

# DL Tour in the Kansas City Chapter

DL's Name: Zuqing Zhu

## Talk #1

Time: 10:00am, on May 24, 2018

Location: Executive Conference Room (246), University of Kansas

Local hosts: Prof. Bo Luo

Title: Knowledge-defined Orchestration in a Hybrid Optical/Electrical DC Network

## Talk #2

Time: 2:00pm, on May 24, 2018

Location: Flarsheim Hall Toyota Room, University of Missouri, Kansas City

Local hosts: Prof. Zhu Li

Title: Knowledge-defined Orchestration in a Hybrid Optical/Electrical DC Network

Cost to ComSoc: Zero, since this trip was combined with Dr. Zhu's business trip to Kansas City.

## Talks abstract:

In this talk, we discuss the design and implementation of a novel datacenter network (DCN) system, which utilizes a knowledge-defined network orchestration mechanism (NO-M) to operate a hybrid optical/electronic DCN (HOE-DCN) cost-effectively and energy-efficiently. The motivations behind the proposed HOE-DCN system are the urgent needs to address the scalability, energy and manageability issues in the existing DCN systems. To realize the knowledge-defined NO-M, we follow the principle of predictive analytics in human brain to design three artificial intelligence (AI) modules based on deep learning (DL) and make them operate collaboratively. The proposed HOE-DCN system is implemented in a network testbed, and we conduct experiments that involve both control and data plane operations to demonstrate its advantages. The experimental results show that the HOE-DCN simultaneously achieves high-performance service provisioning and improved energy-efficiency.

## Brief report on the talks:

Each talk lasted for around 60 minutes, and was followed by a fruitful 10-minute discussion on the topic. There were around 10 attendees in each talk, including faculty members, researchers, and graduate students. The talks were well received.

## Pictures taken at the talks:



