Martha Makowski

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| Department of MathematicsUniversity of AlabamaTuscaloosa, AL 35487 | Email: mbmakowski@ua.edu |

**Academic Employment**

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| *Assistant Professor* | University of Alabama, Tuscaloosa, ALDepartment of MathematicsAugust 2017-present  |
| *Research Assistant* | University of Illinois at Urbana-Champaign, Urbana, ILDepartment of Curriculum & InstructionAugust 2012-August 2017  |
| *Full-time Faculty* | Kankakee Community CollegeMath, Science and Engineering Division August 2008-August 2012  |

**Education**

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| *Ph.D.* | Curriculum & InstructionUniversity of Illinois at Urbana-Champaign, Urbana, ILDepartment of Curriculum & InstructionAugust 2017*Advisor*: Sarah Lubienski *Areas of Specialization*: Mathematics curriculum and instruction; elementary mathematics teacher preparation; community college students; developmental mathematics; large-scale data analyses; quantitative and mixed research methods  |
| *M.S.* | Teaching of Mathematics University of Illinois at Urbana-Champaign, Urbana, ILDepartment of MathematicsMay 2007  |
| *B.S.* | MathematicsGrinnell College, Grinnell, IADepartment of MathematicsMay 2004 |

**Publications**

*Published*

*Accepted for publication while at The University of Alabama*

Ganley, C. M., George-Jackson, C. E., Robinson-Cimpian, J. P., & Makowski, M. B. (in press). Gender equity in college majors: Looking beyond the STEM/non-STEM dichotomy for answers regarding female participation. *American Educational Research Journal.*

Makowski, M. B., Leckrone, L., & Williams, D. (in press). Consuming, Participating and Conducting Research in Community College Classrooms. *MathAMATYC Educator.*

*Accepted for and published prior to employment at The University of Alabama*

Robinson-Cimpian, J. P., Thompson, K., & Makowski, M. B. (2017). Evaluating English learner reclassification policy effects across districts. *American Educational Research Journal, 54*(1S), 255S-278S.

Miller, E., Makowski, M. B. Copur-Gencturk, Y., & Lubienski S. T. (2017). Large-scale data, larger possibilities: A review of *Large-Scale Studies in Mathematics Education. Journal for Research in Mathematics Education, 48*(2), 224-228*.*

Cimpian, J. R., Lubienski, S. T., Timmer, J. D., Makowski, M. B., & Miller, E. K. (2016). Have gender gaps in math closed? Achievement, teacher perceptions, and learning behaviors across two ECLS-K cohorts. *AERA Open, 2*(4), 1-19.

*Under Review*

Lubienski, S., Ganley, C., Makowski, M., Miller, E., Timmer, J. (under review). “Bold Problem Solving”: A New Construct for Understanding Sex Differences in Math Problem-Solving Performance.

*In Preparation*

Makowski, M. B. (in preparation). Convergent and divergent student experiences in a problem-based developmental mathematics class.

Makowski, M. B., & Lubienski, S. (in preparation). Using quantitative diagrams to explore interactions in a group work and problem-centered developmental mathematics class.

Makowski, M. B. (in preparation). Contrasting the justifications of pre-service teachers’ written and oral mathematical arguments.

Makowski, M. B., Geroge, C., & Congleton, R. (in preparation). Underrepresented students succeeding in math: The challenges and coping strategies of mathematically talented post-secondary students.

Makowski, M. B. (in preparation). The academic and career aspirations of mathematically talented women: Diversity is key.

*Published Reports*

Makowski, M.B. (2014). [Gender and the National Alliance for Doctoral Study in the Mathematical Sciences: The changing academic and career aspirations of Alliance students (Report No. 6)](http://education.illinois.edu/docs/default-source/stem-alliance-documents/mars_brief_gendered_aspriations.pdf). Champaign, IL: Math Alliance Research Study.

