

Curriculum Vitae  
**Brandeis Hill Marshall**

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## 1. Personal Information

### 1.1. Education

- Ph.D., Computer Science, Rensselaer Polytechnic Institute, 2007
- M.S., Computer Science, Rensselaer Polytechnic Institute, 2003
- B.S., Computer Science, University of Rochester, 2000

### 1.2. Appointments

- Faculty Associate, Berkman Klein Center for Internet & Society, Harvard University, September 2019 - present
- Professor of Computer Science, Division of Sciences and Mathematics, Spelman College, May 2019 - present
- Founder & CEO, The DataedX Group, LLC, April 2018 - present
- Associate Professor of Computer Science, Division of Sciences and Mathematics, Spelman College, August 2014 - April 2019
- Chair, Computer and Information Sciences, Spelman College, 2016 - 2018
- Associate Professor, College of Technology, Purdue University, 2014
- Assistant Professor, College of Technology, Purdue University, 2008 - 2014
- Postdoctoral Researcher, Cyber Center, Purdue Discovery Park, 2007 - 2008

## 2. Scholarly Research Activities

### 2.1. Full articles in refereed journals

- Marshall, B. (2017). Data Science Experiences for Undergraduates. *Journal of Computing Sciences in Colleges*, 33(2), p.198-204.
- Marshall\*, B., Johnson M., Magikar<sup>+</sup>, A., Ghanekar<sup>+</sup>, A., Mathew<sup>+</sup>, I, Delaveau<sup>+</sup>, L., Budhiraju<sup>+</sup>, R., Chapparala<sup>+</sup>, R. (2012). Flight data analyzer using Twitter. *Journal of Emerging Trends in Computing and Information Sciences*, 3(8), 1226-1234.
- Marshall\*, B. (2012). Discovering robustness amongst CBIR features. *International Journal of Web & Semantic Technology*, 3(2), 19-30.
- Shiroor\*<sup>+</sup>, A., Springer, J., Hacker, T., Marshall, B., Brewer, J. (2010). Scientific workflow management systems and workflow patterns. *International Journal of Business Process Integration and Management*, 5(1), 63-78.
- Adali, S\*, Hill, B., Magdom-Ismail, M. (2007). Information vs. robustness in rank aggregation: Models, algorithms and a statistical framework for evaluation. *Journal of Digital Information Management*. 5(5), 292-307.

## 2.2. Conference or symposium refereed proceedings

- Marshall, B., Geier, S. (2020). Cross-Disciplinary Faculty Development in Data Science Principles for Classroom Integration. *Proceedings of the ACM Special Interest Group on Computer Science Education*, pp. 1207–1213.
- Thema Monroe-White and Brandeis Marshall (December 2019). "Data Science Intelligence: Mitigating Public Value Failures Using PAIR Principles", *Pre-ICIS SIGDSA Symposium on Inspiring mindset for Innovation with Business Analytics and DataScience*, Munich Germany.
- Marshall, B., Geier, S. (2019). Targeted Curricular Innovations in Data Science. *Proceedings of the IEEE Frontiers in Education*, pp. 1-8.
- Marshall, B., Blunt, T., Thompson, T. (2018). The Impact of Live Tweeting on Social Movements. *Proceedings of the IEEE Information Reuse and Integration*.
- Nias, J., Marshall, B., Thompson, T., Blunt, T. (2017). EvergreenLP: Using a Social Network as a Learning Platform, *Proceedings of the IEEE Frontiers in Education*, p. 1-7.
- Marshall\*, B., Ghanekar, A., Springer, J., Matson, E. (2015). Betweenness Centrality Approaches for Image Retrieval. *Proceedings of the IEEE International Symposium on Multimedia*.
- Marshall\*, B., Sareen, S., Springer, J. A., Reid, R. (2014). Eye Tracking Data Understanding for Product Representation Studies. *Proceedings of the Conference on Research in Information Technology*. New York, New York: ACM.
- Marshall\*, B., Scott R., Schmidt, E., Hartman, B. C., Clott, C. (2014). Big Data, Supply Chains, and Port Governance. *METRANS International Urban Freight Conference*. Philadelphia PA: Elsevier.
- Sareen\*+, S., Laux, C. and Marshall, B. (in press 2014). The suitability of lean six sigma for SME and large scale implementation. *Proceedings of the Conference for Industry and Education Collaboration*. New Orleans, LA: American Society of Engineering Education.
- Marshall\*, B., Johnson, M. E. and Chundurur+, N. (2013). Towards general aviation using Twitter as a virtual aircraft dispatcher. *Proceedings of the Conference on Telecommunications and Information Technology*. Murray, Kentucky: Information and Telecommunications Education and Research Association.
- Koch\*, D., Johnson, M. E. and Marshall, B. (2013). Connecting K-12 teachers to STEM careers through industry collaboration. *Proceedings of the Conference for Industry and Education Collaboration*. New Orleans, LA: American Society of Engineering Education.
- Marshall\*, B., Ghanekar+, A. (2012). Finding betweenness in dense unweighted graphs. *Proceedings of the IEEE/IARIA Advances in Future Internet* (pp. 14-19). Wilmington, DE: Xpert Publishing Services.

- Marshall\*, B. (2011). Tag relevancy for similar artists. *Proceedings of the IEEE/IARIA Advances in Future Internet* (pp. 54-59). Wilmington, DE: Xpert Publishing Services.
- Kumar\*+, M., Hacker\*, T.J., Springer, J.A., & Marshall, B. (2011). Kernel level support for workflow patterns. *Proceedings of the 29th IEEE International Performance Computing and Communications Conference (IPCCC)* (pp. 192 - 199). Washington, DC, USA: IEEE Computer Society.
- Magana\*, A.J., Santiago-Roman, A. Santiago-Santiago, N., Aceros, C., Marshall, B. and Matson, E. (2011). Students Understanding of Computational Problem-Solving Tasks. *Proceedings of the 118th ASEE Annual Conference & Exposition*. New Orleans, LA: American Society of Engineering Education.
- Marshall\*, B., Springer\*, J., & Hacker\*, T. (2010). Work in progress - integration of the scientific workflow paradigm into high performance computing and large scale data management curricula. *Proceedings of the 40th ASEE/IEEE Frontiers in Education Conference* (pp. F3F-1-F3F-2). Washington, DC, USA: IEEE Computer Society.
- Marshall\*, B. (2010). Taking the tags with you: Digital photograph provenance. *Proceedings of the IEEE International Symposium on Data, Privacy, & E-Commerce (ISDPE)* (pp. 72-77). Washington, DC, USA: IEEE Computer Society.
- Marshall\*, B. and Pandey+, S. (2010). Using the social networking graph for image organization. *Proceedings of the IEEE/IARIA International Conference on Advances in Future Internet* (pp.102-107). Washington, DC, USA: IEEE Computer Society.
- Marshall\*, B. (2010). Determining result quality for vertical result merging. *Proceedings of the IEEE International Conference on Information Reuse and Integration* (pp.350-354). New York, NY: IEEE Computer Society.
- Marshall\*, B. (2010). Aggregating music recommendation web APIs by artist. *Proceedings of the IEEE International Conference on Information Reuse and Integration* (pp.75-79). New York, NY: IEEE Computer Society.
- Idika\*+, N., Marshall, B., Bhargava B. (2009), Maximizing network security given a limited budget. *Proceedings of the Richard Tapia Celebration of Diversity in Computing* (pp. 12-17). New York, NY: ACM.
- Marshall\*, B. and Wilson, D.-M. (2008). Applying aggregation concepts for image search. *Proceedings of the IEEE International Symposium on Multimedia* (pp. 328-333). Washington, DC, USA: IEEE Computer Society.
- Adali\*, S., Magdon-Ismael, M., Hill+, B. (2007). A classification algorithm for finding the optimal rank aggregation method. *Proceedings of the IEEE International Symposium on Computer and Information Sciences* (pp. 1-6). Washington, DC, USA: IEEE Computer Society.
- Adali, S., Sapino\*, M.-L., Marshall+, B. (2007). A rank algebra to support multimedia mining applications. *Proceedings of the ACM SIGKDD Workshop International Workshop on Multimedia Data Mining* (Article 5). New York, NY: ACM.

- Adali, S., Hill\*+, B., Magdon-Ismael M. (2006). The impact of ranker quality on rank aggregation algorithms. *Proceedings of the ACM ICDE International Workshop on Challenges in Web Information Retrieval and Integration* (pp. 10-17). Washington, DC, USA: IEEE Computer Society.
- Hill\*+, B. (2005). A lattice framework for reusing top-k query results. *Proceedings of the IEEE International Conference on Information Reuse and Integration* (pp. 38-43). New York, NY: IEEE Systems, Man, and Cybernetics Society.

\* denotes primary authorship

+ denotes a graduate student author

Note: Dr. Marshall's maiden name is Hill

### 2.3. Conference summaries or abstract

- Grady, S., Daily, S., Marshall, B., McMullen, K., Washington, N. (2021, forthcoming). Flowing, not Forcing: Finding and Maintaining Authenticity as Black Women in Academia. *Proceedings of the ACM Special Interest Group on Computer Science Education* [Panel].
- Billionniere, E., Rahman, F., Marshall, B., Seo, H. (2021, forthcoming). Debugging the Diversity Tech's Gap through (Re-)entry Initiatives in Emerging Technologies for Women, *Proceedings of the ACM Special Interest Group on Computer Science Education* [Panel].
- Kloefkorn, T., Boardman, M., Horton, N., Marshall, B. (2020). National Academies' Roundtable on Data Science Postsecondary Education, *Proceedings of the ACM Special Interest Group on Computer Science Education* [Panel].
- Bosley, B., Blunt, T., Sherman, J., Marshall, B. (November 2019). From #hashtags to Movements: Performance, Collective Narrative and Erasure, a Black Feminist Perspective. *National Women's Studies Association (NWSA) Conference*. [Presentation/Workshop Session]
- Marshall\*, B. (November 2018). Instructional Change Strategies for Data Science Implementation at Two HBCUs. *Association of American Colleges & Universities 2018 Transforming STEM Higher Education Conference*. [Presentation]
- Davis, K., Marshall\*, B., Affonso, L. (March 2018). Data Modeling for Undergraduate Data Science. *Proceedings of the ACM Special Interest Group on Computer Science Education*. [Birds-of-Feather Abstract] DOI: <https://doi.org/10.1145/3159450.3162183>
- Marshall\*, B., Sareen, S., and Reid, T. (2013). Analyzing Eye Gaze Data from Product Designs' Customer Judgements. *Proceedings of the Grace Hopper Celebration of Women in Computing*.
- Marshall\*, B. (2011). Context seeking with social tags. *Proceedings of the ACM International Conference on Knowledge Management Workshop Exploiting Semantic Annotations for Information Retrieval* (pp. 11-12). New York, NY: ACM.

