Self-Consistent Coherent Self-Amplified Undulator Radiation via Lienard-Wiechert Fields, <u>L.R. ELIAS</u>, CREOL, Univ. of Central Florida - We present three-dimensional numerical results of self-amplified X-ray undulator radiation from a relativistic electron beam using Lienard-Wiechert velocity and acceleration forces to drive self-consistently the motion of each electron. A major advantage of this approach is that except for collective radiation reaction forces the exact electron motion gives rise to exact three-dimensional collective radiation fields and unlike in other methods no initial start-up wave is needed.