

Joi Mondisa

2785 IOE
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Abilities

- **Researcher:** Interviewing, data collection, analysis, and writing skills in qualitative and quantitative research
- **Educator:** In-classroom teaching, online teaching, curriculum development and educational workshop and seminar instruction
- **Advocate:** Public engagement through workshops and community outreach programs

Education

Ph.D., Engineering Education **August 2015**
Purdue University, West Lafayette, IN
Thesis: *In the Mentor's Mind: Examining the Experiences of African-American STEM Mentors in Higher Education*
Advisor: Dr. Robin S. Adams

Master of Science in Industrial Engineering **December 2014**
Purdue University, West Lafayette, IN
Thesis: *Designing Sustainable Mentoring Programs: Examining the Role of Social Community in the STEM College Student Experience*
Advisor: Dr. Sara A. McComb

Master of Business Administration **August 2010**
Governors State University, University Park, IL

Bachelor of Science in General Engineering **May 2001**
University of Illinois at Urbana-Champaign

Research and Teaching Interests

Research

- Mentoring underrepresented populations in STEM
- Mentoring experiences and intervention programs
- Design and assessment of learning experiences

Teaching

- Lean operations and processes
- Lean manufacturing
- Engineering management

Research Experience

Assistant Professor, Industrial and Operations Engineering 09/16 – Present
University of Michigan, Ann Arbor, MI

- Conducts research focused on mentoring; STEM mentoring experiences of underrepresented populations in higher education; how mentoring intervention programs promote the persistence and success of undergraduates in STEM majors; and designing learning experiences.
- Teaches undergraduate and graduate courses in industrial engineering and engineering education: IOE 525 Lean Thinking in Manufacturing and Services and ENGIN 100 Continuous Improvement and Operations Management.

Postdoctoral Research Fellow, Industrial and Operations Engineering 09/15 – 08/16
University of Michigan, Ann Arbor, MI

- Conducted research using effective project management skills and actively seeks out collaborations with faculty and administrators on projects focused on teamwork, mentoring, diversity, and inclusion.

Graduate Research Assistant, Engineering Education 08/12 – 08/14
Purdue University, West Lafayette, IN

- Researched and compiled information on multidisciplinary engineering education topics and wrote research papers that communicated research details, results and analysis.
- Actively sought collaborators as evidenced by publication of multiple conference proceedings and journal articles.

STEM Education Research Intern 06/14 – 08/14
Cyber Innovation Center, Louisiana Tech University, Bossier City, LA

- Wrote and developed engineering problem-based curricula for 6th, 7th, and 8th grade students.
- Exhibited diverse communication skills as an assistant facilitator of professional development workshops for middle and high school teachers.

Summer Scholar Intern, ADVANCE Program 05/13 – 08/13
National Science Foundation, Arlington, VA

- Conducted a portfolio analysis of the NSF ADVANCE program and succinctly synthesized information for program officers' use in budgetary planning and projection meetings.
- Presented portfolio results and insights to program officers and managers in team meetings and prepared detailed evaluation and assessment reports after program site visits.

Teaching Experience

Adjunct Faculty, Engineering Technology 08/08 – 08/15
Triton College, River Grove, IL

- Demonstrated strong communication and teaching skills as evidenced by the ability to effectively teach diverse populations at varying levels of understanding in lean manufacturing (ENT 103 Introduction to Lean Manufacturing and Automation) and physics (ENT 123 Technical Physics) courses.

Adjunct Faculty, Business Administration 05/15 – 06/15
Governors State University, University Park, IL

- Instructed STAT 2700 Statistics for Management summer course featuring applications of statistics to business problems.
- Wrote and developed curriculum and syllabus and implemented group work activities and discussions to engage students in active learning (i.e. problem- and project-based learning activities).

Adjunct Faculty, Business Administration 08/11 – 05/12
Ivy Tech Community College, Lafayette, IN

- Instructed BUSN 101 Introduction to Business Administration course and facilitated class discussions via Blackboard's online learning management system.
- Engaged students in long-distance team projects to help them develop management and teamwork skills.

Professional Experience

Associate Technical Editor 05/06 – 08/11
Goodheart-Willcox Publisher, Inc., Tinley Park, IL

- Exhibited excellent project management skills as evidenced by initiating, planning, and developing editing projects of secondary, post-secondary, and vocational manuscripts, text, and artwork in the areas of technology, programmable logic controllers, and automotive systems.

