# [Scdt] SCDT-FlexE Centre Weekly Tuesday Seminar-09.02.2021 at 7:30 PM

1 message

**scdt@iitk.ac.in** <scdt@iitk.ac.in> Fri, Feb 5, 2021 at 7:03 PM
To: scdt@lists.iitk.ac.in

Zoom Meeting for joining the webinar:
https://zoom.us/j/99863678964?pwd=ZVJvdFN5T1UyQjdZbmxwS0htRUJOUT09

Meeting ID: 998 6367 8964
Passcode: 064022
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Dear Colleagues,

I would welcome you to attend our next SCDT-FlexE Centre Weekly Tuesday Seminar by our colleague from the electrical engineering department, Dr. Shubham Sahay. The details of the seminar (to be given in webinar format) are given below:

Title: “Neuromorphic Computing: Mapping Neural Networks to Hardware”

Date: 9th February, 2021 (Tuesday)
Time: 7:30 PM to 8:30 PM
Presentation will be on zoom. The link is given above.

The talk abstract and a brief bio of the speaker are given below. Please join if you are in a position to do so.

With regards
S.K.I.

Abstract of talk sent by Dr. Sahay:
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The widespread and ever-increasing demand for performing computationally intensive applications such as deep/recurrent neural networks (DNNs/RNNs), signal processing etc. on the edge in the emerging mobile internet-of-things (IoT) devices requires fast, compact and energy-efficient processing engines. Due to the conventional von-Neumann architecture, even the most advanced digital approaches such as GPUs incur significantly increased power consumption owing to frequent memory access. Therefore, there is an urgent need for area- and energy-efficient hardware which can process neural networks on the edge. The possibility of utilizing emerging analog-grade non-volatile memory devices, such as RRAM for realizing such neuromorphic processing engines would be discussed in this talk.

Bio:
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Dr. Shubham Sahay is currently an assistant professor in the department of Electrical Engineering at Indian Institute of Technology (I.I.T.) Kanpur, India. Prior to joining I.I.T. Kanpur, he worked as a postdoctoral research scholar at the University of California, Santa Barbara on the development of hardware neuromorphic computing platforms and hardware security primitives utilizing emerging non-volatile memories. He received the B.Tech (Hons.) in Electronics Engineering from the I.I.T. BHU Varanasi in 2014 and the Ph.D. degree in Electrical Engineering from I.I.T. Delhi in 2018. He has authored a book on “Junctionless Field Effect Transistors: Design, Modeling and Simulation” which is published by the Wiley-IEEE press. He has also published several peer-reviewed articles on topics including semiconductor device design and modeling, neuromorphic computing and hardware security primitives utilizing emerging non-volatile memories.
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