Curriculum Vitae

Kyunghee Moon
University of West Georgia
1601 Maple St, Carrollton, GA 30018
(678) 789-4151 (Office)

Academic History

Ph D in Mathematics Education, Sep. 2013, University of California, Santa Barbara, CA (Advisor: Dr. Mary E. Brenner)

MA in Mathematics Education, Sep. 2010, University of California, Santa Barbara, CA

Ph D in Mathematics, Aug. 1996, University of Southern California, Los Angeles, CA (Advisor: The late Dr. Dennis Estes)

MS in Mathematics, Feb.1987, Chungnam National University, Taejon, S. Korea

BS in Mathematics with **teaching credential in secondary education**, Feb. 1985, Chungnam National University, Taejon, S. Korea

Employment

Assistant Professor (2011-Current), Department of Mathematics, University of West Georgia, GA

Math 1413: Survey of Calculus
Math 2008: Foundations of Numbers and Operations for P-8 Teachers
Math 3703: Geometry for P-8 Teachers
Math 3803: Algebra for P-8 Teachers
Math 4713: Probability and Statistics for P-8 Teachers

Project Leader/Math Coach (2010 – 2011)

Worked as the project leader for a professional partnership program between UCSB and Harding Elementary School and Cleveland Elementary School in Santa Barbara School District. The program provided ongoing supports to in-service elementary teachers to deepen their mathematical understanding for teaching and to adopt/implement an inquiry, reform based mathematics curriculum. Duties included leading workshops for teachers, coteaching, and providing assistance to teachers in planning, designing and implementing instruction.

Instructor (2010-2011), University of California, Santa Barbara, CA
Ed 3A: California Teach I-Mathematics
Ed 122: Practicum Field Observation in School Setting
Math 100A: Mathematics for Elementary Teaching

Graduate Researcher (2008-2011), University of California, Santa Barbara, CA
Worked with Bill Jacob on a NSF CCLI-grant and Educational Advancement Foundation grants. Duties included:

1) Assisting in designing, developing, implementing, and researching inquiry based mathematics curriculum for prospective secondary mathematics teachers
2) Assisting in preparing professional development for in-service and pre-service elementary teachers
3) Assisting in designing and preparing for a summer school program for socially and economically disadvantaged elementary students in Santa Barbara School District
4) Assisting in writing grants

Instructor (2008-2009), Santa Barbara City College, Santa Barbara, CA
Math 130: Calculus for biological sciences, social sciences, and business
Math 107: Intermediate Algebra

Director/Teacher, Dr. Moon's Educational Center, San Jose, CA (1999- 2007)
Duties included teaching school subjects (Algebra I & II, Geometry, Trigonometry, Precalculus, and Calculus) as well as SAT Mathematics; recruiting/overseeing teachers; and counseling students/parents for academic progresses and college admissions

Postdoctoral Fellow (1997), Korea Institute of Science and Technology, S. Korea
Number Theory

Instructor (1996-1997), Chungnam National University, S. Korea
Linear Algebra
Calculus
Real Analysis

Teaching Assistant (1991-1996**),** University of Southern California, CA
Abstract algebra
History of Mathematics
Calculus I, II

Other Experiences

IBL Workshop Planning Member (2014 - **)**

Serve as a planning member for the project, "Evaluation, assessment, and implementation of inquiry based learning in mathematics instruction project" (PI: Ron Douglas), that is funded by the Sloan Foundation and the Educational Advancement Foundation.

Reviewer (2011-)

Serve as a manuscripts reviewer for *Mathematical Thinking and Learning* (2013-Current) and a conference proposal reviewer for PME-NA (2012 & 2013) and AMTE (2011 & 2013).

PACT (Performance Assessment for California Teachers) Scorer (2010)

Served as a scorer for PACT, which is a requirement for a teaching credential in many teacher education programs in California.

IBL Mathematics Evaluator (2008)

Evaluated UCSB IBL (Inquiry Based Learning) courses for a project by Ethnography & Evaluation Research Center at the University of Colorado.

