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Abstract for an Invited Paper for the MAR17 Meeting of the American Physical Society

Topological Defects and Phase Transitions

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This talk reviews some of the applications of topology and topological defects in phase transitions in two dimensional systems for which Kosterlitz and Thouless split half the 2016 Physics Nobel Prize. The theoretical predictions and experimental verification in two dimensional superfluids, superconductors and crystals will be reviewed because they provide very convincing quantitative agreement with topological defect theories.