

The Gibbs Phenomenon: The Saga

This is a historical talk. The Gibbs phenomenon is a feature of the behavior of Fourier series of a discontinuous function. The story of its elucidation at the turn of the 20th century illustrates that mathematical research is very much a human activity—including such things as misattribution, disputed claims of priority, rhetorical long knives, vague (and not so vague) insults, uncritical parroting, etc. Josiah Williard Gibbs was only one person in the story. Other luminaries include Albert Michelson, A.E.H. Love, Maxine Bôcher (of the AMS Bôcher prize), Leopold Fejér, Thomas Grönwall, and Henri Poincaré. In this lecture, we review this history from the late 1800s through the 1910s, together with sequels and prequels.