- Marshall\*, B. (2010). Modeling betweenness for question answering. *Proceedings of the ACM International Conference on Knowledge Management Workshop Exploiting Semantic Annotations for Information Retrieval* (pp. 33-34). New York, NY: ACM.
- Marshall\*, B., Dark, M., Goldman, J., Hacker, T., Smith, A. (2009). Dark web patterns. *Proceedings of the WebSci'09: Society On-Line*.

#### 2.4. Conference posters

- Hacker\*, T., Springer, J., & Marshall, B. (2008, December). Modern file systems for data centric scientific computation. Poster presented at the 2008 Microsoft eScience Workshop, Indianapolis, IN.

#### 2.5. Book Chapters

- Marshall\*, B., (2012). Chapter 15: Music artist similarity aggregation. *Recent Trends in Information Reuse and Integration* (Özyer, T., Mehr, K. K., Tan, M. (Eds.)) (pp. 315-330). New York, NY: Springer

#### 2.6. Non-refereed Publications

- Blunt, T, Marshall, B., (2018). Visualizing Twitter Sub-Culture: Where is Black Twitter? Kennesaw State University Analytics Day 2018.
- Thompson, T, Marshall, B., (2018). Signifyin Groups within Black Twitter. Kennesaw State University Analytics Day 2018.
- Blunt, T, Marshall, B., (2017). An Analysis of Black Twitter through Word Clouds. Spelman Research Day 2017.
- Thompson, T, Marshall, B., (2017). Visualizing Black Twitter's Response to the Oscars Ceremonies. Spelman Research Day 2017.
- Thompson, T, Blunt, T., Marshall, B., (2016). The Grammys and Oscars according to #BlackTwitter. Spelman Research Day 2016.
- Sengoba, E., Marshall, B., (2016). Flight Cancelled?! Tracking Impact of Bad Weather using Twitter Data. Spelman Research Day 2016.

#### 2.7. Invited Presentations

- Marshall, B. (October 2020). Digitizing Discrimination. University of Virginia, School of Data Science.
- Marshall, B. (June 2020). Deepfake Technology: The (Mis-)Representation of Data, Northeastern University, Khoury College of Computer Sciences.
- Marshall, B.\* (January 2020). My Lens in, out and of Data Science. Williams College Data Science Bootcamp for Faculty.
- Marshall, B.\* (January 2020). The Culture of BlackTwitter. Williams College.
- Marshall, B.\* (May 2019). [Learning the Language of BlackTwitter](#). Linguistic Diversity in NLP Invited Session. 2019 Symposium on Data Science & Statistics. (<http://ww2.amstat.org/meetings/sdss/2019/>)
- Marshall, B. (April 2019). [A Taste of Data Science - Hands On Python Masterclass](#). blackcomputeHER Conference 2019.

- Gariba, P., Zou, A., Aktaran-Kalayci, T., Marshall, B.\*, Su, L., Cramer, L. (April 2019). [If AI is the Future, Where are the Women?](#) (Panel), Women in Wireless SIG, Wireless Technology Forum.
- Marshall, B.\* (February 2019). [Inclusivity and Data Science](#). DataCamp's DataFramed podcast. Interviewed by Hugo Bowne-Anderson. <https://www.datacamp.com/community/podcast/inclusivity-data-science>)
- Marshall, B.\* (January 2019). [Our Data Mindset](#). Kennesaw State University Women in Data Science Event. <http://ksusentinel.com/2019/01/28/guest-speaker-invites-ksu-women-into-world-of-computer-science/>)
- Marshall, B.\* (September 2018). [The DSX Project: A First Look at Data Science Education on Spelman and Morehouse Campuses](#). Meeting Theme: Challenges and Opportunities to Better Engage Women and Minorities in Data Science Education. The National Academies of Sciences, Engineering and Medicine Roundtable on Data Science Postsecondary Education. (<http://nas.edu/dsert>)
- Marshall, B.\*, Holmes, M., Williams, U. (July 2018). [Zero to Data Science](#). UNCF Career Pathways Initiative 3rd Annual Convening and Data Institute.
- Marshall, B. (April 2018). BlackTwitter's Reaction to the Oscars. blackcomputeHER Conference 2018.
- Heines, J., Marshall\*, B. (February 2018). [Balancing Teaching, Scholarship, and Service](#). New Educators' Workshop, co-located with ACM Special Interest Group on Computer Science Education.

