in Computer Science, Upsilon Pi Epsilon Computer Science Honor Society, and Golden Key National Honor Society. Dr. Thomas is a recipient of the National Science Foundation's Faculty Early Career Development (CAREER) Award (2012 - 2017). She is also a recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE) (2016).

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