

David A. Huse Biography

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David Alan Huse (May 16, 1958—) was born in Sudbury, Massachusetts, USA, son of Mason Webster Huse, an electrical engineer at Raytheon Corporation, and Marjorie (Burt) Carroll Huse, a physics-educated computer programmer and homemaker. He spent his youth living in Sudbury, attending the public schools there.

Huse studied at the University of Massachusetts at Amherst, where he obtained a BS in Physics (1979), and then pursued graduate studies at Cornell University, obtaining a PhD in Physics (1983) for a thesis entitled *Domain walls and the melting of commensurate phases*, completed under the supervision of Michael E. Fisher. He interned at Bell Laboratories in Murray Hill, NJ, during the summer of 1982, and he joined Bell Labs after graduating (1983-1996). He is Professor of Physics at Princeton University since 1996.

Huse trained as a statistical physicist, working on phase transitions, which eventually brought him to consider the low-temperature behavior of finite-dimensional spin glasses. With Daniel Fisher, he formulated a scenario for the low-temperature behavior of these systems that contrasts with what emerges from the replica symmetry breaking solution of infinite-dimensional (or fully-connected) models. In parallel, he also collaborated and discussed with numerical and experimental groups studying spin glasses at Bell Laboratories. He later worked on various problems, including vortex phase diagrams for superconductors, frustrated and quantum magnetism, and quantum many-body dynamics.

Huse is a fellow of the American Physical Society (1992) and of the American Association for the Advancement of Science (2013) as well as a member of the National Academy of Sciences (2017). He notably received the 2022 Lars Onsager Prize—with Boris Altshuler and Igor Aleiner—for "foundational work on many-body localization, its associated phase transition, and implications for thermalization and ergodicity".