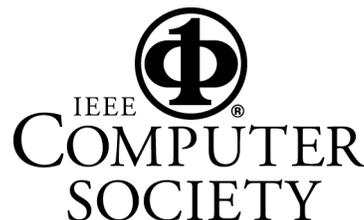


PRINCETON ACM / IEEE-CS CHAPTERS  
SPECIAL APRIL 2016 JOINT MEETING



## Mastering Dots and Boxes: Child's Play? Maybe Not!

The familiar pencil-and-paper game “Dots and Boxes” hides astounding strategic complexity when played on grids larger than a handful of boxes. At this special event, celebrating the Claude Shannon Centenary, we will get some explanations of how the game is played and we will have an overview of how successful strategies for playing this game on larger boards relate to other branches of mathematics, most notably combinatorial game theory and theoretical computer science. Although a subclass of positions are provably NP hard, the vast majority of positions in that subclass turn out to be surprisingly easy to solve, by hand!

**Elwyn Berlekamp** is a recognized world authority on strategic play. He learned the game of Dots and Boxes in 1946, when in the first grade in Ohio. He has subsequently encountered variations in many other parts of the US and several foreign countries. Dots and Boxes became a prime source of inspiration for the origin of the mathematical subject of combinatorial game theory in the 1970s, and Elwyn has written an entire book about it (*The Dots and Boxes Game*, CRC Press, 2000). Berlekamp will show us subtle tactics and some connections with other games. Plus, you are likely to learn how you and your family can beat the neighbors in this perennially-loved pastime.

Berlekamp is also the co-author (with John Conway and Richard Guy) of the 4-volume series of books *Winning Ways for Your Mathematical Plays*, also published by CRC Press. There is more information on Berlekamp's work on his home page: <https://math.berkeley.edu/~berlek/>.

This talk is part of the IEEE celebration of Shannon Centenary – the 100th birthday of Claude Shannon (long-time Bell Labs researcher who built the foundations of Information Theory). There is more information on Shannon Centenary events at <http://www.itsoc.org/resources/Shannon-Centenary>.



Date:	Tuesday, April 26, 2016, 8:00 pm. (Refreshments and networking at 7:30 pm.)
Place:	<b>Large Auditorium, Room CS 104</b> Computer Science Building, Princeton University
Information:	Dennis Mancl (908) 285-1066
On-line info:	<a href="http://PrincetonACM.acm.org">http://PrincetonACM.acm.org</a>

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

There will be no pre-meeting dinner before this special ACM/IEEE talk.