## Title:

Deep Learning: algorithms, systems, and applications

## Abstract:

Deep Learning is a fast-growing sub-field of Artificial Intelligence capable of mimicking human intelligence. It is able to do this without being explicitly programmed, but instead learning on its own by recognizing patterns in data. In recent years it was shown to have outperformed humans at certain tasks and has since revolutionized many industries. Deep Learning is used in voice and image recognition, recommender systems, language translation, robotics, chat bots, self-driving cars, search engines, and the list continues with many other examples of automation. The workshop aims at bringing together leading scientists in deep learning and related areas within machine learning, artificial intelligence, mathematics, statistics, and neuroscience. No formal submission is required. Participants are invited to present their recently published work as well as work in progress, and to share their vision and perspectives for the field. The organizing committee is excited to invite you to take part in this workshop.

## Scope and Topics:

We encourage researchers to formulate innovative learning theories, feature representations, and end-to-end vision systems based on deep learning. We also encourage new theories and processes for dealing with large scale image datasets through deep learning architectures. We are soliciting original contributions that address a wide range of theoretical and practical issues including, but not limited to:

- Machine learning
- Video classification
- Object recognition
- Object tracking
- Scene understanding
- Industrial and medical applications
- Security Applications
- Deep learning architectures
- Deep NLP (natural language processing)
- Deep learning in mobile platforms and embedded systems
- Advancements in semi-supervised learning and transfer learning algorithms
- Neural abstract machines and program induction
- Applications of unsupervised learning.
- Deep learning for robotics.
- Deep learning for Meteorological applications
- Lifelong learning.
- Deep reinforcement learning.…

## Program Committee Chairs:

**Xiaolin Li**, University of Florida, USA

andyli@ece.ufl.edu

http://www.andyli.ece.ufl.edu/index.php/people/andyli/

Xiaolin (Andy) Li is a Full Professor and University Term Professor in Department of Electrical and Computer Engineering (ECE) and Department of Computer & Information Science & Engineering (CISE, affiliated) at University of Florida (UF). He is the founding Director of National Science Foundation Center for Big Learning (CBL), the first NSF center on deep learning, with UF (lead), CMU, UO, and UMKC. He is also Director of Large-scale Intelligent Systems Laboratory (Li Lab). His research interests include Cloud Computing, Big Data, Deep Learning, Intelligent Platforms, HPC, and Security & Privacy for Health, Precision Medicine, CPS/IoT, Science, Engineering, and Business. He has published over 100 peer-reviewed papers in journals and conference proceedings, 5 books, and 4 patents (three licensees). He received a PhD degree in Computer Engineering from Rutgers University. He is a recipient of the National Science Foundation CAREER Award in 2010, the Internet2 Innovative Application Award in 2013, NSF I-Corps Top Team Award (1 out of 24 teams, including Berkley, Harvard, and MIT) in 2015, Top Team (DeepBipolar) in the CAGI Challenge on detecting bipolar disorder in 2016, and best paper awards (IEEE ICMLA 2016, IEEE SECON 2016, ACM CAC 2013, and IEEE UbiSafe 2007).

**Victor S. Sheng**, University of Central Arkansas, USA

ssheng@uca.edu

http://people.stern.nyu.edu/ssheng/

Victor S. Sheng received the master's degree in computer science from the University of New Brunswick, Canada, in 2003 and the PhD degree in computer science from Western University, Ontario, Canada, in 2007. He is an associate professor of computer science with the University of Central Arkansas, and the founding director of Data Analytics Lab (DAL). His research interests include data mining, machine learning, and related applications. He was an associate research scientist and NSERC postdoctoral follow in information systems in the Stern Business School, New York University. He received the best paper award runner-up from KDD'08, and the best paper award from ICDM'11. He is a PC member for a number of international conferences and a reviewer for several international journals. He is a senior member of the IEEE and a life-time member of the ACM.

**Wei Fang,** Nanjing University of Information Science & Technology, China

fangwei@nuist.edu.cn

http://web2.nuist.edu.cn:8080/jszy/Professor.aspx?id=835

Wei Fang received his PhD in computer science from School of Computer Science and Engineering, Soochow University, China, in 2009. He is currently an associate professor in School of Computer and Software, Nanjing University of Information

Science and Technology, China. He was a visiting scholar of Faculty of Computer Science, University of Florida, USA, from September 2015 to September 2016. His research interests include big data mining, deep learning and cloud computing. He is a member of ACM.

**Neal N. Xiong**  Northeastern State University, USA
Neal N. Xiong is current an Associate Professor (5rd year) at Department of Mathematics and Computer Science, Northeastern State University, OK, USA. Before he attended Northeastern State University, he worked in Georgia State University, Wentworth Technology Institution, and Colorado Technical University (full professor about 5 years) about 10 years. His research interests include AI in Cloud Computing, Security and Dependability, and Optimization Theory. Dr. Xiong published over 200 international journal papers and conference papers. Some of his works were published in IEEE JSAC, IEEE or ACM transactions, ACM Sigcomm workshop, IEEE INFOCOM, ICDCS, and IPDPS. He has been a General Chair, Program Chair, Publicity Chair, Program Committee member and Organizing Committee member of over 100 international conferences, and as a reviewer of about 100 international journals, including IEEE JSAC, IEEE SMC (Park: A/B/C), IEEE Transactions on Communications, IEEE Transactions on Mobile Computing, IEEE Trans. on Parallel and Distributed Systems. He is serving as an Editor-in-Chief, Associate editor or Editor member for over 10 international journals (including Associate Editor for IEEE Tran. on Systems, Man & Cybernetics: Systems, Associate Editor for Information Science, Editor-in-Chief for Journal of Internet Technology (JIT), and Editor-in-Chief for Journal of Parallel & Cloud Computing (PCC)). Dr. Xiong is the Chair of " Trusted Cloud Computing" Task Force, IEEE Computational Intelligence Society (CIS), http://www.cs.gsu.edu/~cscnxx/index-TF.html, and the Industry System Applications Technical Committee, http://ieee-cis.org/technical/isatc/; He is a Senior member of IEEE Computer Society from 2012, E-mail: xiongnaixue@gmail.com

## Program Committee:

Xiaolin Li, University of Florida, USA
Victor S. Sheng, University of Central Arkansas, USA
Wei Fang, Nanjing University of Information Science and Technology, China
Xiaoyong Yuan, University of Florida, USA
Weiting Chen, East China Normal University, China
XueJuan Liu, Southeast University, China
Jun Li, Nanjing University of Science and Technology, China
Shukui Zhang, Soochow University, China
Pengpeng Zhao, Soochow University, China
Xuezhi Wen, Nanjing University of Information Science and Technology, China
Maofu Liu, Wuhan University of Science and Technology,China
Shubi Wang, Jiangsu University, China
Yanyan Zheng, Lishui University, China
Xuefeng Xian, Suzhou Vocational University, China