

## Heather Kay Gerberich

Fermilab MS 318 CDF/University of Illinois Batavia, IL 60510  
630-840-3912 hkg@fnal.gov

### Education:

Ph.D. Physics, Duke University, 2004  
M.A. Physics, Duke University, 2000  
B.S. Physics, Clemson University, 1997

### Positions Held:

Postdoctoral Research Associate, University of Illinois, March 2005 - present  
Research Associate, Duke University, July 2004 - March 2005  
Research Assistant, Duke University, 1999 – July 2004

### Research Experience:

#### CDF (1999 – Present)

University of Illinois, Research Associate

- Trigger Dataset Working Group co-leader (March 2009 – present)
- Leading contributor to the eXtremely Fast Tracker (XFT) upgrade
- Developed, tested, installed, commissioned and maintain XTC2 front end boards.
- Wrote online monitoring code for all systems in the Level 1 XFT upgrade.
- Developed, tested, and commissioned the “tracklist” system, which increased the throughput speed of Level 1 XFT tracks to the Level 2 system and the Silicon Vertex Trigger system.
- Worked on implementing integral parts of the Level 2 XFT upgrade.

#### Duke University, Research Assistant/Associate

- Designed, maintained, and managed an analysis package to create root ntuples from CDF data. This package is used by several groups for both low level detector studies and full analyses.
- Worked on COT tracking algorithms and developed an algorithm using COT track reconstruction information to differentiate muons from collisions to those coming from cosmic rays.

#### Primary Analyses:

- “Study of  $B_c$  meson production”
- “Measurement of CP Asymmetry in Semimuonic B Decays”
- “Search for Excited or Exotic Muon Production using the Dimuon + Photon Signature at CDF in Run II”
- “Search for Excited or Exotic Electron Production using the Dielectron + Photon Signature at CDF in Run II”