## 2.8. Consultations

- Marshall, B. (May 2020). Deepfakes-focused TBA. MailChimp (private event on data privacy and ethics).
- Marshall, B. (April 2020). Truist Inclusion in Data Investment Event. Trust (formerly SunTrust and BB&T).
- Marshall, B. (April 2020). Women in Data (Atlanta Chapter) Speaker.
- Marshall, B. (March 6, 2019). Dorothy Vaughan Tech Symposium. Invited by the Honorable Congresswoman Yvette Clarke serving as the technical computing expert. (<https://www.hillhappenings.com/list/2019/3/6/dorothy-vaughan-tech-symposium>)
- Brandon Rohrer et al. Data Science Curriculum Roadmap. Final report from Facebook's Industry Data Science Advisory. January 24, 2019. ([https://github.com/brohrer/academic\\_advisory/blob/master/curriculum\\_roadmap.md](https://github.com/brohrer/academic_advisory/blob/master/curriculum_roadmap.md))
- Co-moderator and Workshop Organizer, [Forum on Health and National Security: Ethical Use of Big Data for Healthy Communities and a Strong Nation](#), sponsored by the Uniformed Services University of the Health Sciences (USUHS) Center for the Study of Traumatic Stress, the Health Services Research Program and the NSF South Big Data Innovation Hub. December 10, 2018.

- Marshall, B. (September 20, 2018). Data Science Drivers Workshop. National Library of Medicine (NLM) of the National Institutes of Health (NIH). By Invitation Only.
- Marshall, B. (August 2018). Foo Camp. By Invitation Only. ([https://en.wikipedia.org/wiki/Foo\\_Camp](https://en.wikipedia.org/wiki/Foo_Camp))
- Facebook’s Industry Data Science Advisory. April 16, 2018. ([https://github.com/brohrer/academic\\_advisory](https://github.com/brohrer/academic_advisory))
  - Academic Contributors: Sylvain Jaume, Harvard University; Jeff Leek, Johns Hopkins University; Brandeis Marshall, Spelman College; Dan Potter, Brown University and others (as of November 2018)
- External Review of the Computer Science Department at Hope College. March - May 2018
  - Dr. Brandeis Marshall of Spelman College
  - Dr. Victor Norman of Calvin College
  - Dr. Henry M. Walker of Grinnell College (lead)
- Experian’s Data Science Community Interview by Michael Delgado. “Data Modeling Techniques: How to Get the Most From Your Data”. March 15, 2018. (<http://ex.pn/marshall>)
  - 140K+ YouTube video views, 790+ Facebook likes and 35+ Facebook shares
  - Podcast available on [Google Play](#), [Stitcher](#), [SoundCloud](#), and [Spotify](#).

## 2.9. Honors, Prizes and Press Releases

- [Media Press Release, June 2019]: Berkman Klein Center Announces 2019-2020 Community. See <https://cyber.harvard.edu/story/2019-06/berkman-klein-center-announces-2019-2020-community>
- [Media Press Release, January 2019]: Black Women In Tech to Follow on Twitter. 2018 Honorees. See <http://blackwomentech.com/>
- [Wikipedia, August 2018]: Wikipedia page generated and available to the public by @webmz\_ (Maryam Zaringhalam, PhD) of @500womensci, See: [https://en.wikipedia.org/wiki/Brandeis\\_Marshall](https://en.wikipedia.org/wiki/Brandeis_Marshall)
- [Media Press Release, July 2017]: The skill that makes candidates twice as likely to get a job. See: <https://www.eab.com/daily-briefing/2017/07/07/the-skill-that-makes-candidates-twice-as-likely-to-get-a-job>
- [Spelman Press Release, July 2017]: Dr. Brandeis Marshall: An Interdisciplinary Approach to Data Science and Analytics, See <http://www.spelman.edu/about-us/news-and-events/our-stories/stories/2017/07/10/brandeis-marshall>
- [Media Press Release, June 2017]: Black Women In Tech to Follow on Twitter. 2017 Honorees. See <http://blackwomentech.com/>
- [Media Press Release, June 2017]: Experts: Data Science and Analytics Skills Essential for Minority Students. Diverse Issues in Higher Education. See <http://diverseeducation.com/article/98508/>

- [Spelman News Release, April 2017]: Diverse Issues in Higher Education Highlights Professor’s Grant to Train Faculty in Data Science. See <http://www.spelman.edu/about-us/news-and-events/our-stories/stories/2017/04/13/brandeis-marshall>
- [Media Press Release, March 2017]: Leading Educators: All Students Need Data Analytics Courses. Diverse Issues in Higher Education. See <http://diverseeducation.com/article/94506/>
- [Media Press Release, March 2017]: Investing in America’s Data Science and Analytics Talent. Business-Higher Education Forum Report. See <http://www.bhef.com/publications/investing-americas-data-science-and-analytics-talent>
- [Spelman News Release, January 2017]: Robust 2016 Funding Fuels Spelman’s Rigorous Research, Programs, and Initiatives Focused on STEM. See <http://www.spelman.edu/about-us/news-and-events/news-releases/2017/01/04/robust-2016-funding-fuels-spelman-s-rigorous-research-programs-and-initiatives-focused-on-stem>
- [Media Press Release, December 2016]: CS FOR ALL: RPP WORKSHOPS FOR ASPIRING PIS. See <http://www.informalscience.org/news-views/cs-all-rpp-workshops-aspiring-pis>
- [Spelman News Release, August 2016]: Spelman receives \$399,903 from NSF to train faculty in data science. See [http://faculty.spelman.edu/osp/award-2016-nsf-marshall-2/#.WS3\\_TxPyvow](http://faculty.spelman.edu/osp/award-2016-nsf-marshall-2/#.WS3_TxPyvow)
- [Media Press Release, March 2016]: Women in Machine Learning Spotlight. See <https://twitter.com/wimlworkshop/status/710129497450807297> & <https://www.facebook.com/WomenInMachineLearning/posts/1275582289124076>
- Teaching for Tomorrow Fellowship Award FY 2013-2014
- College of Technology Faculty Equity, Inclusion and Advocacy Award FY 2013-2014
- Association for Career and Technical Education’s Engineering and Technology Education Division Silvius/Wolansky Outstanding Young Teacher Educator Award FY 2013-2014
- Brandeis Marshall and Mary E. Johnson. Purdue #2013-MARS-66582. Notification of Invention. “Aircraft Dispatch Augmented by Social Media Technologies”

### 3. Teaching and Advising

#### 3.1. General, Undergraduate

- Instructor, CIS328, Introduction to Database Management Systems Design, Computer and Information Sciences, Spelman College, (Spring 2020).
- Instructor, CIS472, Software Engineering, Computer and Information Sciences, Spelman College, (Fall 2019).
- Instructor, CIS 181, First Year Seminar I, Computer and Information Sciences, Spelman College, (Fall 2019).



- Instructor, CIS328, Introduction to Database Management Systems Design, Computer and Information Sciences, Spelman College, (Spring 2019).
- Instructor, CIS 481, Senior Seminar I, Computer and Information Sciences, Spelman College, (Spring 2019).
- Instructor, CIS 181, First Year Seminar I, Computer and Information Sciences, Spelman College, (Fall 2018).
- Instructor, CIS 481, Senior Seminar I, Computer and Information Sciences, Spelman College, (Spring 2018).
- Instructor, CIS328, Introduction to Database Management Systems Design, Computer and Information Sciences, Spelman College, (Spring 2018).
- Instructor, CIS 181, First Year Seminar I, Computer and Information Sciences, Spelman College, (Fall 2017).
- Instructor, CIS 313, Data Structures and Algorithms, Computer and Information Sciences, Spelman College, (Spring 2017).
- Instructor, CIS 328, Introduction to Database Management Systems Design, Computer and Information Sciences, Spelman College, (Spring 2017).
- Instructor, CIS 481, Senior Seminar I, Computer and Information Sciences, Spelman College, (Spring 2017).
- Instructor, CIS 215, Data Structures and Theoretical Foundations of Computer Science, Computer and Information Sciences, Spelman College, (Fall 2016).
- Instructor, CIS181, First Year Seminar I, Computer and Information Sciences, Spelman College, (Fall 2016).
- Instructor, CIS 313, Data Structures and Algorithms, Computer and Information Sciences, Spelman College, (Spring 2016).
- Instructor, CIS 328, Introduction to Database Management Systems Design, Computer and Information Sciences, Spelman College, (Spring 2016).
- Instructor, CIS 481, Senior Seminar I, Computer and Information Sciences, Spelman College, (1-credit course, Spring 2016).
- Instructor, CIS 482, Senior Seminar II, Computer and Information Sciences, Spelman College, (1-credit course, Spring 2016).
- Instructor, CIS 201, Programming Team, Computer and Information Sciences, Spelman College, (1-credit course, Fall 2015).
- Instructor, CIS 346, Foundations of Programming Languages, Computer and Information Sciences, Spelman College, (Fall 2015).
- Instructor, CIS 215, Data Structures and Theoretical Foundations of Computer Science, Computer and Information Sciences, Spelman College, (Fall 2015).
- Instructor, CIS 121, Computer Science I, Computer and Information Sciences, Spelman College, (Spring 2015).
- Instructor, CIS 201, Programming Team, Computer and Information Sciences, Spelman College, (1-credit course, Spring 2015).
- Instructor, CIS 328, Introduction to Database Management Systems Design, Computer and Information Sciences, Spelman College, (Spring 2015).

- Instructor, CIS 100, Introduction to Computers, Computer and Information Sciences, Spelman College, (Fall 2014).
- Instructor, CIS 215, Data Structures and Theoretical Foundations of Computer Science, Computer and Information Sciences, Spelman College, (Fall 2014).
- Instructor, CNIT 39200, Enterprise Data Management, Computer and Information Technology, Purdue University, (Spring 2014).
- Instructor, CNIT 31500, Systems Engineering, Computer and Information Technology, Purdue University, (Spring 2013).
- Instructor, CNIT 39200, Enterprise Data Management, Computer and Information Technology, Purdue University, (Spring 2012).
- Instructor, CNIT 39200, Enterprise Data Management, Computer and Information Technology, Purdue University, (Spring 2011).
- Instructor, CNIT 39200, Enterprise Data Management, Computer and Information Technology, Purdue University, (Spring 2010).
- Instructor, CNIT 39200, Enterprise Data Management, Computer and Information Technology, Purdue University, (Fall 2009).
- Instructor, CNIT 39200, Enterprise Data Management, Computer and Information Technology, Purdue University, (Spring 2009).
- Instructor, CNIT 39200, Enterprise Data Management, Computer and Information Technology, Purdue University, (Fall 2008).

