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## BOUNDARY SLOPE DIAMETER AND CROSSING NUMBER OF 2-BRIDGE KNOTS

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**Abstract of Talk:** It is conjectured that, for a hyperbolic knot in  $S^3$ , the diameter of the set of boundary slopes is twice the crossing number. My partner, Kristin Robinson, and I investigated this conjecture for 2-bridge knots. Utilizing the relationships between 2-bridge knots, their boundary slopes, and continued fractions, we developed a set of substitution rules which allow us to calculate all continued fractions of a given rational number from its simple continued fraction.