

Lebesgue's Integral for Undergraduates

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Mathematics Colloquium

Friday, September 18, 2009, 1:40 PM, Copley 200



Come to this presentation of Lebesgue's integral, which presents an outline of the integral that does not require measure theory as a prerequisite. The outline is due to Alan J. Weir, a British mathematician who provided the approach in a little-known 1973 text published by Cambridge University Press. The presentation will refer to the Riemann integral (used in *Calculus I* and defined fully in Math 421 *Real Variables*). It will also refer to the concept of "limit of a sequence," but the presentation will have no other prerequisites. Can the presentation succeed in defining Lebesgue integrable functions, along with the associated Lebesgue integral, in just 40 minutes? Come find out, learn who Henri Lebesgue (pictured at left) was, and see why the Lebesgue integral is the "gateway to modern function theory."