

NSF DGE#1723250, “CAPTIVOLOGY-STIMULI-BASED LEARNING (CAPITAL) OF **BIG DATA SECURITY** (BIGSEC): TOWARDS A SCIENCE/ENGINEERING, CAREER-ORIENTED TRAINING,” 2017-2020. PI: DR. FEI HU, 2017-2020

- Big data security becomes critical with the coming of many big data applications in smart cities/communities, smart health, 5G communications, universe/space exploration, large-scale transportations, etc.
- We propose to develop (1) two courses (1 for BS and 1 for MS/PhD students), (2) hands-on lab materials, (3) new stimulation-based pedagogy, to cover all the latest big data security contents.
- Main knowledge points: (1) Big Table/Graph protection; (2) Encrypted search; (3) Remote access control to cloud big data; (4) Protection of Deep Learning based big data processing; (5) Large-scale data privacy preservation; (6) Secure Big data transmission in wireless networks, etc.
- The co-PI – Dr. Da Yan, has developed 1 course on Big Graph security.
- Flipped classroom and virtual reality have been used in the teaching.