CURRICULUM VITAE

JACOB MOORE, PH.D.

Assistant Professor
Penn State Mont Alto
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CURRENT POSITION:

Assistant Professor of Engineering (January 2014 –Present)

Engineering Technology and Commonwealth Engineering Department
Penn State Mont Alto Campus
Research Interests:

- Engineering Education with a focus on digital textbooks
- Additive manufacturing technology.

Courses Taught:

- Introduction to Engineering Design
- Statics
- Dynamics
- Strengths of Materials
- Thermodynamics

Other Responsibilities:

- Faculty Advisor for the Engineering Club (August 2013 – Present)
- Shop Supervisor for the Engineering Lab (August 2013 – Present)
- Member of the Academic Festival (August 2013 – Present), Faculty Affairs Committee (August 2014-Present), and Information Technology (August 2013 – May 2014) Committees

EDUCATION:

PhD, Engineering Education, Virginia Polytechnic Institute (2013)

Dissertation Title: Promoting Conceptual Understanding via Adaptive Concept Maps
Advisor: Dr. Christopher Williams
Notable Coursework: Educational Research Methods, Student and Program Assessment, Curriculum Design, Instructional Technology

MEng, Mechanical Engineering, Virginia Polytechnic Institute (2012)

Master's Project Title: Fatigue Characterization of 3D Printed Elastomer Material
Advisor: Dr. Christopher Williams
Notable Coursework: Advanced Modern Control Systems, Robotics, Instrumentation, Additive Manufacturing

BS, Mechanical Engineering, Rensselaer Polytechnic Institute (2008)

Notable Coursework: Mechatronics, Advanced Dynamics, Advanced Manufacturing

PREVIOUS EXPERIENCE:

Instructor in Engineering (August 2013 –December 2013)

Engineering Technology and Commonwealth Engineering Department
Penn State Mont Alto Campus
Courses Taught:

- Introduction to Engineering Design
- Engineering Statics

Graduate Research Assistant, Virginia Tech

May 2011 – July 2013
Project Title: Promoting Conceptual Understanding via Adaptive Concept Maps

Graduate Teaching Assistant, Explorations in Engineering Design Workshop Instructor, Virginia Tech

Spring Semester 2011
Subjects covered: computer-aided design and engineering drawing, programming in MATLAB, engineering design

Graduate Teaching Assistant, Engineering Exploration Workshop Instructor, Virginia Tech

Fall Semester 2008, Spring and Fall Semesters 2009, Fall Semester 2010
Workshop Co-Coordinator Spring and Fall Semesters 2009, Fall Semester 2010
Subjects covered: introduction to engineering specializations, data collection and analysis, engineering problem-solving process, engineering design, electronics, programming in LabVIEW

Graduate Research Assistant, Virginia Tech

January – August 2010
Project Title: A Mixed-Methods Study of the Effects of First-Year Pedagogies on the Retention and Career Plans of Women in Engineering

Graduate Research Assistant, Virginia Tech

May – August 2009
Project Title: Integrating Art and Engineering through Additive Manufacturing

Teaching Assistant, Principals of Engineering Design, Johns Hopkins Center for Talented Youth

June – August 2007, June – August 2008

Engineering Intern, Consumer Electronics Association

May – August 2006, December – January 2006, May – June 2007
Project Title: Power Draw of Common Consumer Electronics

AWARDS AND AFFILIATIONS:

Awards:

Penn State Mont Alto Faculty Scholar Award (2016)

Honors a member of the faculty who had the most outstanding (academic) year in terms of research and creative accomplishments at the Penn State Mont Alto campus.

3rd Place Best Paper Award for the ASEE New Engineering Educators Division (2015)

Recognizing the 3rd best paper submitted to the New Engineering Educators Division at the National American Society for Engineering Education Conference. Awarded for the paper " New Faculty Experiences with Mastery Grading".

U.S. Renaissance in Advanced Manufacturing Symposium Scholarship Recipient (2012)

Recognizing students who show promise in advanced manufacturing. Awarded for excellence in advanced manufacturing work in Virginia Tech DREAMS Lab, by Symposium sponsors.

XCaliber Award (2012)

Recognizing excellence in technology-assisted instruction. Awarded for work with developing tactile models for a visually impaired student, by the Office of the Provost at Virginia Tech.

Excellence in Access and Inclusion Award (2012)

Recognizing those whose work goes above and beyond policy compliance in making the university more accessible to students, faculty, and the community. Awarded for work with developing tactile models for a visually impaired student, by the Services for Students with Disabilities Office and the Office of Diversity and Inclusion at Virginia Tech.

Best Poster at 2011 IDR Interdisciplinary Research Symposium at Virginia Tech

Recognizing the best graduate student research poster at the IDR Symposium. Awarded for research poster titled, "Visualizations for the Visually Impaired," by Iota Delta Rho (the Interdisciplinary Research Honor Society).

Graduate Student Teaching Excellence Award (2011)

Recognizing excellence in graduate student teaching across all colleges and departments in the university. Awarded for work as workshop co-coordinator of ENGE 1024 (Engineering Exploration), by the Graduate School at Virginia Tech.

