NEW HORIZON COLLEGE OF ENGINEERING

Department of Electronics and Communication Engineering

06.04.2018

EXPERT LECTURE

The ECE students are hereby informed that an expert lecture is scheduled on

"Digital Signal Processing"

On 09.04.2018.

By Mr.Shivananda Koteshwar, MediaTek, Bangalore.

Timing schedule is as follows

| Sl No | Timings | Semester |
|-------|------------------|----------|
| 1 | 2.50PM – 3.50 PM | 4 |
| | | |

Respective subject teachers are hereby informed to be present in the Chanakya Hall during the schedule.

Note: All Faculty members are invited to attend the same (without affecting regular classes)

Venue: Chanakya Seminar Hall

Faculty In-Charge: Mr.Madhukar & Ms.Thanuja I.K

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Shivananda (Shivoo) Koteshwar has over 23 years of experience in the semiconductor industry in varying positions. He is currently with MediaTek as General Manager and Site Head and responsible for Engineering teams focusing on Smartphones, IoT, Networking and Home Entertainment products

Shivoo is also an accomplished entrepreneur and angel investor in social networking, hospitality, agritech and social networking. Shivoo's key angel investment projects are – Your Philanthropy Story, Coastered Technologies, Belakoo CoCreate and Sparsha Learning technologies. Shivoo is a trustee, Belakoo Education Trust, focusing on rural education and skill development program.

Shivoo has taught many courses in VLSI and Management as a visiting faculty in leading colleges/universities in India. Shivoo also serves as a Board of Studies Member in Mount Carmel College, BMS College, Indian Academy Degree College and Dr. MCET, Pollachi and served as an Advisory Board Member in Vyasa International School, PES Group of Institutes and MS Ramaiah School of Advanced Studies

A Phd Research Scholar and an alumnus of IIM, Bangalore, Shivoo has derived inspiration from real life stories all around him and has published a books titled "50 Shades of Life" and a fiction titled "50 Colours of Love"





Thanuja I K <hemthama@gmail.com>

Syllabus for DSP

Thanuja I K <hemthama@gmail.com>
To: shivoo <shivoo.koteshwar@gmail.com>

Mon, Apr 2, 2018 at 12:13 PM

Respected Sir,

Thank you very much.

Can we have your expert lecture on the 9th April from 3 to 4 pm?

Thanks and Regards, Thanuja.

[Quoted text hidden]

Thanuja I.K
Assistant Professor,
Dept of ECE,
New Horizon College of Engineering,
Bengaluru.

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Thanuja I K <hemthama@gmail.com>

Syllabus for DSP

shivoo <shivoo.koteshwar@gmail.com>
To: Thanuja I K <hemthama@gmail.com>

Mon, Apr 2, 2018 at 12:13 PM

yes possible [Quoted text hidden]

Expert lecture

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NEW HORIZON COLLEGE OF ENGINEERING DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING IV Sem "A" Sec

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NEW HORIZON COLLEGE OF ENGINEERING DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING IV Sem "B" Sec