Senior Engineer of Operations

02/04 - 05/06

La Petite Academy Corporate Headquarters, Chicago, IL

- Effectively managed and assessed profit & loss and market information for special projects for the company which was comprised of over 600 business units with total revenues of \$120 million.
- Trained 200 field personnel on new programs, cost savings opportunities, and company information and directed assessment teams regarding field improvement programs.

Corporate Engineer – Sales & Applications

07/02 - 02/04

THK America, Inc. - Linear Motion Systems Manufacturer, Schaumburg, IL

- Organized and provided sales and technical support information to customers in addition to application engineering duties (i.e. sizing linear systems for engineering clients).
- Managed and trained 30 staff personnel about linear system products.

Mechanical Engineer - Mechanical Applications

06/01 - 07/02

THK America, Inc. - Linear Motion Systems Manufacturer, Schaumburg, IL

- Applied analytical skills and conducted applications and projects for over 75 diverse companies and trained 10 sales administrators on product, engineering, and sales topics.

Publications, Seminars, Panels, and Posters**Peer-Reviewed Journal Articles**

1. **Mondisa, J.L.** & Adams, R.S., in review. Mentoring as Learning: Examining Mentoring Relationships Using a Learning Partnerships Framework.
2. **Mondisa, J.L.** & McComb, S. A., in review. Examining the Differences in the Experiences of STEM Minority Mentoring Program (MMP) Participants Using a Social Community Model.
3. **Mondisa, J.L.** & McComb, S. A. (2015). Social Community: A Mechanism to Explain the Success of STEM Minority Mentoring Programs. *Mentoring & Tutoring: Partnership in Learning*, 23(2), 149-163. doi:10.1080/13611267.2015.1049018

Peer-Reviewed Conference Proceedings

1. **Mondisa, J.L.** & Chelst, K. (2017). Developing an Integrated Mathematics and Human Factors Engineering Curriculum for Middle School Students, in *Proceedings of the American Society of Engineering Education (ASEE) Zone II Conference*, March 2-5, 2017, San Juan, Puerto Rico.
2. **Mondisa, J.L.**, Millunchick, J., Davis, C., Koch, D. (2016). The University of Michigan's M-STEM Academies Program: Examining the Social Community of Future Engineers, in *2016 Frontiers in Education Conference Proceedings*, October 12-15, 2016, Erie, PA.
3. London, J.S., **Mondisa, J.L.**, Fayyaz, F., & Jones, T. (2016). Making Learning Whole: Toward the Development of An Instrument Operationalizing Perkins's Model, in *Proceedings of the Annual American Society of Engineering Education (ASEE) Conference*, June 26-29, 2016, New Orleans, LA.
4. **Mondisa, J.L.** (2016). Capturing Our Stories in Our Voices: Constructing a Narrative Analysis Study of American-American STEM Mentors, in *Proceedings of the Annual American Society of Engineering Education (ASEE) Conference*, June 26-29, 2016, New Orleans, LA.
5. **Mondisa, J.L.**, London, J.S., & Pilotte, M. (2016). Work in Progress-The Relationship between Resilience, Grit, and Persistence in Engineering Education in *Proceedings of the Industrial and Systems Engineering Research Conference (ISERC)*, May 21-May 24, 2016, Anaheim, CA.

