TEMPLE

MATH CLUB

The Basel Problem: Weierstrass' Contribution to Euler's 100-year-old Solution - Nora Melican

WHEN
November 14 2024
5-6 PM

WHERE
Wachman Hall 617

As with many of history's great mathematicians, we see Euler's name attached to numerous theories, theorems, and solutions. Among these lies the Basel problem, solved by Euler in the 18th century. He showed that the infinite sum of inverse squares converges to a value using pi—but how? In this talk, we'll do a crash course on the tools that formalize Euler's method from a complex analysis perspective, employing Taylor series and infinite products. We will walk through a proof of the Weierstrass Factorization Theorem and its application to the Basel problem. Along the way, we will make connections to some of your favorite concepts from calculus! Remember the p-series test for convergence?

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