Distinguished Lecture Series in PHYSICS

OCTOBER 26-27, 2017

J. Michael Kosterlitz, D. Phil.

2016 Nobel Laureate in Physics

J. Michael Kosterlitz, D. Phil. is a theoretical physicist recognized for his work with David J. Thouless, Ph.D. on the application of topological ideas to the theory of phase transitions in two-dimensional systems with a continuous symmetry. The theory has been applied to thin films of superfluid 4He, to superconductors and to melting of two-dimensional solids. Experiments on two dimensional layers of colloidal crystals agree with theoretical predictions in quantitative detail. This work was recognized by the Lars Onsager prize in 2000 and the Nobel Prize in Physics in 2016. Dr. Kosterlitz was elected to the National Academy of Science (NAS) and is a Fellow of the American Academy of Arts and Science (AAAS).

Born in Aberdeen, Scotland, in 1943, Kosterlitz graduated from Cambridge University earning a BA in physics in 1965, an MA in 1966 and a D. Phil. from Oxford in 1969. He was a postdoctoral fellow at Torino University, Italy, in 1970 and at Birmingham University, U.K., from 1970-73. There he met David Thouless, and together they did their groundbreaking work on phase transitions mediated by topological defects in two dimensions. He was a postdoctoral fellow at Cornell in 1974, on the faculty at Birmingham 1974-81 and Professor of Physics at Brown University 1982–present.

SCHEDULE OF EVENTS

THURSDAY, OCTOBER 26 — 5 p.m.

PUBLIC LECTURE

Centennial Hall — Skogen Auditorium A, Room 1400

Reception at 4:30 p.m. — Centennial Hall, Cameron Hall of Nations

FRIDAY, OCTOBER 27 — 3:20 P.M.

PHYSICS SEMINAR

Centennial Hall — Skogen Auditorium A, Room 1400

Topological Defects and Phase Transitions

This Public Lecture and Seminar review some of the applications of topology and topological defects in phase transitions in two-dimensional systems for which Kosterlitz and Thouless split half of the 2016 Physics Nobel Prize. Their work has opened a door on an unknown world where matter can assume strange states. They used advanced mathematical methods to study unusual phases, or states of matter such as superconductors and superfluids. The theoretical predictions and experimental verification in two-dimensional superfluids, superconductors and crystals will be reviewed as they provide very convincing quantitative agreement with topological defect theories.

Co-sponsored by

University of Wisconsin-La Crosse Foundation Inc.

Department of Physics

College of Science and Health

Wettstein's

This publication was funded by the University of Wisconsin-La Crosse Foundation Inc.

www.uwlax.edu/physics

Gubbi Sudhakaran, Ph.D.
608.785.8431
email: *gsudhakaran@uwlax.edu*

Physics Department
University of Wisconsin-La Crosse
1725 State St. | La Crosse, WI 54601

For more information about making arrangements to attend, contact:
UW-La Crosse Foundation Inc.
615 East Ave. N.
La Crosse, WI 54601
608.785.6803
foundation@uwlax.du