रा.इ.सू.प्रौ.सं
NIELIT

राष्ट्रीयइलेक्ट्रॉनिकीएवंसूचनाप्रौद्योगिकीसंस्थान,कालीकट
National Institute of Electronics & Information Technology, Calicut

Ministry of Electronics and Information Technology
Government of India

सत्यमेव जयते

Internship Training
Prospectus

ISO 9001-2015 Certified

Digital Signal Processing and its application (Ultrasound Imaging)

02nd January 2023 - 04th February 2023
(2 hrs daily)

Course Description

This is a course on Digital Signal Processing and its application(Ultrasound Imaging) which provides Basics of MATLAB, simulation of all kinds of ultrasound transducers, simulation of transducer transmitting and receving signal for desired excitation signals, digital signal processing of the received signal using MATLAB and generating the 2D Ultrasound Image.

GUI Design using QT and QML, processing the received ultrasound signal using Intel IPPs and creation of Ultrasound Motion Images(B-mode and M-mode images). The Course is planned with instructor led Offline/live sessions of lectures and demonstrations

Click Here to Register

Who can attend?

Anyone who is interested in learning

1. Simulation of transducers and echo signals for desired excitation signals
2. Digital Signal Processing using MATLAB/C/C++ with Intel IPPs
3. GUI Design using QT and QML
4. Ultrasound GUI designers
5. Embedded Systems design Enthusiastic
   - Preferably Students pursuing Engineering,

Course Content

Sno	Topics
1	Introduction to MATLAB
2	Signal processing in MATLAB
3.	File Handling in MATLAB
4.	Basics of sound and Introduction to Ultrasound
5.	Simulation of Transducers and generation of echo signals for excitation signal
6.	FIELD-II tool
7.	Ultrasound 1-D and 2-D imaging in MATLAB
8.	Introduction to QT and basic QT classes.
9.	Introduction to QML
10.	Artificial Phantom generation (Objects creation)
11.	Ultasound GUI design using QT and QML
12.	Mini Project Discussion

Fee and important dates

Fee	Rs. 4720/- *(Including GST)*

Last date for registration & payment	31st December 2022
Razor PAY QR CODE **Program Name:** Online internship training on DSP and its Application (Ultrasound Imaging)	

Certificate

Certificate to all completed candidates

Minimum System Requirements

- Attendees must have a computer system with a good internet connection.
- Computer System Configuration – Linux/Ubuntu/Windows OS 7/8/10, i3/i5, 64bit processor, Minimum 4GB RAM
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Faculty Profile

Qualification and experience of the faculty handling the sessions

1. Dr. Jayaraj U Kidav – Scientist/Engineer 'E', Ph.D.(VLSI Signal processing), 23 Years of Experience
2. Akula Sri Rama Pavan – Scientist-B, B.Tech(ECE), 7 Years of Experience

Course Coordinator

Akula Sri Rama Pavan
Scientist-B
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Terms and Conditions

1. In case any registered candidate could not attend the offline/ online session due to technical   issue at their side there will not be any refund of the course fee and the sessions will   not be repeated.

2. In case the offline/ online course is cancelled /postponed due to some technical issue at   NIELIT side and new date is not convenient to the candidate, our liability is limited to the refund of the course fee and NIELIT shall not be responsible for any consequential damages.

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Autonomous Scientific Society of
Ministry of Electronics & Information Technology,
Govt. of India