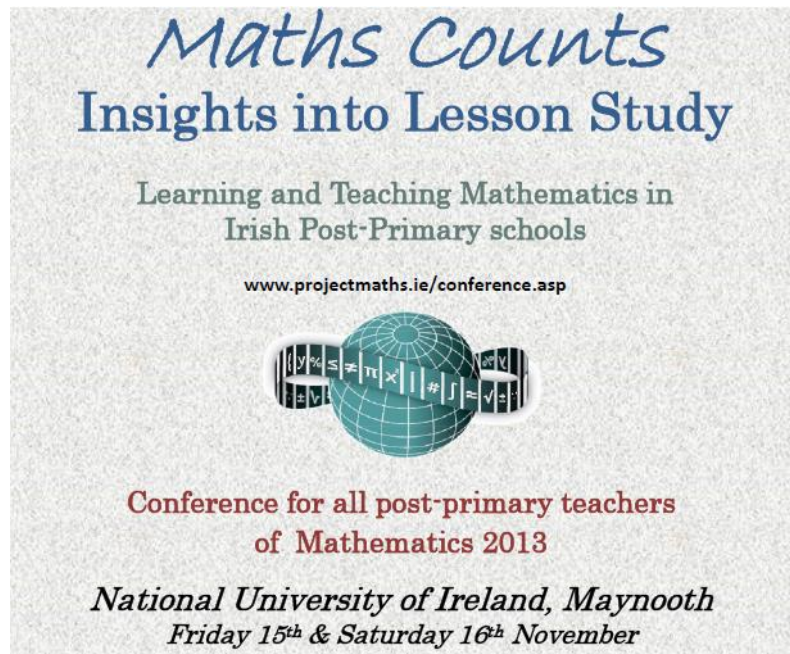
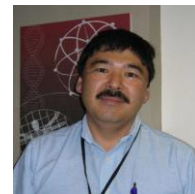




Keynote Speaker: Professor Tad Watanabe



Keynote Address - Hand in Hand: Lesson Study and Problem Solving

Tad Watanabe is a professor of mathematics education at Kennesaw State University, Georgia, USA. He received his master's degree in mathematics from Purdue University, Indiana, USA, and Ph. D. in mathematics education from Florida State University, USA.

He has published several research articles on Japanese Lesson Study and the teaching and learning of mathematics.

Originally from Japan, Tad was always interested in their education practices in mathematics. In particular, he was interested in Japanese teachers' use of problem solving to teach mathematics and how they developed their teaching proficiency through Lesson Study.

In 2000, Tad spent 7 months in Japan visiting more than 50 schools and attending Lesson Study meetings throughout Japan. Upon his return to the United States, he worked with many Lesson Study groups across USA, including Chicago Lesson Study Group, Rochester (NY) Lesson Study Group, and Volusia County (Florida) Lesson Study Group, serving different roles such as a knowledgeable other, final commentator, and invited lecturer.

He was a member of an advisory panel of a National Science Foundation funded project by EDC and Resources for Supporting Lesson Study in Mathematics, which focused on Lesson Study at High Schools.

He also served as an outside consultant to the project, Important Mathematics and Powerful Pedagogy: Deepening Teacher Content Knowledge and Using Lesson Study to Effectively implement Iowa's High School Mathematics Initiatives.

He is currently involved in a project that is promoting the Japanese style problem solving teaching model among US teachers.

His publications and presentations from his analysis of Japanese curriculum materials include the use of different visualization models as students' thinking tools and how Japanese lower secondary curriculum approaches the teaching of proofs.

Selected Publications

Challenges and promises of uncharted water: Lesson study and institutes of higher education. In L. C. Hart, A. Alston, & A. Murata (Eds.), *Learning together: Lesson-study research and practice in mathematics education*, 175-178. Dordrecht: Springer. 2011

Problem centered learning in the Land of the Rising Sun. In A. Reynolds (Ed.), *Problem-centered learning in mathematics*, 200-209. 2010

Supporting focused and cohesive curricula through visual representations: An example from Japanese textbooks. In B. Reys & R. Reys (Eds.), *Mathematics Curriculum: Issues, Trends, and Future Directions NCTM Seventy-second Yearbook*, 131 - 144. (With A. Takahashi and M. Yoshida) 2010

Kyozaikenkyu: A critical step for conducting effective lesson study and beyond. In F. Arbaugh & P. M. Taylor (Eds.), *Inquiry into Mathematics Teacher Education*. Association of Mathematics Teacher Educators (AMTE) Monograph Series, Volume 5, 131 - 142. (With A. Takahashi & M. Yoshida) 2008

Initial treatment of fractions in Japanese textbooks. *Focus on Learning Problems in Mathematics*, 29 (2), 41-60. 2007 The role of knowledgeable others. In P. Wang-Iverson & M. Yoshida (Eds.) *Building Our Understanding of Lesson Study*, pp. 85-91. Philadelphia, PA: Research for Better Schools. (With P. Wang-Iverson) 2005

Learning from Japanese Lesson Study. *Educational Leadership*, 59, 36-39. 2002

Japanese high school entrance examination. *Mathematics Teacher*, 93, 30-35. 2000

Developing ratio and proportion schemes: A story of a fifth grader. *Journal for Research in Mathematics Education*, 28, 216-236. (With J. Lo.) 1996 Morgan's Theorem. *Mathematics Teacher*, 89, 420-423. (With R. Hanson and F. Nowosielski) 1995

Selected Presentations

Challenges and opportunities for teaching and learning of proofs. National Council of Teachers of Mathematics, Indianapolis, April 2011.

Making connections among concepts, procedures, representations, and contexts. National Council of Teachers of Mathematics, San Diego, CA, April, 2010.

Pictorial presentation of quantities: Tool for developing procedures with conceptual understanding." National Council of Teachers of Mathematics, Anaheim, CA, April, 2005.

Research Lessons as Professional Development: What Can We Learn from the Japanese Model?"
National Council of Supervisors of Mathematics, Orlando, April 2 - 4, 2001. (With S. Beal & D.
Thompson)