Some of Euler's Early Infinite Series

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102 Bradley Hall, 4:00 pm
(Tea 3:30 pm Math Lounge)

Abstract

Early in his career, Euler made two of his many great discoveries. He showed that the sum of the reciprocals of the squares, also called $\zeta(2)$, equals $\pi^2/6$, and he discovered what we now call the Product-Sum Formula for the zeta function. We find common roots to these discoveries in one of his very earliest papers on the Gamma function, and in his first letter to Christian Goldbach. On the way, we sum some remarkable series.

This talk should be accessible to undergraduates.

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