Affiliations:

American Society of Mechanical Engineers

Member since 2011

American Society of Engineering Educators

Member since 2008
One of the founding members of the student chapter at Virginia Tech in 2009
Information Resources Officer for the student chapter Fall 2010 – Spring 2011

Tau Beta Pi – Engineering Honor Society
Inducted May 2007

PUBLICATIONS:

Journal Papers:

Moore, J., Williams, C. (2015). "Fatigue Properties of Parts Printed by PolyJet Material Jetting" Rapid Prototyping Journal **21** (6)

Moore, J., Williams, C., North C., Johri, A., Paretti, M. (2015). "Effectiveness of Adaptive Concept Maps for Promoting Conceptual Understanding: Findings from a Design-Based Case Study of a Learner-Centered Tool" Advances in Engineering Education ASEE **4** (4)

Conference Papers:

Moore, J., Ranalli, J. (2015) "A Mastery Learning Approach to Engineering Homework Assignments" Proceedings of the 2015 ASEE Annual Conference and Exposition Seattle, WA, ASEE.

Ranalli, J., **Moore, J.** (2015) New Faculty Experiences with Mastery Grading" Proceedings of the 2015 ASEE Annual Conference and Exposition Seattle, WA, ASEE.

Moore, J. Pascale, M., Williams, C. North, C. (2013) "Translating Educational Theory Into Educational Software: A Case Study of the Adaptive Map Project" Proceedings of the 2013 ASEE Annual Conference Atlanta, GA, ASEE.

Moore, J., Williams, C. North, C. Johri, A. (2013) Promoting Conceptual Understanding in Engineering Statics Through the Use of Adaptive Concept Maps Proceedings of the 2013 ASEE Annual Conference Atlanta, GA, ASEE.

Moore, J., Williams, C. (2012). "Fatigue Characterization of 3D Printed Elastomer Material" Proceedings of the 23rd Annual Solid Freeform Fabrication Symposium. Austin, TX.

Moore, J., Pierce, R., Williams, C. (2012). "Towards an "Adaptive Concept Map": Creating an Expert-Generated Concept Map of an Engineering Statics Curriculum." Proceedings of the 2012 ASEE Annual Conference and Exposition. San Antonio, TX, ASEE.

Moore, J., Williams, C., Paretti, M. (2011). "Using Wikis as a Formative Assessment Tool For Student Engineering Design Teams." Proceedings of the ASME 2011 International Design Engineering Technical Conference & Computers and Information in Engineering Conference. Washington, DC, ASME.

Matusovich, H., Jones, B., Paretti, M., **Moore, J.**, Hunter, D. (2011). "Problem-Based Learning: A Student Perspective on the Role of the Facilitator." Proceedings of the 2011 ASEE Annual Conference and Exposition. Vancouver, BC, Canada, ASEE.

Paretti, M., Jones, B., Matusovich, H., **Moore, J.** (2010). "Work in Progress: A Mixed-Methods Study of the Effects of First-Year Project Pedagogies on the Motivation, Retention, and Career Plans of Women in Engineering". 2010 IEEE Frontiers in Education. Arlington VA, IEEE.

Presentations, Workshops and Posters:

Rocco, S., Chinn, G., **Moore, J.**, Pursel, B. (2016). *Showcase of OER Champions.* Invited Panel Discussion at the 2016 Penn State Open Educational Resources Summit, State College, PA.

Gregg, A., Lang, J, **Moore, J.**, Salem, J. Williams, V. (2016). *Open Educational Resources at Penn State.* Invited Panel Discussion at the 2016 Symposium for Teaching and Learning with Technology, State College, PA.

Moore, J., Young, M. (2016*). Navigating a Sea of Information.* Presentation at the 2016 Symposium for Teaching and Learning with Technology, State College, PA.

Moore, J. (2014). *The Adaptive Map: A Concept Map Based Digital Textbook.* Presentation at the 2014 Symposium for Teaching and Learning with Technology, State College, PA.

Moore, J. (2012). *Using Additive Manufacturing to Create Tactile Instructional Tools for the Visually Impaired.* Poster presented at the 23rd Annual Solid Freeform Fabrication Symposium, Austin, TX.

Moore, J., Williams, C., North, C., Pierce, R. S., Johri, A. (2012). *Promoting Conceptual Understanding via an Adaptive Concept Map.* Poster presented at the 2012 ASEE Annual Conference and Exposition, San Antonio, TX.

Moore, J., Amaya, A., Groves, E., Williams, C. (2012). *Using Additive Manufacturing Technologies as an Instructional Tool for the Blind and Visually Impaired.* Poster presented at the 2012 Conference on Higher Education Pedagogy, Blacksburg, VA.

Moore, J., Williams, C. (2012). *Adaptive Concept Maps as a Way to Promote Conceptual Understanding in Digital Textbooks.* Poster presented at the 2012 Conference on Higher Education Pedagogy, Blacksburg, VA.

Amaya, A., **Moore, J.**, Groves, E., Williams, C. (2011.) *Visualizations for the Visually Impaired.* Poster presented at the 1st Virginia Tech Interdisciplinary Research Symposium, Blacksburg, VA.

Moore, J. (2011). *The Textbook in a Digital Age.* Poster presented at the 2011 Conference on Higher Education Pedagogy, Blacksburg, VA.