The Schottky Problem

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We often study algebraic curves by instead studying their Jacobians, a special class of principally polarized abelian varieties. One important theorem is that the map from curves to their Jacobians is injective, due to Torelli. However, starting in genus 4, most ppavs are not Jacobians. The Schottky problem is the question of how to characterize Jacobians among all ppavs. I'll briefly survey work from the late 1800s through the 1980s on the Schottky problem, and then I'll describe my work on the Schottky-Jung conjecture in genus five.