

## HOW WE THINK: A THEORY OF HUMAN DECISION-MAKING WITH A FOCUS ON TEACHING



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**Date:** 5 February, 2013

**Time:** 2.30 pm to 4.00 pm

**Venue:** NIE7-03-16 (Journal Room)

#### Abstract

Is it possible to build a theory that characterizes mathematical problem solving, tutoring, and teaching - and a few other things like cooking and medical diagnosis? That is the focus of this talk. For the past 30 years I have been developing a theory of how people make decisions "in the moment" as they engage in complex activities. Here are the major questions I ask: Suppose a person is engaged in a complex activity, such as teaching. What determines what that person does, on a moment-by-moment basis, as he or she engages in that activity? What resources does the person draw upon, and why? What shapes the choices the person makes? What accounts for the effectiveness (in problem solving, the success or failure) of that person's efforts?

I claim that if you know enough about a teacher's knowledge, goals, and beliefs, you can explain every decision he or she makes, in the midst of teaching. I will give examples, showing what shaped teachers' decision-making, and I will explain the theory. I will also show how these ideas have implications for how to help teachers to become better mathematics teachers.

#### About the speaker:

Alan Schoenfeld holds the Elizabeth and Edward Conner Chair in Education at the University of California, Berkeley. In 2011 the International Commission on Mathematics Instruction awarded Schoenfeld the Felix Klein medal, the highest international distinction in mathematics education. A fellow of the American Association for the Advancement of Science and a laureate of the education honor society Kappa Delta Pi, Dr. Schoenfeld has served as president of the American Educational Research Association and as vice president of the National Academy of Education. He has written, edited or co-edited 22 books and more than 200 articles on mathematical thinking, teaching and learning. Major strands of his work include mathematical problem solving, assessment, and studies of productive mathematics classrooms; he has participated as a lead author for the grades 9-12 of the National Council of Teachers of Mathematics' *Principles and Standards for School Mathematics* and for the mathematics test specifications for the Smarter Balanced Assessment consortium. His most recent book, *How We Think*, provides a theory of decision-making, illustrated with examples of classroom teaching.

**All are Welcome!**

For more information, please contact Dr Jaguthsing Dindyal, at [jaguthsing.dindyal@nie.edu.sg](mailto:jaguthsing.dindyal@nie.edu.sg)