Registration Form

Five days GIAN on

Low Power Nyquist-rate Data Converters

(March 6-10, 2017)

1. Name of applicant:

2. Gender : Male Female

3. Designation & Department:

4. Mailing Address:

5. Tel: (Res):
(Mob):
(office):

6. Email:

7. Qualification:

8. Experience: Teaching _____ and Industrial _____

Details of Registration Fee:
DD/ Online ref. No:……Date: ……
Bank:…… Branch:……

Signature of the applicant
Date & Place:

Mr/Ms/Dr. _____ is an employee of our Institution and is sponsored (permitted) to attend the workshop.

Signature of the Head of (applicant's) Institution/Industry and Seal

Place: Date:

Registration Fees details:

Students: Rs. 1000/- (For SC/ST students Rs. 500/-)
Faculty Members: Rs.6000/-
Industry Delegates: Rs. 8000/-
Participant from abroad: $500
Note: Faculty/Student of NIT Goa will be admitted at free of cost
DD should be drawn in favour of "Director NIT Goa" payable at Ponda, Goa or it can be remitted by bank transfer and the account details are as follows:
Name of account: DIRECTOR NIT GOA, Acc. No.: 132800101000653, IFSC code: CORP0001328.
The participants may send an advance copy of the filled in registration form along with scanned copy of the DD/ bank online transfer copy to coordinators in order to confirm their participation. Registration of seats will be based on first-come-first-served basis along with relevant background. Confirmation of registration will be sent by email. Maximum number of participant is limited to 30. The completed applications forwarded by competent authority, should reach the Coordinators on or before Feb 10th 2017.

Accommodation:

Accommodation may not available to the participants due to limited hostel availability. Outstation participants are requested to make their own arrangement for boarding and lodging.

How to reach NITGOA

The Institute is located at Farmagudi which is about 4 kilometers from Ponda, Goa and 29 k.m. south-east of Panjim and 25k.m. from Margoa. Farmagudi is well connected by road with various parts of Goa, and also with the Dabolim airport. There are regular bus services between Panjim, Margoa , Dabolim Airport and, the Margoa railway station to Ponda.

Eligibility Criteria:

The program is open to all the teachers, research scholars and PG students of Engineering Institutes working in the area of Electronics & Communication Engineering / Electrical and Electronics Engineering disciplines with relevant area. Engineers and researcher from Industry and government organizations with relevant background in IC design can attend.

Ministry of Human Resource Development
Govt. of India

GLOBAL INITIATIVE ON ACADEMIC NETWORK

GLOBAL INITIATIVE OF ACADEMIC NETWORKS

सत्यमेव जयते

on

Low Power Nyquist-rate Data Converters

(March 6-10, 2017)

Organized by:

Department of Electronics & Communication Engineering

राष्ट्रीय प्रौद्योगिकी संस्थान गोवा

National Institute of Technology Goa

Ponda. Goa-403401.

Website: www.nitgoa.ac.in

Course Overview:

The rapid growth of demand for portable and wireless computing systems is driving the need for ultra-low power systems. In recent years the explosive growth of portable electronic devices demands the need to optimize the existing design for better performance in terms of smaller silicon area, higher speeds, and longer battery life. Furthermore the scaling of VLSI technology, that makes possible the continuing dramatic improvements in digital signal processor performance, also severely constrains the dynamic range available and forcing the design to work at lower supply voltage. Thus, the design requirements of power hungry building blocks like data converters are very demanding and challenging.

Data converters comprise Analog to Digital Converters (ADCs) and Digital to Analog Converters (DACs), which are the devices that provide the link between the analog world and the digital world of signal processing. They convert the analog signals to digital equivalent which are processed in digital domain and converted back to analog signals. An ADC must perform sampling in time and quantization in amplitude operations in order to obtain the digital signals.

The course will cover the design challenges in the data converters starting from specification, behavior modeling etc. to circuit realization of the state of art Nyquist-rate architectures. The course assumes that the participants have a working knowledge on basic analog circuit design and layout.

Objectives:

- Understanding the specification and performance metrics of data converters
- Design of essential circuit blocks for data converters like track and hold, comparator etc.
- Behavior modeling of data converters using Matlab/Simulink
- Understanding Nyquist rate data converters like flash, pipeline, SAR ADC etc.

About National Institute of Technology Goa

The National Institute of Technology Goa (NIT Goa) is a premier technical Institute of the region. NIT Goa was established in the year 2010 by an act of parliament (NIT act 2007) and it is declared as 'Institute of National Importance '. NIT Goa is an autonomous institute and functioning under the aegis of Ministry of human Resource Development (MHRD), Govt. of India.

The Institute offers under Graduate and Post Graduate courses in three Engineering Departments: Computer Science and Engineering, Electronics and Communication Engineering and Electrical and Electronics Engineering. The Institute also offers Ph.D in all the three above mentioned engineering departments.

Department of E&C. Engg.

The Electronics and Communication Department of NIT Goa was formed in 2010 when NIT Goa was established. Currently, it offers an undergraduate programme namely Bachelor of Technology in Electronics and Communication Engineering (B Tech in ECE), post-graduate M.Tech programme on VLSI and Ph.D programme. The goal of the department is to impart both theoretical and practical knowledge in Electronics and Communication Engineering to students so as to enable them for technology and research. The department covers following major areas in Electronics and Communication Engineering through its courses and projects: Microelectronics and Electronics Design, Communication and Networking, Signal Processing, Electromagnetics.

The department has well equipped laboratories in various disciplines and VLSI laboratory has equipped with Workstation and High end systems along tools like, 20 license (Research bundle) of Cadence, Silvaco Device modeling tool- Atlas and Athena, Zync FPGA board, MATLAB, PSPICE, KEIL.

Coordinators

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Course Instructor:

Edoardo Bonizzoni was born in Pavia, Italy. He received the Laurea degree (summa cum laude) in Electronic Engineering from the University of Pavia, Italy, in 2002. From the same University, he received in 2006 the Ph.D. degree in Electronic, Computer, and Electrical engineering.

In 2002 he joined the Integrated Microsystems Laboratory of the University of Pavia as a Ph.D. candidate. During his Ph.D., he worked on development, design and testing of non-volatile memories with particular regard to phase-change memories. From 2006 his research interests are mainly focused on the design and testing of DC-DC and A/D converters. In this period he worked on single-inductor multiple-output DC-DC buck regulator solutions and on both Nyquist-rate and oversampled A/D converters. Recently, his research focuses on the design of high precision amplifiers and ultra-low voltage reference circuits as well.

Presently, he is a Senior Assistant Professor at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia.

Dr. Bonizzoni authored or co-authored 90+ papers published in international journals and in international conference proceedings. He is co-recipient of the IEEE International Symposium on Circuits and Systems (ISCAS) 2014 Honorary Mention Paper Award of the Sensory Systems Track, of the IEEE/IEEJ Analog VLSI Workshop (AVLSIWS) 2010 best paper award, of the IEEE European Solid-State Circuits Conference (ESSCIRC) 2007 best paper award and of the IEEE/IEEJ Analog VLSI Workshop (AVLSIWS) 2007 best paper award.

From 2011 to 2015 he served the IEEE Circuits and Systems Society as an Associate Editor of the IEEE Transactions on Circuits and Systems - Part. II and, since 2016, he is an Associate Editor of the IEEE Transactions on Circuits and Systems - Part. I. Dr. Bonizzoni has been nominated Best TCAS-II Associate Editors for the 2012-2013 term. Since 2013 he is a TPC member of the IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME). He is an IEEE member since 2006.