J. Bardeen, who formulated the BCS theory of superconductivity together with Cooper and Schrieffer, reportedly described the superconducting phase as “coherent over miles of dirty lead wire”. This long-lasting, long-range coherence leads to the quantization of magnetic flux in vortices in superconductors. In this talk, I will describe how to image and manipulate vortices and what they can tell us about the nature of the superconducting state in exotic superconductors.

Hosts: Steve Girvin and Karsten Heeger

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Physics Club is a weekly colloquium of general interest to the Department of Physics, Applied Physics, Astronomy, and Mathematics. The series is aimed at graduate students, postdoctoral researchers, research staff and faculty. The name dates to the late 1890s, the era of J Willard Gibbs, who influenced the intellectual life at Yale through a number of “graduate clubs”. Physics Club is sponsored by the Yale Physics Department and Yale University.