

Monday, November 21, 2011

8:45 – 9.30: Registration opening (Accademia dei Zelanti e dei Dafnici)

Topics: “Physics and Instrumentation; Front-End Electronics; Signal Formation in Radiation Detector and Noise Mechanism; Preamplifiers”

Morning session:

9:30 – Welcome address by Political Authorities

9:40 – “Origini e missione dell’Accademia dei Zelanti e dei Dafnici”, Dr. G. Contarino, Presidente (10)

9:50 – Welcome address by A. Pagano (INFN, Sezione di Catania), G. Cuttone (INFN-INS) and A. Insolia (University of Catania, Department of Physics)

10:00 – “Overview on the physics perspectives in the future european laboratories ” (30+5)

A. Bracco (Università di Milano e INFN Milano - Italy)

10:35 – “Instrumentation needs” (30+5)

E. Pollacco (CEA-IRFU, Saclay – France)

11:10 – 11:40 Coffee Break

11:40 – “Signal Formation in radiation Detectors: Ramo's theorem and its application in practical cases” (35+5)

A. Castoldi (Politecnico di Milano and INFN Milano – Italy)

12:20 – “Noise mechanisms in electronic devices: physical origin and circuit model” (35+5)

C. Guazzoni (Politecnico di Milano e INFN Milano – Italy)

13:00 – Lunch

Evening session:

14:30 – “Front-end design in CMOS for high resolution detectors” (40+5)

G. De Geronimo (Brookhaven National Laboratory, Upton, NY – USA)

15:15 – “Front-end electronics solutions for large arrays of segmented detectors” (25 + 5)

G. Pascovici (Institute of Nuclear Physics, Univ. of Cologne – Germany)

15:45 – “Statistical Suppression of Sign-Symmetric Noise in Spectroscopy Measurements” (15+ 5)

P. Degtiarenko (TJNAF, Jefferson Lab, Newport News, VA - USA)

16:05 – 16:30 Coffee break

16:30 – “Cutting-edge circuit technology able to boost the dynamic range of CMOS charge-sensitive preamplifiers far beyond their saturation limit” (25+5)

A. Pullia (University and INFN Milan, Italy)

17:00 – “<<Floating Point>> Charge Sensitive Amplifier, a large dynamic range energy measurement chip for the focal plane of the Super Separator Spectrometer of the SPIRAL2 project” (15+5)

P. Vallerand (GANIL CNRS – CEA, Caen - France)

17:20 – “Development of the Time Projection Chamber readout for heavy RI collision experiment” (15+5)

T. Isobe (Riken, Wako Japan)

17:40 – 18:20 Open discussion

Tuesday, November 22, 2011

Topics: "From the Analog World to the Digital Domain; Case Study in Nuclear Physics: Silicon and Scintillators Detectors for Charged Particles"

Morning session:

- 9:00 – "Signal processing techniques for the extraction of physical observables in presence of different noise sources" (25+5)
C. Guazzoni (Politecnico and INFN of Milan, Italy)
- 9:30 – "Reflections on two ASIC development projects for nuclear physics" (40+5)
L. Sobotka (Washington University, St Louis – USA) and E. Pollacco (CEA-IRFU, Saclay – France)
- 10:15 – "Two CMOS Solutions for Two Different Signal Processing Problems" (20+5)
G. Engel (Southern Illinois University Edwardsville – USA)
- 10:40 – 11:10 Coffee Break
- 11:10 – "Analogue memories for particle physics detectors" (35+5)
E. Delagnes (CEA-IRFU, Saclay – France)
- 11:50 – "Introduction to FPGAs" (40+5)
A. Kugel (University of Heidelberg at Mannheim - Germany)
- 12:35 – "Wide Dynamic range readout preamplifier for Silicon Strip Sensor" (15+5)
A. Taketani (Riken, Wako Japan)
- 12:55 – Lunch

Evening session:

- 14:30 – "Case study in nuclear physics: the FAZIA project" (40+5)
G. Poggi (University of Florence and INFN, Sesto Fiorentino, Italy)
- 15:15 – "Proton and deuterium identification by means of PSA at energies below 1 MeV" (15 + 5 min)
J.Duenas(University of Huelva - Spain)
- 15:35 – "Digital Pulse Processing for Physics Applications" (20+5)
M.Locatelli (Caen, Viareggio, Italy)
- 16:00 – 16:30 Coffee Break
- 16:30 – "A Case Study: Design of a CMOS ASIC For Pulse Shape Discrimination" (25 + 5 min)
G.Engel (Southern Illinois University Edwardsville – USA)
- 17:00 – "SPADIC –Self triggered Pulse Amplification and Digitization ASIC" (15+5)
M. Krieger (University of Heidelberg, Mannheim - Germany)
- 17:20 – 18:30 "Round table on International Networking"

Wednesday, November 23, 2011

- 9:00 – Poster session I (60)
- 10:00 – Departure for the social visit (180)
- 13:00 – Lunch and Poster session II

Topics: "Data Reduction and Trigger Strategies; Case Study in Nuclear Physics: Gamma Ray Detectors"

Evening session:

- 14:30 – "The AGATA Demonstrator Array at LNL" (35+5)
E. Farnea (INFN Sezione di Padova – Italy)
- 15:10 – "System design for nuclear structure experiments: online data reduction and distributed systems" (35+5)
H. Simon (GSI Darmstadt – Germany)
- 15:50 – 16:10 Coffee break
- 16:10 – "Triggering Philosophies for Large Nuclear Physics Experiments" (40 + 5 min)
I. Lazarus (Daresbury Laboratory, Warrington – UK)
- 16:55 – "Off-line event building" (20 + 5 min)
H. Baba (Riken, Saitama - Japan)
- 17:20 – End of session
- 19:00 – Chorus Concert by...
- 21:00 – Social Dinner

Thursday, November 24, 2011

Topics: "Slow Control Systems; DAQ; Interconnections; Case Study in Nuclear Physics: Spectrometers, Gas Detectors"

Morning session:

- 9:00 – "General electronics for TPC (GET), an architecture based on the μ TCA standard... with a short introduction to μ TCA for physics" (30 + 5 min)
G. Wittwer (Ganil, Caen – France)
- 9:35 – "Controls" (40 + 5 min)
B. Kolb (GSI Darmstadt – Germany)
- 10:20 – "Data acquisition systems (DAQ) <<essentials>>" (40 + 5 min)
E. De Filippo (INFN sez. Catania – Italy)
- 11:05 – 11:30 Coffee break
- 11:30 – "Narval: a generic framework to develop Data Acquisition Systems" (30 + 5 min)
X. Grave (IPN0/IN2P3/CNRS00, Orsay – France)
- 12:05 – "Interconnections – the link between sensors and r/o electronics" (30 + 5 min)
L. Andricek (MPI Halbleiter labor, Munchen – Germany)
- 12:40 – "Measure of the DSSSD efficiency" (15+5)
D. Torresi (CSFNMS and INF-LNS, Catania, Italy)
- 13:00 – Lunch

Evening session:

- 14:30 – "Cases for nuclear physics: the S^3 instrumentation and comparison to the AIDA project" (40+5)
A. Drouart (CEA Saclay IRFU/SPHN, Gif sur Yvette – France) & Ian Lazarus (Daresbury Laboratory, Warrington, UK)

15:15 – “Present situation in GEM and Micromegas detectors / structure and production upgrades” (40 + 5 min)
R. De Oliveira (CERN – Switzerland)

16:00 – 16:25 Coffee break

16.25 – “Selex Eltag Satellite Solutions” (40+5)
R. Russo (Selex Eltag S.p.A., Catania, Italy)

17:10 – “Conclusive remarks” (30) and open discussion
L. Sobotka (Washington University, St. Louis, USA)