### 3.2. Specialized, Undergraduate

- Instructor, CIS 475, Special Topics: Data Science, Computer and Information Sciences, Spelman College, (Spring 2020).
- Instructor, CIS 445, Information Retrieval, Computer and Information Sciences, Spelman College, (Fall 2019).
- Instructor, CIS 475, Special Topics: Data Science, Computer and Information Sciences, Spelman College, (Fall 2018).
- Instructor, CIS 445, Information Retrieval, Computer and Information Sciences, Spelman College, (Fall 2017).
- Instructor, CIS 445, Information Retrieval, Computer and Information Sciences, Spelman College, (Spring 2015).
- Instructor, CNIT 49900, Data Integration on the Web, Computer and Information Technology, Purdue University, (Fall 2013)
- Instructor, CNIT 49900, Data Integration on the Web, Computer and Information Technology, Purdue University, (Fall 2012).
- Instructor, CNIT 49900, Data Integration on the Web, Computer and Information Technology, Purdue University, (Fall 2011).
- Instructor, CNIT 49900, Data Integration on the Web, Computer and Information Technology, Purdue University, (Fall 2010).
- Instructor, CNIT 49900, Data Integration on the Web, Computer and Information Technology, Purdue University, (Spring 2010).

### 3.3. General, Graduate

- Instructor, CNIT 62300, Research Methods in Computing, Computer and Information Technology, Purdue University, (Fall 2013)
- Instructor, CNIT 62300, Research Methods in Computing, Computer and Information Technology, Purdue University, (Fall 2012).
- Instructor, CNIT 62300, Research Methods in Computing, Computer and Information Technology, Purdue University, (Fall 2011).
- Instructor, CNIT 62300, Research Methods in Computing, Computer and Information Technology, Purdue University, (Spring 2011).

### 3.4. Specialized, Graduate

- Instructor, TECH 58100, Problems in National Information Security, College of Technology, Purdue University, (Spring 2014).
- Instructor, CNIT 58100, Data Integration on the Web, Computer and Information Technology, Purdue University, (Spring 2012).
- Instructor, CNIT 58100, Data Integration on the Web, Computer and Information Technology, Purdue University, (Fall 2010).
- Instructor, CNIT 58100, Data Integration on the Web, Computer and Information Technology, Purdue University, (Fall 2009).
- Instructor, CNIT 58100, Data Integration on the Web, Computer and Information Technology, Purdue University, (Spring 2009).

### 3.5. Undergraduate Research Mentoring

- Takeria Blunt, #BlackTwitter Project, Clare Boothe Luce Undergraduate Research Scholar, January 2016 - May 2018
- Tayloir Thompson, #BlackTwitter Project, Clare Boothe Luce Undergraduate Research Scholar, August 2015 - May 2018
- Ropa Denga, Timely Acquisition of Data for Aviation, January 2015-May 2016
- Elizabeth Sengoba, Timely Acquisition of Data for Aviation, January 2015-May 2016

### 3.6. Postdoctoral Fellow Supervision

- Jaye Nias, HBCU-UP CURE Postdoctoral Fellow, August 2016-July 2017
  - Note: Dr. Nias became a tenure-track Assistant Professor in Computer and Information Sciences at Spelman College in August 2017.

### 3.7. M.S. and PhD Committees

- Chair, Christopher Bohacek, M.S. Thesis: “Service Data Quality”, August 2011
- Chair, Devarapalli, Ravali, M.S. Thesis: “Cost Appraisal for Data Accuracy in Emergency Management”, August 2012
- Chair, Anuya Ghanekar, M.S. Thesis: “Betweenness Measure for Social Network Analysis and Image Retrieval”, May 2013

- Chair, Ryan Wischmeyer, M.S. Thesis: “Measuring and Improving Software Quality”, May 2014
- Chair, Nag Varun Chunduru, M.S. Thesis: “Towards a Twitter-based Flight Dispatcher”, May 2014
- Chair, Shweta Sareen, M.S. Thesis: “Using Eye-Tracking Data to Better Understand System Design”, May 2014
- Chair, Shih-Feng Yang. M.S. Thesis. 2015
- Member, Teresa Shanklin, PhD Dissertation: “A Multi-agent System-of-Systems for End-to-End Navigation”, May 2012.
- Member, Shruthi Simha Kestur Chandrashekar. non-MS Thesis, May 2014.
- Member, Animesh Jain. MS Thesis: Analyzing response to open ended survey questions for NSF-sponsored SPIRIT program. May 2014.
- Member, Hans Vargas. The Indiana Cyber Security Center (INCSC): A Cost-Benefit Analysis for K-12 Schools. May 2014.
- Member, Yue Zhang. A Cross-site study of user’s information disclosure behavior and privacy perceptions. May 2014.
- Member, Raghava K. Budhiraju. MS Thesis, December 2013.
- Member, Temitope Toriola, non-MS Thesis, August 2013.
- Member, Diego M. Mendez Mena, MS Thesis: “CLEERhub.org Adoption by EAFIT University Faculty Members: A Longitudinal Study”, May 2013.
- Member, George Kiruthu, MS Thesis: “Conducting Digital Forensics in a Cloud-Shared Folder”, May 2012.
- Member, Ludovic Delaveau, MS Thesis: “The utilization of context to adapt the interface of a computer”, May 2012.
- Member, Benjamin Loulier, MS Thesis: “Using smartphones for indoor navigation”, December 2011.
- Member, Aniruddh Ghatpande, MS Thesis: “Pattern Mapping in Scientific Workflows to Smart Pipes in Filesystem”. August 2011.
- Member, Manish Kumar, MS Thesis: “Kernel Level Support for Work Patterns”. August 2011.
- Member, Siddharth Pandey, MS Thesis: “A Framework for Genomic Literature Area Sequence Search”, May 2011.
- Member, Feras Hirzalla, MS Thesis: “Can a Scalable System be Built to capture Webpage Thumbnails?”, August 2010.
- Member, Amruta Shiroor, MS Thesis: “Scientific Workflow Management Systems and Workflow Patterns”, August 2009.

