

Session Program

23 January 2017 to 3 February 2017



**4th Summer School on INtelligent signal
processing for FrontIER Research and Industry**

Presentation of the Laboratories

Campus of USP in Sao Paulo, Abraão de Moraes Auditorium (IF)

Sunday 22 January

14:00

Presentation of the Laboratories

Session | **Location:** Campus of USP in Sao Paulo, Abraão de Moraes Auditorium (IF) | **Convener:** Gustavo Rehder

14:00–14:10

Introduction on the Labs to be held each afternoon from Jan24 to Feb 3

Speaker

Aurore Savoy Navarro

14:10–14:17

Introduction to Advanced Filtering Techniques

Speaker

Junior Barrera

14:17–14:24

GPGPU dedicated Lab

Speakers

Alfredo Goldman, Marco Dimas Gubitoso

14:24–14:31

Introduction to Neuro-Mathematics

Speaker

Marco Dimas Gubitoso

14:31–14:38

Identification of molecules responsible for Rays in spectrum (Astronomy)

Speaker

Jacques Lepine

14:38–14:45

Demonstration of a low frequency receptor (astronomy)

Speaker

Jacques Lepine

14:45–14:52

Adaptative Optics based on robotic arms for Telescopes

Speaker

Stephen Eikenberry

14:52–14:59

Fermi Gamma-ray Space Telescope: Observing Black Holes, Dark Matter and Other High-Energy Astrophysical Phenomena

Speaker

Rodrigo Nemmen

14:59–15:06

Introduction to Micro Pattern Gas Detectors (MPGD) - the Gas Electron Multiplier (GEM)

Speaker

Marco Bregant

15:06–15:13

Initiation to the use of Microcontrollers in collaboration with ST Microelectronics

Speaker

Gustavo Rehder

15:20–15:27

Synthetic Aperture Radar (SAR) based Imaging, theoretical & practical Lab**Speaker**

Joao Moreira

15:27–15:42

Introduction to PET, High Field MRI, Ultra Sound Instruments: 3 Medical Imaging Labs at InRAD, FM-USP**Speaker**

Maria Concepcion Garcia Otaduy

15:42–15:49

A PET Demonstrator based Test Bench**Speaker**

Giancarlo Sportelli

15:49–15:56

Introduction to new CCD (pixels) technology and applications**Speakers**

Guillermo Moroni, Miguel Sofo-Haro

15:56–16:03

Medipix Pixels read out with TimePix**Speaker**

Kazuyoshi Carvalho Akiba

16:10–16:17

Crossed Octagonal Ring Antenna (C-ORA) Array & Analogue Beamformer Demonstration (Square Km Array project)**Speaker**

Laith Danoon

16:17–16:24

Advanced High Rate and High Speed Data transmission for High Luminosity LHC at CERN**Speaker**

Enrico Junior Schioppa

16:24–16:31

Introduction to the Silicon Photomultiplier (Si PMT) technology**Speaker**

Giovanni Franchi

16:31–16:38

Introduction to the Very Deep Sub Micron (VDSM) technology**Speaker**

Lodovico Ratti

16:38–16:45

The SiPMT developed for the Cerenkov Telescope Array (CTA) Cameras**Speaker**

Francesco Giordano

16:45–16:52

Multi/Many-Core Programming with Intel Xeon Phi Coprocessors

Speakers

Rogério Iope, Silvio Stanzani

16:52-16:59

Introduction to the new GEANT V simulation based on high performance and Massive Parallel Computing software

Speakers

Guilherme Lima, Victor Daniel Elvira

16:59-17:06

Introduction to Advanced 3D interconnect technology for new 3D applications in Microelectronics

Speaker

Robert Patti

17:10