Makowski, M.B., Dobson, L., Rincon, B., & George-Jackson, C. (2014). [Descriptive statistics and initial findings from the student survey (Report No. 5)](http://education.illinois.edu/docs/default-source/stem-alliance-documents/Alliance_Student_Survey_Brief.pdf). Champaign, IL: Math Alliance Research Study.

Makowski, M.B. (2013). [Evaluation vs. educational research(Report No. 1)](http://education.illinois.edu/docs/default-source/stem-alliance-documents/Alliance_EducationvsResearch.pdf). Champaign, IL: Math Alliance Research Study.

**Presentations**

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| Lubienski, S. T., Miller, E. K., & Makowski, M. (2018, April). *“Bold problem solving”: A new construct for gender equity research.* Paper to be presented at the research session of the annual meeting of the National Council of Teachers of Mathematics, Washington, D.C.Makowski, M. B., & Lubienski, S. T. (2018, April). *Using quantitative diagrams to examine curriculum enactment in a developmental mathematics classroom.* Poster to be presented at the annual meeting of the American Educational Research Association, New York, NY.Makowski, M. B., & Miller, E. K. (2018, April). *Observing “bold problem-solving” behaviors in high-achieving boys and girls: Findings, issues, and reflections*. Paper to be presented at the annual meeting of the American Educational Research Association, New York, NY.Makowski, M. B. & Lubienski, S. T. (2018, February). *Using quantitative diagrams to explore interactions in a group work and problem-centered developmental mathematics class*. Paper presented at the annual meeting of the group for Research in Undergraduate Mathematics Education, San Diego, CA.Makowski, M. B. (2018, February). *Convergent and divergent student experiences in a problem-based developmental mathematics class*. Paper presented at the annual meeting of the group for Research in Undergraduate Mathematics Education, San Diego, CA.Makowski, M. (2017, April). *Changing student attitudes in a problem centered developmental math class.* Paper presented at the research session of the annual meeting of the National Council of Teachers of Mathematics, San Antonio, TX.Lubienski, S. T., Miller, E. K., Makowski, M., & Timmer, J. (2017, April). *Spatial skills, problem solving approaches and gender gaps in middle school.* Paper presented at the research session of the annual meeting of the National Council of Teachers of Mathematics, San Antonio, TX.Makowski, M., & Congleton, R. (2017, February). *Underrepresented students succeeding in math: The challenges and coping strategies of mathematically talented post-secondary students.* Paper presented at the annual meeting of the group for Research in Undergraduate Mathematics Education, San Diego, CA.Makowski, M. (2017, February). *Outcomes beyond success in a problem centered developmental mathematics class.* Paper presented at the annual meeting of the group for Research in Undergraduate Mathematics Education, San Diego, CA.Makowski, M. (2017, January). *Learning for or through problems?: Exploring differentiating experiences in a problem-centered developmental math class.* Paper presented at the annual Joint Mathematics Meetings of the American Mathematics Association and Mathematical Association of America, Atlanta, GA.Makowski, M. (2016, October). *High school math in college: Trends and approaches.* 2016 Illinois Council of Teachers of Mathematics annual conference, Peoria, IL. Makowski, M. (2016, February). *Student experiences in a problem-solving-based developmental mathematics class.* Poster presented at the annual meeting of the group for Research in Undergraduate Mathematics Education, Pittsburgh, PA.Makowski, M. (2015, November). *Student experiences in a problem solving based developmental mathematics class*. Paper presented at the annual meeting of the American Mathematical Association of Two-Year Colleges, New Orleans, LA.Makowski, M., & Wilding-Martin, E. (2015, November). *Outcomes from Mathematical Literacy: Do attitudes about math change?,* 2015 American Mathematical Association of Two-Year Colleges annual meeting, New Orleans, LA.Makowski, M. (2015, April). *Taking high school level math in college: Issues, trends, and novel approaches*, MSTE Friday Lunch Series (invited), Champaign, IL.Makowski, M. (2014, April). *Argument components, justification types, and accuracy of pre-service teachers’ mathematical arguments over time*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.Robinson-Cimpian, J.P., Ganley, C.M., George-Jackson, C.E., Makowski, M.B. (2014, April). *Gender equity in college majors: Looking beyond the STEM/non-STEM dichotomy for answers regarding female participation*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.Makowski, M. (November 12, 2009). *“Explain your reasoning”: Assessing through writing*. 2009 American Mathematical Association of Two-Year Colleges annual meeting, Las Vegas, NV. |

