Shannon and the St. Petersburg Paradox

The St. Petersburg Paradox asks how much you would be willing to pay to receive an infinite expected amount of money. For example, would you pay 100 dollars to receive a payoff of 2, 4, 8, ..., dollars with respective probabilities 1/2, 1/4, 1/8, ...? Although Shannon did not address this question, his general advocacy of growth optimality in his famous 1966 MIT talk led to a parting of the ways with Nobel laureate Paul Samuelson but provides a natural resolution of the paradox. We introduce the idea of relative growth rate (thus dispensing with the so-called super St. Petersburg paradox) and establish growth rate optimality and competitive optimality while arguing that any price for the St. Petersburg gamble is attractive, but the proportion of wealth invested in St Petersburg decreases rapidly with the cost.

Endowed Chair Announcement
Jack Keil Wolf Chair in Electrical Engineering

Prof. Jack K. Wolf was the Stephen O. Rice Professor of Magnetics at the Center for Magnetic Recording Research, UCSD for 27 years. To commemorate Jack's extraordinary professional achievements and his enormous contributions to UCSD, the Jack Keil Wolf Chair in Electrical Engineering is being endowed in his honor. The Chair Announcement will include brief remarks by campus leaders, as well as some of Jack's professional colleagues, students, and family members.