

## Curriculum Vitae

### **Stefan Grünendahl**

Scientist I, Fermilab

c/o Fermilab

MS352

PO Box 500

Batavia, IL 60510

USA

email: STEFAN@FNAL.GOV

Tel.: 630 840 8760

### **Education**

1986 - 1991 Ph.D. at the University of Heidelberg (Dr. rer. nat., magna cum laude)

1979 - 1986 M.S. at the University of Bonn (Diploma in Physics).

### **Positions held**

2001 - present: Scientist I at the Fermi National Accelerator Laboratory.

1997 - 2001: Wilson Fellow at the Fermi National Accelerator Laboratory.

1995 - 1997: Senior Research Associate at the University of Rochester.

1992 - 1995: Research Associate at the University of Rochester.

1990 - 1991: Research Associate at the IHEP Heidelberg.

1986 - 1990: Research Assistant (“wissenschaftlicher Mitarbeiter”) at the IHEP Heidelberg.

### **References**

Alan Bross, Fermilab, PO Box 500, Batavia, IL 60510; [bross@fnal.gov](mailto:bross@fnal.gov)

Tom Ferbel, University of Rochester, Rochester, NY 14627; [ferbel@fnal.gov](mailto:ferbel@fnal.gov)

Paul Grannis, State University of New York at Stony Brook, Stony Brook, NY 11794;  
[pgrannis@fnal.gov](mailto:pgrannis@fnal.gov)

Marvin Johnson, Fermilab, PO Box 500, Batavia, IL 60510; [mjohnson@fnal.gov](mailto:mjohnson@fnal.gov)

Hugh Montgomery, Fermilab, PO Box 500, Batavia, IL 60510; [mont@fnal.gov](mailto:mont@fnal.gov)

Randy Ruchti, University of Notre Dame, Notre Dame, IN 46556; [ruchti@undhep.nhep.nd.edu](mailto:ruchti@undhep.nhep.nd.edu)

## Research Summary

at Fermilab (1997-present):

- In charge of commissioning and operation of the DØ Level 1 Tracking Trigger  
This includes planning and oversight of:
  - Hardware and firmware deployment
  - Debug on test stands and the DØ detector platform
  - Tool development for download and control
  - Trigger framework interfacing
- support of trigger and readout electronics
- support of embedded VLPC temperature control

in Rochester and at Fermilab (1992-1997):

- Readout electronics development
- On-board (AFE) VLPC temperature control
- QCD with W/Z + jets
- Analysis of top production: b-tagging issues, studies of MC generation of QCD background
- Various DØ editorial boards (W plus jets; dijet decorrelation)
- DØ top physics advisory committee: planning for Run II
- R&D for and construction of the DØ fiber tracker; including:
  - Development of the fiber ribbon technique; organization and supervision of fiber ribbon production for the first 3000 channel test system
  - R&D on cryogenic semiconductor detectors (VLPCs); planning and implementation of small and intermediate scale test systems, supervision of technicians, programmers and students; demonstration of feasibility for HEP
  - Organization and operation of a DAQ system for a relatively large cosmic ray test experiment
  - Construction of a test system for VLPC device testing at the manufacturer

in Heidelberg and at CERN (1986-1991):

- Design and construction of the UA2 time-of-flight system

- Design and layout of fast detector-mounted discriminator electronics
- Planning and running of a CERN PS test beam experiment for the TOF system
- Running of the UA2 experiment, with responsibility for the TOF system
- Analysis work for top search
- Analysis of data for a  $W'/Z'$  search (thesis topic)
- Teaching: lab classes for physicists and non-physicists, edition of lab manual for medical students

in Bonn (1984-1986):

- Physics simulation package for the SAPHIR detector (from kinematics generators to GEANT detector geometry)
- Software package for vertex reconstruction (thesis topic)
- Design studies for the SAPHIR  $e^+e^-$  veto counters