Publications (Published)

Moon, K. (2014). Preservice secondary teachers' understanding of the Cartesian Connection and equivalence. In T. Fukawa-Connolly, G. Karakok, K. Keene, & M. Zandieh (Eds.), *Proceedings of the 17th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 916-925), Denver, Colorado.

Moon, K., Brenner, M. E., Jacob, B., & Okamoto, Y. (2013). Prospective secondary mathematics teachers' understanding and cognitive difficulties in making connections among representations. *Mathematical Thinking and Learning, 15*(3), 201-227.

Moon, K., Brenner, M. E., Jacob, B., & Okamoto, Y. (2012). Cognitive obstacles and mathematical ideas related to making connections among representations**.** In L. R. Van Zoest et al. (Eds.), *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 645-651), Kalamazoo, MI.

Hough, S., Jacob, B., **Moon, K.,** Guzman, M., & Lager. C (2010). Measuring the differences in prospective elementary teachers' and secondary teachers' early pedagogical content knowledge using video cases. In C. Crawford et al. (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2010* (pp. 3456-3467). Chesapeake, VA: AACE.

Estes, D., & **Moon, K**. (1998). Form class groups over number fields. *Proceedings of International Conference on Integral quadratic forms and lattices,* AMS Providence, Seoul, S. Korea.

Publications (In preparation)

Moon, K. (In preparation). Analyzing teachers' mathematical knowledge for teaching with the lens of big ideas.

Moon, K. & Jacob, B. (In preparation). Function as covariation and correspondence: Developing mathematical knowledge for teaching in prospective secondary teachers.

Dissertations

Moon, K. (2013). *Preservice secondary teachers' development of mathematical knowledge for teaching and their use of knowledge in their instruction* (Ph. D. dissertation under Dr. Mary E. Brenner).

Moon, K. (1996). *Gauss class groups* (Ph.D. dissertation under the late Dr. Dennis Estes).

Presentations

Moon, K. (2014). Preservice secondary teachers' understanding of the Cartesian Connection and equivalence. *The 16th Annual Conference on Research in Undergraduate Mathematics Education*, Denver, CO.

Moon, K., Brenner, M. E., Jacob, B., & Okamoto, Y. (2012). Cognitive obstacles and mathematical ideas related to making connections among representations**.** *The 34th Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Kalamazoo, MI.

Moon, K. (2012). Prospective secondary mathematics teachers' mathematical ideas and cognitive difficulties in relation to making connections among representations. *MAA PREP IBL Workshop*, Santa Barbara, CA.

Moon, K. (2011). Are models tools for understanding or algorithms to memorize? *Association of Mathematics Teacher Educators (AMTE) Conference*, Irvine, CA.

Hough, S., Jacob, B., **Moon, K.,** Guzman, M., & Lager. C (2010). Measuring the differences in prospective elementary teachers' and secondary teachers' early pedagogical content knowledge using video cases. The *Society for Information Technology & Teacher Education International Conference*, San Diego, CA.

Moon, K. (2008). STEM undergraduates' conceptual understanding of division and part-whole relation. *California Mathematics Council North Conference,* Asilomar, CA.

Jacob, B., Lager, C., & **Moon, K**. (2008). NSF course, curriculum and laboratory improvement (CCLI) grant. *Educational Advancement Foundation Conference*, Austin, TX.

Moon, K. (1997). On class groups. *Korean Mathematical Association Conference*, Seoul, S. Korea.

Moon, K. (1996). Class groups in number theory. *Chungchung Mathematical Association Conference*, Taejon, S. Korea.

Grant (Awarded)

Moon, K. (PI, 2014-2015). *Unraveling Big Ideas Associated with Difficulties in Connecting Representations*. Spencer Foundation Small Grants ($12550).

Professional Membership

NCTM
AMTE
MAA
SIGMAA-RUME
PME-NA