

## Three-Days Workshop

### Deep Learning Framework for Applications (DeLeFa-2017) (Joint Collaboration with Intel Corporation, India and OpenPOWER)

**Dates:** April 5 - 7, 2017

**Venue:** Day -1 (April 05, 2017) at Hotel Leela Palace, Bengaluru  
: Day -2 & Day-3 (April 06-07, 2017) at C-DAC Knowledge Park, Bengaluru

#### TENTATIVE TECHNICAL PROGRAMME

1<sup>st</sup> Day prog. is in collaboration with Intel Corp., India will be conducted at Leela Palace, Bengaluru. 2<sup>nd</sup>, & 3<sup>rd</sup> prog. is in collaboration with OpenPOWER (IBM/NVIDIA/Mellanox) & other Institutes at C-DAC, Bengaluru.

**Day 1: April 5 (Wednesday) 2017**

**8:30 AM ~ 9:00 AM: Reg.**

**Venue : Hotel Leela Palace Bengaluru ( In Collaboration with Intel Corporation, India)**

Lunch- 1:00 PM		Coffee Break- 10:30 AM & 4:00 PM	
9:00 AM ~ 9:15 AM	An overview of DeLeFa-2017 Programme		
9:15 AM ~ 9:45 AM	<b>Intel Session :</b> Machine Learning /Deep Learning – Implementation – Case Study Linear Regression - Neural Networks on Intel Platforms		
9:45 AM ~ 10:30 AM	<b>Intel Session :</b> Code Walk through of Machine Learning (ML) /Deep Learning - Neural Networks - Caffe on Intel Platforms		
11:00 AM ~ 1:00 PM	<b>Intel Session :</b> Intel Machine Learning Tools for Software Developers and Data Scientists - Nervana Introduction; Intel Perf. Libraries for ML/DL		
2:00 PM ~ 5:00 PM	<b>Intel Session (Lab.) :</b> Intel Performance Libraries for Machine Learning and Deep Learning; Data Analytics with Intel® Distribution for Python and pyDAAL; AI Alg.; Intel optimized Machine Learning Frameworks; Distributed Machine Learning – Image Classification for Supercomputers;		
5:00 PM ~ 6:00 PM	<b>Intel Session :</b> Nervana Demo; Q&A		

**Day 2: April 6 (Thursday) 2017**

**Venue :C-DAC Knowledge Park, Bengalure ( In Collaboration with OpenPOWER System)**

9:00 AM ~ 9:45 AM	<b>OpenPOWER Session (IBM) :</b> OpenPOWER in High Performance Comp. and High Performance Data Analytics (HP DA) POWER 8 Minsky; IBM POWER AI-OpenPOWER– NVIDIA-NVLINK Deep Learning Framework
9:45 AM ~ 10:30 AM	<b>OpenPOWER Session (NVIDIA) :</b> An Overview of NVIDIA PASCAL-Tesla P100; CUDA /OpenACC / CUDA Deep Neural Network Lib (CuDNN); NVIDIA Deep Learning SDK – Caffe, Theano, Torch, Tensorflow
11:00 AM – 1:00 PM	<b>OpenPOWER Session (IBM &amp; NVIDIA) :</b> Deep Learning- Basics of Frameworks and Libraries : Caffe, Theano Torch; Tensor Flow
2:00 PM ~ 6:00 PM	<b>OpenPower Session (IBM/NVIDIA Lab.) -</b> Training a model on a set of data: e.g. use Caffe and ImageNet (Caffe features, Data Preparation, Compute Image Mean, Model Definition, Training ImageNet

**Day 3: April 7 (Friday) 2017**

**Venue : C-DAC Knowledge Park, Bengalure ( In Collaboration with IT Companies)**

9:00 AM ~ 9:45 AM	<b>C-DAC :</b> Machine Learning /Deep Learning Alg. – Application Modelling
10:00 AM ~10:30 AM	<b>C-DAC :</b> An Overview of Programming Environment – ML/DL Framework
11:00 AM ~ 11:45 M	<b>Invited Talk :</b> Deep Learning – Implementation and Performance Issues
11:45 AM ~1:00 PM	<b>Invited Talk :</b> An Overview of Application Perf. – Machine Learning / Deep Learning on Multi-to-Many Core Systems : Speech Recognition,
2:00 PM ~ 2:45 PM	<b>Invited Talk :</b> Deep Learning – Case Study and Performance Issues
2:45 PM ~3:30 PM	<b>Invited Talk :</b> Application Perf – Machine Learning / Deep Learning on Multi-to-Many Core Systems : - Bio-Informatics; & Image Processing
3:30 PM ~ 5:00 PM	<b>Intel Session (Tools) :</b> Intel® Distribution for Python and pyDAAL; Tools
5:00 PM	Conclusions & Closure