

Special Joint SDI/ISTC-VCS Seminar



PLEASE NOTE SPECIAL DAY AND TIME

Friday
April 28, 2017
RMCI 4th Floor
Panther Hollow Room
10:30 - 11:30 am

Fast and Scalable Deep Learning with Microsoft Cognitive Toolkit (CNTK)



Cha Zhang
Microsoft

Cha Zhang, Principal Researcher, Microsoft Research Dr. Cha Zhang is a Principal Researcher at Microsoft Research, and he currently manages the CNTK team.

He received the B.S. and M.S. degrees from Tsinghua University, Beijing, China in 1998 and 2000, respectively, both in Electronic Engineering, and the Ph.D. degree in Electrical and Computer Engineering from Carnegie Mellon University, in 2004. Before joining the CNTK team, he spent over 10 years developing audio/image/video processing and machine learning techniques, and has published over 80 technical papers and held 20+ US patents. He won the best paper award at ICME 2007 and the best student paper award at ICME 2010. He was the Program Co-Chair for VCIP 2012, and the General Co-Chair for ICME 2016. He currently serves as an Associate Editor for IEEE Trans. on Circuits and Systems for Video Technology, and IEEE Trans. on Multimedia.

CNTK is Microsoft's open-source deep learning framework designed from the ground up for scalability and flexibility. The latest v2.0 release contains both C++ and Python APIs, with a built-in Layer Library for high-level model description. The toolkit has been extensively used internally at Microsoft for video, image, text and speech data. CNTK is well-regarded as the fastest toolkit for recurrent neural networks, which can easily be 5-10x faster than other toolkits such as TensorFlow and Torch. It was the key to Microsoft Research's recent breakthrough in speech recognition by reaching human parity in conversational speech recognition. In this talk, I will explain how CNTK achieves significant speed up through symbolic loops, sequence batching, and new schemes of data-parallel training.

For more details about CNTK, please visit <https://github.com/Microsoft/CNTK>.



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