6. **Mondisa, J.L.** (2015). Increasing Diversity in Higher Education by Examining African-American STEM Mentors' Mentoring Approaches, in *Proceedings of the World Engineering Education Forum*, September 20-24, 2015, Florence, Italy.
7. **Mondisa, J.L.** Adams, R.S. & Brown, C. (2015). Mentoring African-American Science, Technology, Engineering, and Mathematics (STEM) Undergraduates: An African-American STEM Mentor's Perspective, in *Proceedings of the Annual American Society of Engineering Education (ASEE) Conference*, June 14-17, 2015, Seattle, WA.
8. **Mondisa, J.L.** & Corbett, K. (2015). Global Earthquake Engineering: A STEM EDA Lesson and Activity (Curriculum Exchange), in *Proceedings of the Annual American Society of Engineering Education (ASEE) Conference*, June 14-17, 2015, Seattle, WA.
9. **Mondisa, J.L.** (2014). Mentoring Minorities: Examining Mentoring from a Race and Gender Lens, in *Proceedings of the Annual American Society of Engineering Education (ASEE) Conference*, June 15-18, 2014, Indianapolis, IN.
10. **Mondisa, J.L.** & McComb, S. A. (2014). Social Community: Understanding Students' Connectedness to Promote Student Success in *Proceedings of the Industrial and Systems Engineering Research Conference (ISERC)*, May 31 – June 3, 2014, Montreal, Canada.
11. **Mondisa, J.L.**, Siddiqui, J., Chua, M., Adams, R. S., Vanasupa, L., & Herter, R. (2013). Lessons Learned from Others' Stories: How Changemakers' Stories Changed Us in *Proceedings of the Annual American Society of Engineering Education (ASEE) Conference*, June 23 – 26, 2013, Atlanta, GA.
12. **Mondisa, J.L.** & Cox, M. F. (2012). The Meyerhoff Scholars Program and STEM Policy: How a Mentoring Intervention Program Relates to STEM Policy in *Proceedings of the University of New Mexico at Albuquerque Mentoring Institute Conference*, October 24 – 26, 2012, Albuquerque, NM.
13. Adams, R.S., **Mondisa, J.L.**, Sambamurthy, N., Chua, M., Denick, D., & Siddiqui, J. (2012, October). Work in progress: In their own words—how “changemakers” talk about change. In *2012 Frontiers in Education Conference Proceedings* (pp. 1-2). IEEE.
14. **Mondisa, J.L.**, Zephirin, T., Purzer, S., Fila, N. D., & Dringenberg, E. (2012, October). Work in progress: A case study of the types and frequencies of conflict in engineering design dyads. In *2012 Frontiers in Education Conference Proceedings* (pp. 1-2). IEEE.

Invited Presentations and Panels

1. **Mondisa, J.L.** “Examining the Experiences of African-American STEM Mentors in Higher Education.” Industrial and Systems Engineering and the Illinois Academy for Excellence in Engineering Education Seminar at University of Illinois at Urbana-Champaign. 3 November 2016.
2. **Mondisa, J.L.** “Mentoring Practices, Insights, and Resources.” Graduate Education Seminar at University of Illinois at Urbana-Champaign. 4 November 2016.
3. **Mondisa, J.L.** “Innovative Opportunities in Industrial Engineering and Engineering Education.” Graduate Education Seminar at University of California at Berkeley, Berkeley, CA. 21 September 2016.
4. **Mondisa, J.L.** “Innovative Opportunities in Industrial Engineering and Engineering Education.” The Industrial Engineering Department at Purdue University, West Lafayette, IN. 15 September 2016.

5. **Mondisa, J.L.** “Resilience, Grit, and Persistence in Engineering.” The Women in Engineering Leadership (WIE Lead) Program at the University of Illinois at Urbana-Champaign virtually from Purdue University, West Lafayette, IN. 15 September 2016.
6. **Mondisa, J.L.** “Graduate Education and Research Opportunities in Engineering and Engineering Education.” National Society of Black Engineering (NSBE) Seminar and the Engineering Education Department Seminar at Virginia Polytechnic Institute and State University, Blacksburg, VA. 8 September 2016.
7. **Mondisa, J.L.**, “Our Experiences in Our Voices: The Undergraduate, Graduate, and Professional Experiences of African-American STEM PhD Mentors” accepted for panel presentation at the Keeping Our Faculty of Color Symposium, University of Minnesota, April 17 –April 19, 2016.
8. **Mondisa, J.L.**, “Navigating After the Maize: The Postdoctoral Experience,” panelist at the Navigating the Maize: A Conference on Strategic Alliances and Partnerships for Institutional Transformation in Graduate Education, University of Michigan, March 18, 2016.
9. **Mondisa, J.L.** “Examining the Experiences of African-American STEM Mentors in Higher Education.” The Illinois Foundry for Innovation in Engineering Education at the University of Illinois at Urbana-Champaign, Urbana, IL. 20 November 2015.
10. **Mondisa, J.L.** “STEM Explore Curriculum: Earthquakes.” The Education Discovery Forum at the Shreveport Convention Center, Shreveport, LA. 14-18 July 2014.
11. **Mondisa, J.L.** “Reflections on the Merit Scholars Workshop Program: The Role of Social Community in Increasing the Retention of African-American STEM Undergraduates.” The Urban Education Institute at North Carolina A&T University, Greensboro, NC. 8 March 2013.

