

Curvature Effects in 1-D and 2-D Josephson Junctions

Tomasz Dobrowolski

Department of Materials Physics, Institute of Physics UP, Poland
dobrow@up.krakow.pl

ABSTRACT

The gauge invariant phase difference between superconducting electrodes is a dominating dynamical degree of freedom in the Josephson junction. This rapport concerns the influence of the curvature of the junction on the dynamic of this field variable. The effects of curvature are discussed in the long and large area junctions. In particular the dynamics of the fluxion and the kink front are studied.