

# **COHERENT SYNCHROTRON RADIATION INSTABILITIES AND ITS EFFECTS ON ELECTRON BEAM QUALITIES**

K.-J. Kim, ANL, Argonne, Illinois

## **Abstract**

Coherent synchrotron radiation (CSR) can seriously affect performance of high-brightness, short pulse electron accelerators for high-performance light sources based on storage rings, energy recovery linacs, and x-ray free electron lasers. This paper is a review of the physical mechanism, its effects on electron beam qualities, and possible cures of CSR.

**PAPER NOT YET  
RECEIVED**