**Grants**

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| $1,500…. | College Academy of Research, Scholarship, and Creative Activity (CARSCA)University of Alabama College of Arts and Sciences*Understanding Students’ Math Course Perceptions and Withdraw Patterns at a Large University* (CARSCA #255)December 2017-January 2019  |

**Teaching Experience**

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| *Tenure-track faculty*….*Course Instructor* | University of AlabamaDepartment of Mathematics*Courses taught*:  Math 403: Advanced Math Connections and Development Math 405: Geometry for Teachers (Spring 2018) Math 355: Theory of Probability (Spring 2018) …. University of Illinois at Urbana-ChampaignDepartment of Curriculum & Instruction*Course taught*: Investigative Approach to Elementary Mathematics InstructionFall 2013, 2014, & 2015; Spring 2016   |
| *Full-time Faculty* | Kankakee Community CollegeMath, Science and Engineering Division *Courses taught*: Pre-algebra II; Beginning Algebra; Intermediate Algebra; College Algebra; Trigonometry; Contemporary Mathematics; Math for Elementary Teachers I & II; Calculus IAugust 2008-August 2012 |

**Service**

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| *Search committee**Graduate College Fellowship Board Executive Committee**Instructional Assistant**Reviewer**College Readiness and Placement Grant*  | Non-tenure Contract Renewable Faculty PositionDepartment of MathematicsUniversity of AlabamaFall 2017Graduate Student Representative (invited)University of Illinois at Urbana-Champaign2016-2017 academic year*Using Large-Scale Data to Study Student Mathematics Education and Outcomes*Washington, D.C.American Educational Research Association Institute on Statistical Analysis For Education Policy, May 2016*AERA Annual Conference*2016, 2018 conference cycles*RUME Annual Conference*2018 conference cycle*International Journal of Science and Mathematics Education*Faculty Liaison Kankakee Community CollegeJanuary 2009-May 2012KCC received funding to implement interventions for high school juniors at risk of not being college ready. Participating faculty served as the primary contacts and mentors for local high school administrators and teachers.   |
| *Assessment Committee* | Kankakee Community CollegeAugust 2011-May 2012 |

**Fellowships & Awards**

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| *Scott Dissertation Completion Fellowship*, 2016-2017 school yearGraduate CollegeUniversity of Illinois at Urbana-Champaign University-level fellowship granted through a campus wide competition. Includes a stipend and full tuition waiver.*Hardie Dissertation Award*, April 2015College of EducationUniversity of Illinois at Urbana-Champaign*Hardie Conference Travel Award*, April 2014University of Illinois at Urbana-Champaign *State Farm Companies Foundation Doctoral Scholarship Award*, August 2013University of Illinois at Urbana-Champaign |

**National Workshops & Mentoring Programs**

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| *Mentoring and Partnerships for Women in RUME*Special Interest Group of the American Mathematical Association on Research in Undergraduate Mathematics EducationFebruary 2015 & 2016NSF-funded seminar for women conducting research on undergraduate mathematics education.*Measures of Effective Teaching Longitudinal Database: A Review of the MET Project and Available Data*ICPSR Summer Program in Quantitative Methods of Social ScienceJune 2014, Ann Arbor, MI*Mathematical Knowledge for Teaching*Instrument trainingApril 2013, San Francisco, CA*Project ACCCESS*American Mathematical Association of Two-Year CollegesAugust 2009-November 2010Mentoring program designed to help new faculty become effective teachers and active members of the mathematics teaching community |

**Professional Organizations**

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| *American Educational Research Association* *American Mathematical Association of Two-Year Colleges* *American Mathematical Society* *National Council of Teachers of Mathematics*  |