Christine Browning is interested in developing mathematics curricula for pre-service elementary/middle school teachers that a) incorporates artifacts of children’s thinking and b) makes appropriate use of digital tools that extend the walls of the mathematics classroom and engage preservice teachers with mathematics teaching and learning. Other research interests include digital tools, mathematical and statistical content knowledge for K-8 teaching, and technology, pedagogy, and content knowledge (TPACK).

Jon Davis’s research interests revolve around three foci: mathematical action technologies, curricular resources, and reasoning-and-proving (RP). Davis has examined the nature of RP and computer algebra systems use in high school reform-oriented and commercially developed textbooks. He is a co-PI on a National Science Foundation grant investigating how middle school mathematics teachers use curricular resources to realize Common Core Content and Mathematical Practice standards.

Theresa Grant’s current work is focused on teacher thinking and learning in the area of number and operation, and the design and implementation of curriculum for prospective elementary teachers, as well as support materials for instructors. This is informed by earlier work designing and providing professional development for elementary school teachers implementing reform mathematics curriculum, and researching the impact of these experiences on teachers’ changing thinking and practice.

Christian Hirsch’s work focuses on design, development, and research on the efficacy of problem-based, inquiry-oriented, and technology-rich integrated high school mathematics curricula. A secondary research focus is on the role of innovative curriculum materials as a context for teacher learning. Current National Science Foundation funding is supporting the design, development, and evaluation of Transition to College Mathematics and Statistics, a fourth-year capstone course for students intending to pursue undergraduate programs that do not require calculus.

Ok-Kyeong Kim’s current research centers on the role of teacher and curriculum in mathematics instruction and the relationships among teacher, curriculum, and instruction. Particularly, she is interested in the knowledge and capacity teachers need to use curricular recourses effectively to teach mathematics, and curricular support for mathematics teaching and learning. She is also interested in the development and use of mathematical thinking in school and non-school settings.
**Kate Kline** is working on characterizing the types of arguments elementary school students construct to support their solutions and ideas as well as identifying when they, their classmates, and teachers are convinced by those arguments. This coincides with analyzing what it is teachers need to know in order to effectively engage with children’s thinking along with the challenges they face in encouraging children to develop sound mathematical arguments.

**Jane-Jane Lo**’s research focuses on mathematics learning, specifically, in three main areas: the mathematical preparation of elementary school teachers, rational number concepts, and student engagement. Her long-term research goal is to utilize both technological and non-technological tools to support all learners to develop the deep understanding of rational number concepts, both in numerical and geometrical contexts, necessary for fulfilling their college and career aspirations.

**Tabitha Mingus** is interested in the teaching and learning in undergraduate mathematics courses, specifically linear algebra, discrete mathematics, and abstract algebra. Her research focuses on the mathematical content preparation of in-service and pre-service secondary school mathematics teachers and how the use of technology and constructivist pedagogy in the university classroom affects teachers’ mathematical understanding. As part of that research, Mingus is also investigating the role of proof as a learning and communication tool in advanced undergraduate mathematics courses.

**Laura Van Zoest**’s research focuses on the preparation and development of mathematics teachers, specifically at the secondary level. Lines of research have included investigating the effect of reform curriculum materials on teacher development, the use of practice-based materials in university methods courses, and the cultivation of productive norms in teacher education. Her current National Science Foundation-funded work involves developing a theory of productive use of student mathematical thinking.

**Steven Ziebarth**’s main research interests focus broadly on the areas of assessment and evaluation with particular interest at the secondary level. Ziebarth has served as an internal and external evaluator on numerous NSF and state-funded curriculum and professional development projects, most of which have been multi-year efforts and used a wide array of research tools and techniques. He is also completing work as project director on an interdisciplinary NSF-funded capacity-building grant for doctoral students with research interests focused on assessment for learning.