#### 4. Grants

##### 4.1. External Awards

- PI, “TRIPODS+X:EDU: Collaborative Education: Data-driven Discovery and Alliance”, National Science Foundation, \$99,092. [Primary PI Dr. Prasad Tetali of Georgia Institute of Technology with an additional budget of < \$100,000]

- PI, “Computer Science For All Workshop in Atlanta”, National Science Foundation, December 15, 2016 - November 30, 2018, \$160,215 [Supplement awarded August 2018; updated total: \$192,257]
- PI, “Computer Science For All Workshop in Atlanta”, National Science Foundation, December 15, 2016 - November 30, 2017, \$160,215.
- PI, “Targeted Infusion Project: Data Science eXtension (DSX): Incorporating data science fundamentals in computing curriculum at Spelman and Morehouse Colleges”, National Science Foundation, August 15, 2016 - July 31, 2019, \$399,903. [Supplement awarded May 2017; updated total: \$479,688]
- PI, “Planning a Dual Institution Research Center in Socially Relevant Computing”, National Science Foundation, March 1, 2016 - February 28, 2019, \$92,353. (Primary PI Dr. Kinnis Gosha of Morehouse College)
- co-PI, “Conference: A Strategic Planning Workshop to Explore Quantitative Biology as a Vehicle for Broadening Participation to be held at Spelman College on March 11 and 12, 2016”, National Science Foundation, December 15, 2015 - December 15, 2016, \$41,013.00.
- PI, “Broadening Participation in Data Mining 2016”, Intel Corporation, June 2016 - December 2016, \$5,000.
- PI, “Broadening Participation in Data Mining 2013”, Bosch Community Fund, June 2014 - December 2016, \$50,000.
- PI, “Enterprise Database Management and Security”, Intel Corporation, May 15, 2014 - May 31, 2015, \$24,570.20.
- PI, “Broadening Participation in Data Mining 2014”, Bosch Community Fund, June 15, 2014 - June 30, 2015, \$60,000.
- co-PI, “Project No. 2: Rotorcraft ASIAs”, Federal Aviation Administration, August 1, 2013 - July 31, 2014, \$85,183.
- co-PI, “The Information Security Research and Education (INSuRe) Collaborative”, National Science Foundation, July 15, 2013 - June 30, 2015, \$299,927.
- co-PI, “Preparing Cyber Security Leaders- Supplement”, National Science Foundation, August 1, 2013 - July 31, 2015, \$340,997.
- co-PI, NIPA-Purdue Junior Capstone Project, NIPA South Korea, January 1, 2013 - May 31, 2013, \$100,000.
- PI, “Broadening Participation in Data Mining 2013”, Bosch Community Fund, December 2012 - December 2013, \$30,000.
- PI, “Broadening Participation in Data Mining (BPDM) 2013”, CRA-W/CDC DSW, July 15, 2012 - June 15, 2013, \$17,000.
- PI, “Broadening Participation in Data Mining”, National Science Foundation, June 15, 2012 - May 15, 2014, \$9,900.
- PI, “Broadening Participation in Data Mining 2012”, Bosch Community Fund, June 2012 - August 2012, \$12,000.

#### 4.2. Internal Awards (Purdue University)

- co-PI, Computational Representation and Learning Collaboratory (CRLCollab) Research Space and Equipment, College of Technology Dean's Office, July 15, 2013 to July 2014
- PI, Teaching for Tomorrow Fellowship Award, Office of the Provost, FY 2013 - 2014, \$1,000.
- PI, Building a Strong Purdue Contingency to the 2012 Grace Hopper Celebration of Women in Computing, Agency: College of Technology Dean's Office, April 2012 - October 2012, \$18,700.
- PI, Social Network Graph (SNG) Framework Optimizations, Purdue Research Foundation, June 1, 2012 - August 1, 2012, \$8,000.
- PI, International Conference on Advances in Future Internet, Purdue Research Foundation International Travel Grant, FY 2011 - 2012, \$1,000

