

Summer School - Nuclear Physics meets Electronic Technology



Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome

Monday, 17 June 2024 13:30 (2 hours)

Contribution ID: 2

Type: **not specified**

Introduction to semiconductors. Doping and hyperdoping

Monday, 17 June 2024 16:00 (1h 30m)

Presenter: DI RUSSO, Enrico (Università di Padova)

Contribution ID: 3

Type: **not specified**

Rutherford backscattering analysis and the method of channeling. H and D induced Nuclear Reaction Analysis as a complimentary method.

Contribution ID: 4

Type: **not specified**

Electrical activation of implanted dopants: Statistical mechanical aspects of defect recovery and Hall effect characterization.

Tuesday, 18 June 2024 09:30 (1 hour)

Presenters: PIERUCCINI, Marco (stituto per la Microelettronica e i Microsistemi Area della Ricerca di Bologna); BOLDRINI, Virginia (IMM-CNR Bologna)

Contribution ID: 5

Type: **not specified**

Nuclear Physics for Semiconductors and Solar Cells.

Tuesday, 18 June 2024 11:00 (1h 30m)

Presenter: DENKER, Andrea (Helmholtz-Zentrum Berlin für Materialien und Energie)

Contribution ID: 6

Type: **not specified**

Hands-On: Simulation of Ion implantation with SRIM software.

Tuesday, 18 June 2024 14:00 (1h 30m)

Presenter: CANINO, Marica (CNR Italy)

Contribution ID: 7

Type: **not specified**

Overview of the radiation induced degradation of electronic devices.

Tuesday, 18 June 2024 16:00 (1h 30m)

Presenter: VELARDI, Francesco (University of Cassino)

Contribution ID: 8

Type: **not specified**

Capacitive techniques for the defect characterization of semiconductor devices.

Wednesday, 19 June 2024 09:30 (1 hour)

Presenter: DI BENEDETTO, Luigi (University of Salerno)

Contribution ID: 9

Type: **not specified**

Non-contact methods for the characterization of high energy particle irradiation induced defects in various semiconductors.

Wednesday, 19 June 2024 11:00 (1h 30m)

Presenter: Prof. NEITZERT, Heinz-Christoph (Univ. of Salerno)

Contribution ID: **10**

Type: **not specified**

Hands-On: Optoelectronic characterization of the radiation damage in light emitting diodes,

Wednesday, 19 June 2024 14:00 (1h 30m)

Presenter: HEINZ NEIZERT, Christoph (Univ. of Salerno)

Contribution ID: 11

Type: **not specified**

Hands-On: DLTS spectrum Analysis.

Wednesday, 19 June 2024 16:00 (1h 30m)

Presenter: DI BENEDETTO, Luigi (University of Salerno)

Contribution ID: 12

Type: **not specified**

Optical characterization of implantation defects: the case study of sulphur implanted silicon

Presenter: FABBRI, Filippo (NANO-CNR)

Contribution ID: 13

Type: **not specified**

Hands-On: Identification of the composition and thickness of the surface layers of a Schottky diode using a 4He charged particle beam.

Thursday, 20 June 2024 11:00 (1h 30m)

Presenter: BUOMPANE, Raffaele (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 14

Type: **not specified**

Principles of PIXE and PIGE, advanced techniques and applications.

Friday, 21 June 2024 09:30 (1 hour)

Presenter: CHIARI, Massimo (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 15

Type: **not specified**

Measurements of Hydrogen concentrations with an 15N-beam - principle and applications.

Friday, 21 June 2024 11:00 (1h 30m)

Presenter: BECKER, Hans-Werner (Ruhr-Universität Bochum)

Contribution ID: **16**

Type: **not specified**

Visit to the Enrico Fermi Research Center

Thursday, 20 June 2024 15:00 (1h 30m)

Contribution ID: 17

Type: **not specified**

Optical characterization of implantation defects: the case study of sulphur implanted silicon

Wednesday, 19 June 2024 17:30 (1 hour)

Presenter: FABBRI, Filippo (NANO-CNR)

Contribution ID: 18

Type: **not specified**

Characterization of materials with elastic scattering experiments using MeV protons and alpha particles beams

Thursday, 20 June 2024 09:30 (1 hour)

Presenter: RIGATO, Valentino (Istituto Nazionale di Fisica Nucleare)