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| 1 | 1NH16EC064 | NEHA MAHESH |
| 2 | 1NH16EC066 | NISHU DUBEY |
| 3 | 1NH16EC067 | NITESH K |
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| 8 | 1NH16EC074 | PAVAN KUMAR S |
| 9 | 1NH16EC075 | POOJA SHANTARAM NAYAK |
| 10 | 1NH16EC076 | PRAJWAL.T.J |
| | 1NH16EC077 | PRANAY REDDY S |
| 12 | 1NH16EC078 | PRASHANTH GOWDA.R.S Proshout & |
| 13 | 1NH16EC079 | PRAVEEN KUMAR S |
| 14 | 1NH16EC080 | PRESHIKA J M |
| 15 | 1NH16EC081 | PRITHIPA A |
| 16 | 1NH16EC082 | R.PAVAN RAJ |
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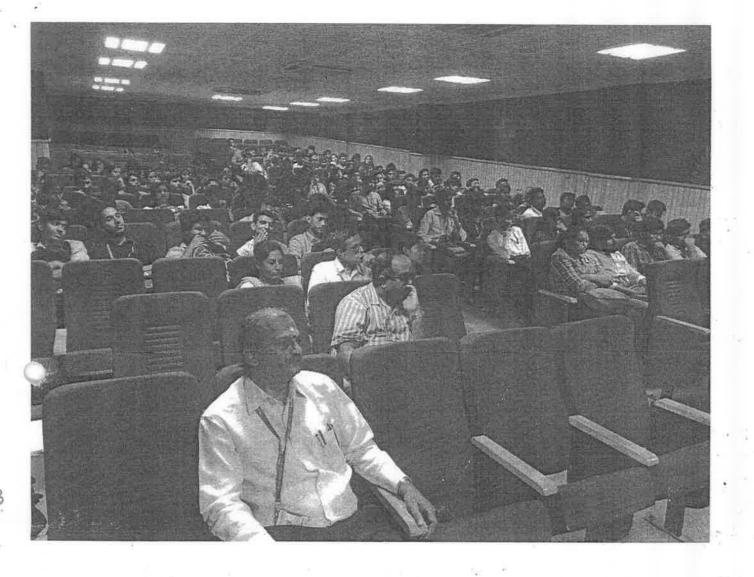
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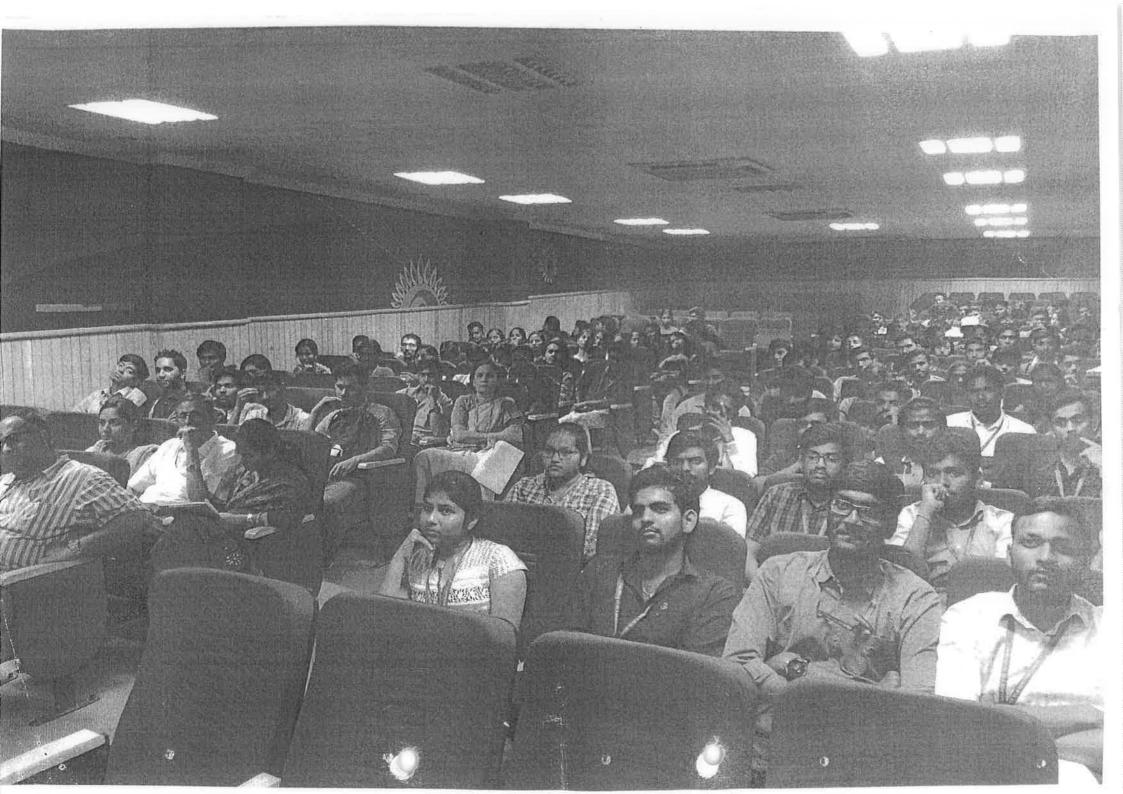
NEW HORIZON COLLEGE OF ENGINEERING RTMENT OF ELECTRONICS & COMMUNICATION ENGINEE IV Sem "C" Sec

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REPORT

Date: 09-04-2018 Time: 3:00 – 4:00pm

Expert: Mr.Shivanada Koteshwar Topic: Applications of DSP

The expert lecture started with a brief introduction to DSP, Augmented and virtual reality. An explanation was given on how a signal is processed and transmitted with reference to DAC & ADC. Also a description was given about the process of hearing sound, how sound is captured in the ear and how the brain processes and interprets it.

Later a brief talk was given about the human eye and its wonderful resolution and even elucidated about how a human eye and the brain processes an image with comparison to a DSP processor. Visuals were shown on the camera module in a smartphone.

The concept of AR and VR was explained in detail, where augmented reality is an enhanced vision of the human eye and Virtual reality is where the person is transferred into another dimension, where they can interact with various elements. He briefly explained what is inside a DSP processor and what are its major components, i.e Program memory, Data memory, Compute engine and I/O ports. The working of the processor was explained with a block diagram.

There was a comparison of Microprocessors and DSP processors, where we learnt how these two processors work in a smartphone with reference to the real time and the background process in a smartphone chip. The detailed working of the smartphone's IC, how the NPU (neural processing unit) & the GPU (graphical processing unit) work hand in hand in the simple tasks of a smartphone, everything was explained properly with real time examples and videos.

The last topic for the session was on Biomedical sensors from Mediatek, where an explanation was given on how a small chip could replace various current methods of health monitoring such as Heartrate, Blood Pressure, Pulse, saturation and calorie intake.

The lecture concluded with an interactive session where all the students asked questions and were clarified on spot by the speaker.