J. Michael Kosterlitz Biography

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John Michael Kosterlitz (June 22, 1943-) was born in (Cults) Aberdeen, Scotland, son of Hans Walter Kosterlitz, an academic biochemist, and Hannah Gresshöner. He first attended Robert Gordon's College (1948-1959), a private co-educational school, before entering Edinburgh Academy (1959-1961) to prepare university entrance examinations.

Kosterlitz obtained BA in physics (1961-1966)—subsequently converted to a MA degree—at Gonville and Caius College, Cambridge, and then a Doctor of Philosophy in theoretical physics (1966-1969) from Oxford for a thesis entitled "Problems in strong interaction physics," under the supervision of John C. Taylor. He spent a year at Istituto di Fisica Teorica in Torino, Italy, with Sergio Fubini, before joining Department of Mathematical Physics at Birmingham University as a research fellow, where he started working with David Thouless (1970-1973). He then spent another year at the Cornell Laboratory of Atomic and Solid State Physics (LASSP) before rejoining Birmingham as faculty member (reader, 1974; lecturer, 1978; and senior lecturer, 1980). In 1982, he took up a professorship at Brown University, where he is now Harrison E. Farnsworth Professor of Physics.

Kosterlitz was trained in high-energy physics, and got interested in the theory of phase transitions while working with Thouless at Birmingham. Together, they notably identified a remarkable two-dimensional topological phase transition, and then worked on various aspects of spin glasses, formulating a spherical model and later evaluating the stability of the Parisi ansatz. At Brown, Kosterlitz has also kept an intermittent interest in the problem.

Kosterlitz is a fellow of the American Physical Society (1983) and of the American Association for the Advancement of Science (2007) as well as a member of the National Academy of Sciences of the U.S.A. (2017). He has received the Maxwell Medal and Prize (1981) from the British Institute of Physics, the Last Onsager Prize of the American Physical Society (2001) "for the introduction with David J. Thouless of the theory of topological phase transitions, as well as his subsequent quantitative predictions by means of early and ingenious applications of the renormalization group." He was also given 1/4 of the 2016 Nobel Prize in Physics awarded "for theoretical discoveries of topological phase transitions and topological phases of matter".