### 5. Service

#### 5.1. Service to professional organizations

- Scholarship Committee, Richard Tapia Celebration of Diversity in Computing 2020
- Program Committee, IJCAI-PRICAI2020 Special Track on AI in FinTech 2020
- Technical Program Committee, Research on Equity & Sustained Participation in Engineering, Computing & Technology 2020
- Program Committee, ACM Southeast Conference 2019
- Local Co-Chair, ACM Fairness, Accountability and Transparency (FAT\*) Conference 2019
- Member, The National Academies of Sciences, Engineering and Medicine Roundtable on Data Science Postsecondary Education March 2018-Dec 2019
- Program Committee, IEEE International Conference on Data Mining 2018
- Program Committee, IEEE International Conference on Data Science and Advanced Analytics 2018
- Scholarship Co-chair, Grace Hopper Celebration of Women in Computing 2018
- Program Committee, IEEE International Conference on Big Knowledge 2017
- Reviewer, International Journal on Semantic Computing - ICSC Special Issue 2017
- Program Committee, IEEE International Conference on Semantic Computing 2017
- Scholarship Committee, Richard Tapia Celebration of Diversity in Computing 2017
- Scholarship Committee, Grace Hopper Celebration of Women in Computing 2017
- Scholarship Committee, Richard Tapia Celebration of Diversity in Computing 2016
- Scholarship Committee, Grace Hopper Celebration of Women in Computing 2016
- Program Committee, IEEE International Conference on Multimedia Big Data 2016

- Program Committee, Workshop on Education for High-Performance Computing 2015
- Program Committee, IEEE International Conference on Data Mining 2015
- Program Committee, International Conference on Data Science and Advanced Analytics 2015
- Program Committee, International Workshop on Big Data Security and Privacy
- Program Committee, International Conference on Data Science and Advanced Analytics 2014
- Program Committee, IEEE International Symposium on Multimedia 2014
- Program Committee, IEEE International Conference on Data Mining 2014
- General Co-Chair, Broadening Participation in Data Mining 2014
- Poster Committee, Richard Tapia Celebration of Diversity in Computing 2014
- Scholarship Committee, Richard Tapia Celebration of Diversity in Computing 2014
- Reviewer, IEEE Transactions on Knowledge and Data Engineering 2013
- Co-Chair, Broadening Participation in Data Mining 2013 (held prior to KDD)
- Program Committee, IEEE International Conference on Data Mining 2013
- Poster Committee, Grace Hopper Celebration of Women in Computing 2013
- Scholarship Committee, Richard Tapia Celebration of Diversity in Computing 2013
- Technical Program Committee, IARIA/IEEE Advances in Future Internet 2013
- Co-Chair, Broadening Participation in Data Mining Workshop 2012 (co-located with SIAM SDM)
- Technical Program Committee, IARIA/IEEE Advances in Future Internet 2012
- Program Committee, IEEE International Symposium on Multimedia 2012
- Technical Program Committee, IARIA/IEEE Advances in Future Internet 2011
- Program Committee, IEEE International Symposium on Multimedia 2011
- Program Committee, Symposium on High Performance Computing Workforce Development held within the SC10 Supercomputing Conference 2010
- Committee Member, Broader Engagement, SuperComputing 2010
- Committee Member, Broader Engagement, SuperComputing 2009
- Program Committee, IEEE International Symposium on Multimedia 2009
- Co-Chair of Poster Session, ACM Richard Tapia Celebration of Diversity in Computing 2009
- Local Arrangements, ACM Special Interest Group on Databases (SIGMOD) 2008
- External Reviewer, ACM International Symposium on Methodologies for Intelligent Systems (ISMIS) 2008
- External Reviewer, Association for Computational Linguistics: Human Language Technologies (ACL-HT) 2008
- External Reviewer, International Conference on Web Information Systems Engineering 2007
- External Reviewer, International Conference on Collaborative Computing 2007

- External Reviewer, International Conference on Signal-Image Technology and Internet-Based Systems 2007

5.2. Department, College, and/or University Committee

- Steering Committee Member and Data Science Consultant, Spelman Career Pathways Initiative Steering Committee January 2017 - 2018
- Member, Spelman College Technology Governance Committee 2016 - 2017
- Member, Spelman Strategic Planning Committee - Organizational Productivity Theme Group 2017
- Member, Spelman College's New Center for Arts and Innovation User Group 2017-present
- Member, Spelman College's New Center for Arts and Innovation Facility-CIS Expansion Coordination February 2017 to August 2017
- Member, Spelman College Education Technology Committee, 2014, 2016, 2017
- Member, Purdue University Strategic Enrollment Plan Committee 2013
- Member, College of Technology 2013-14 Faculty Grievance Committee 2013-14
- Member, College of Technology PhD Subcurriculum Committee 2013
- Member, ADVANCE-Purdue Women of Color Faculty in STEM Conference Planning Committee 2013
- Member, College of Technology Curriculum 2014 Revision Team Taskforce 2012-2013
- Member, ADVANCE-Purdue Women of Color Faculty in STEM Conference Planning Committee 2012
- Member, College of Technology Educational Policy Committee 2010-2012
- Member, CIT Graduate Education Committee 2008 to 2014

*References available upon request*