

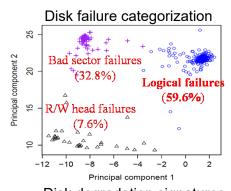
## **Associate Professor Song Fu**

### Department of Computer Science and Engineering

Director, Dependable Computing Systems Lab

Computer systems, system resilience, storage reliability, distributed and parallel computing, IoT and edge computing Research Group: Federal funding; 5 Ph.D. Students

#### **Resilient Storage Systems**

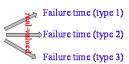


# Disk degradation signatures $\frac{2^{5}}{2^{25}} = \frac{1}{125}$ $s_{3,i}(t) = \frac{1}{d_i^3} t^3 - \frac{1}{125}$

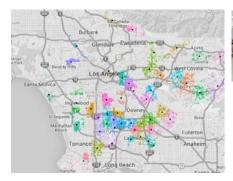
#### Disk failure prediction





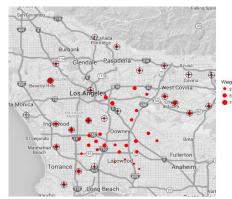


#### **Senor Data Processing**



Crime data of Los Angeles County

#### **Smart Resource Planning**



Optimal police patrol planning

#### **Resilient Storage**

- Funded projects on storage reliability characterization and prediction
- Data centers and HPC storage systems
- Expertise in failure management and machine learning

#### **Near-Data Computing**

- Internet of things
- Edge computing
- Resource planning
- Smart communities
- Expertise in real-time, near-data processing