Posters

1. **Mondisa, J.L.** & Mitchneck, B., “Examining the Award Composition of an NSF Program: A Portfolio Analysis of the ADVANCE Program” accepted for presentation at the American Association for the Advancement of Science (AAAS) Annual Meeting, Chicago, IL, February 13-February 17, 2014.
2. **Mondisa, J.L.** & McComb, S. A. “Differences in the Perceptions of Social Community by Engineering Undergraduate and Graduate Students” accepted for presentation at The American Association for the Advancement of Science (AAAS) Emerging Researchers National Conference, February 28 - March 2, 2013. (**Awarded 1st place for graduate poster presentation in the social and behavioral sciences category.**)

Grants

Funded

1. **Open Meadows Foundation, the No Longer Forgotten Network, Homewood, IL,** 11/01/16-11/01/17. *Empowering Young Girls’ Self-Perceptions through Storytelling: A Publication and Pilot of a Graphic Book*, PI, Funding: \$650.

Pending

1. **National Science Foundation, NSF 16-571 OISE Partnerships for International Research and Education (PIRE), University of Michigan, Ann Arbor, MI,** 09/01/17-08/31/22. *Robust, Risk-Informed Climate Adaptation Framework for Coupled Human-Natural Systems*, co-PI, Funding: \$4,000,000.
2. **National Science Foundation, NSF 15-585 DUE Improving Undergraduate STEM Education (IUSE), University of Michigan, Ann Arbor, MI,** 09/01/17-08/31/20. *Examining Social Community Within and Across Institutions’ Mentoring Programs*, co-PI, Funding: \$458,307.

J.L. Mondisa

Interview and Film Appearances

- **Interviewee in “Safe Havens: Supporting Women and Minorities Through Mentoring and Merit Programs”**: <http://ise.illinois.edu/newsroom/article/safe-havens>
- **Coordinator in “GADgET Girls: STEM Futures”**, a 2015 documentary about the GADgET girls 2012 summer camp at Triton College, River Grove, IL: <http://www.bivouacfilms.com/>

Fellowships

- **Bilsland Dissertation Fellowship, Purdue University**: a Graduate School fellowship which provides support to an outstanding College of Engineering Ph.D. candidate in the final year of doctoral degree completion. (*Academic year 2014 - 2015*)
- **Ross Graduate Fellowship, Purdue University**: a Graduate School fellowship which provides support to an outstanding first year Ph.D. student. (*Academic year 2011 - 2012*)

Service and Outreach Roles

- **Communications Liaison, Engineering Education Program**, January 2017-Present
- **Panel Reviewer**, Directorate of Education and Human Resources, National Science Foundation Arlington, VA, November 2016.
- **Presenter**, Society of Minority Engineers and Scientists-Graduate Component (SMES-G) Lunch and Lab, University of Michigan, Ann Arbor, MI, November 12, 2016.
- **Reviewer**, *Journal of Engineering Education*, March 2016 – Present
- **Reviewer**, *IEEE Transactions on Education*, January 2016 – Present
- **President and co-founder**, No Longer Forgotten Network, 501c3 non-profit organization, 08/06–Present
- **Reviewer**, *Frontiers in Education (FIE) Conference, Engineering Education Division*, October 12-15, 2016, Erie, PA.
- **Convener**, NextProf Preparing Future Faculty Workshop, University of Michigan, Ann Arbor, MI, September 29, 2016.
- **Reviewer**, *Annual Industrial and Systems Engineering Research (ISERC) Conference*, Engineering Education Research Track, May 21-24, 2016, Anaheim, CA.
- **Reviewer**, Minorities in Engineering Division, *Annual American Society of Engineering Education (ASEE) Conference, Minorities in Engineering Division*, June 26-29, 2016, New Orleans, LA.
- **Presenter**, Martin Luther King Jr. Sr. High School, the University of Michigan’s Center for Educational Outreach Wolverine Express Program, Detroit, MI, October 29, 2015.
- **Volunteer**, American Association of University Women (AAUW) Tech Savvy STEM Conference for Girls, Triton College, River Grove, IL, March 21, 2015.
- **Reviewer**, Minorities in Engineering Division, *Annual American Society of Engineering Education (ASEE) Conference, Minorities in Engineering Division*, June 14 – 17, 2015, Seattle, WA.
- **Reviewer and Moderator**, *Annual American Society of Engineering Education (ASEE) Conference, Minorities in Engineering Division*, June 15-18, 2014, Indianapolis, IN.

References

Robin Adams, PhD
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Professor, Nursing & Industrial Engineering
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