# Course title: Introduction to Deep Learning: Algorithms & Applications

**Instructors**: Professor Xiaoming Huo (Georgia Tech); [huo@gatech.edu](mailto:huo@gatech.edu) (Best way to communicate)

**Course** **materials**: Will be available at https://github.com/xhuo17/CDC\_DL\_2022

**Meeting** **link**: Join Zoom Meeting <https://gatech.zoom.us/j/94199344278?pwd=ejgxbnFlbUhjUXJ6ZUNzYWRCV2pOUT09>

Meeting ID: 941 9934 4278; Passcode: 874802

Course overview (schedule): Thursday, July 7, 2022

* 8:30-9:30 Module 1: Introduction
* 9:45-10:45 Module 2: Overview & preparation
* 11:00-12:00 Module 3: Neural networks - basics
* 12:00-1:15 Lunch break
* 1:15-2:00 Module 4: Neural networks - models
* 2:15-3:00 Module 5: Convolutional neural networks
* 3:15-4:00 Module 6: Some examples
* 4:00 Adjourn

**Summary**. The lecture notes are downloadable from a GitHub repository (see the above) and are mostly written/supplemented in *Jupyter* *notebooks*, which facilitate interactions with other software packages (mostly Python). I will demonstrate the interactions during the lectures. If you want to regenerate the course slides, you will need to install Anaconda (https://www.anaconda.com/) and can program in Python. Jupiter Notebook and Python programming will be used.

**About the instructor** Xiaoming Huo is a professor at the Stewart School of Industrial & Systems Engineering at Georgia Tech. Dr. Huo’s research interests include statistical theory, statistical computing, and issues related to data analytics. He has made numerous contributions on topics such as sparse representation, wavelets, and statistical problems in detectability. His papers appeared in top journals, and some of them are highly cited. He is a senior member of IEEE since May 2004. He was a Fellow of IPAM in September 2004. He won the Georgia Tech Sigma Xi Young Faculty Award in 2005. His work has led to an interview by Emerging Research Fronts in June 2006 in the field of Mathematics — every two months, one paper is selected. Dr. Huo received an M.S. degree in electrical engineering and a Ph.D. degree in statistics from Stanford University, Stanford, CA, in 1997 and 1999, respectively. He participated the 30th International Mathematical Olympiad (IMO), which was held in Braunschweig, Germany, in 1989, and received a golden prize.

Professor Huo taught the same course in CDCU multiple times since 2019.