



หลักสูตร ป.โท
สาขาวิชาวิศวกรรมไฟฟ้า คณะวิศวกรรม จุฬาลงกรณ์มหาวิทยาลัย

Cluster: TeleNet

Telecommunications & Networking

ChulaEE TeleNet Cluster

- (1) innovative research
- (2) telecom industrial linkage
- (3) international collaborateon networks

Track 1 :
network design and
performance engineering

Track 2 :
microwave engineering and
wireless network

Track 3 :
optical communications and
transport network

Track 4 :
future internet and
software-defined network

Huawei-ChulaEE Communication Network Lab



FTTx Testset



Traffic War Room



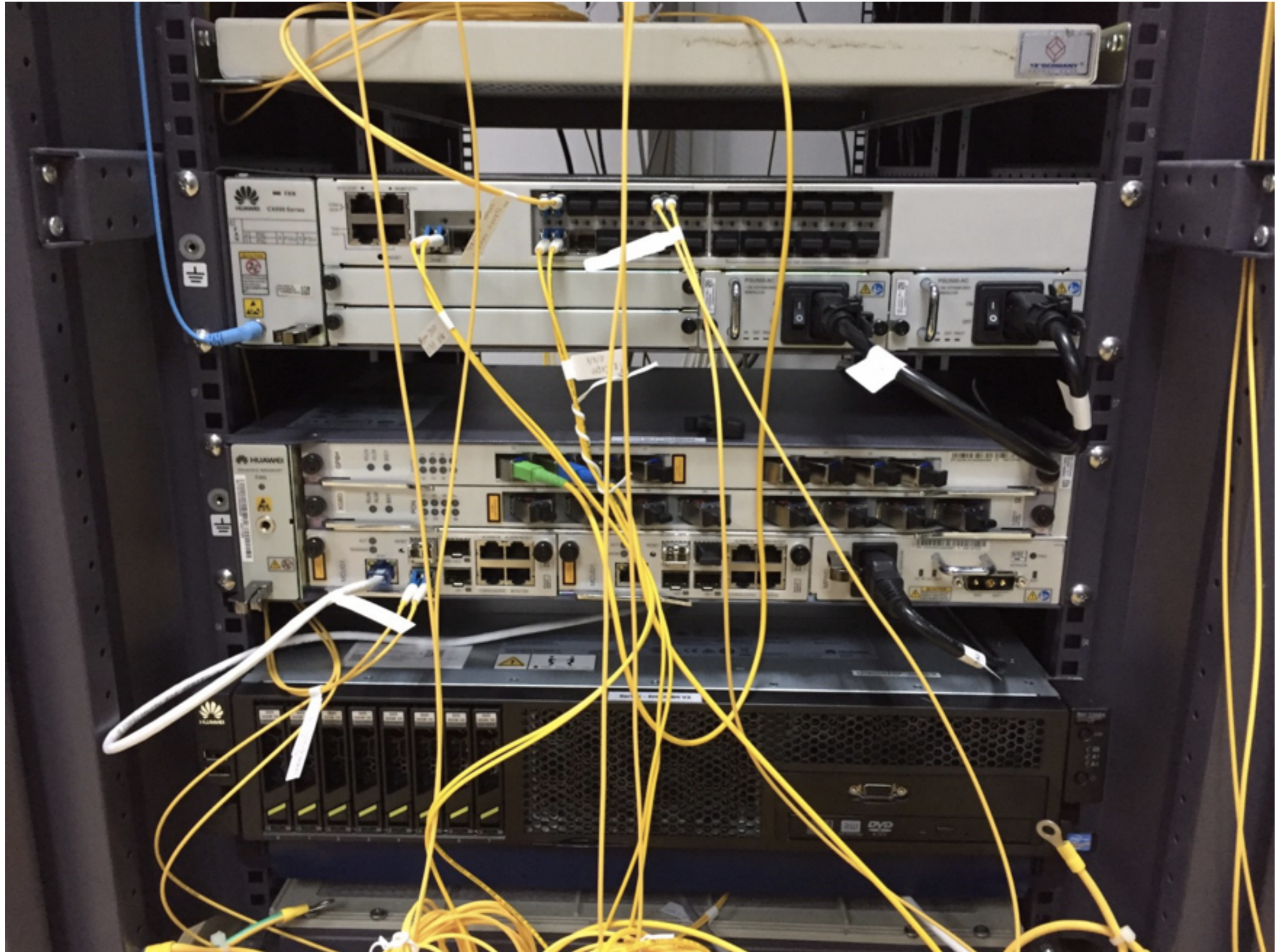
Intelligent Video Surveillance



NICT (Japan) Lab



Core/Access Network Test



Network Master Workshop



ChulaEE TeleNet Cluster

- (1) innovative research
- (2) telecom industrial linkage
- (3) international collaboration networks

Track 1 :
network design and
performance engineering

Track 2 :
microwave engineering and
wireless network

Track 3 :
optical communications and
transport network

Track 4 :
future internet and
software-defined network

Example Subject Selection for Job-Oriented Study Tracks in Cluster: TeleNet

Subject - Study Track	1	2	3	4
Reliability and Survivability of Communication Networks	X			X
Graph Theory and Combinatorial Optimization	X			X
Traffic Engineering Analysis and Simulation	X			X
Theory & Computational of Electromagnetic Wave		X	X	
Information Security				X
Signal Processing for Wireless Communications		X		
Antennas and Radio Propagation	X	X		
Multimedia Communication	X			X
Internet Technology and Applications	X	X	X	X
Telecommunication Network	X	X	X	X
Satellite Communications		X		
Mobile Communications and Networking	X	X		
Advanced Wireless Communications	X	X		
Telecommunications Switching, Transmission and	X		X	X
Optical Fiber Transmissions and Networks	X		X	
Design of Microwave and Photonic Circuit & System		X	X	



Faculty Member List

Cluster: TeleNet

Telecommunications & Networking



CHULA **ENGINEERING**
Foundation toward Innovation

Prof. Watit Benjapolakul (PhD)

Ph.D. (University of Tokyo, Japan)



- Internet of Thing (IoT)
- Smart Home/ Smart City
- Smart Grid



Asst. Prof. Tuptim Angkaew

Ph.D. (Osaka University, Japan)

- Numerical analysis and design of microwave and lightwave guiding components.
- Finite element method and applications in electromagnetic field analysis.
- Boundary element method and applications in electromagnetic field analysis.
- Numerical analysis of optical transmission in optical fiber communication systems.



CHULA **ENGINEERING**
Foundation toward Innovation

Assoc. Prof. Prasit Teekaput

Ph.D. (Virginia polytechnic Institute and State University, U.S.A)



● Telecom Network

● Telecom Management



Asst. Prof. Widhyakorn Asdornwised

Ph.D. (Chulalongkorn University)

- Lossless Image Compression
- Wavelet Transform
- Multiple Classifier Systems
- Speech and Character Recognition



Assoc. Prof. Lunchakorn Wuttisittikulkiy

Ph.D. (University of Essex, U.K.)

- 5G wireless communications and Internet of Thing (IoT)
- Low Density Parity Check and Polar codes
- Multiple Access for Communications and Industrial IoT
- Optical Network Optimization and Design
- Terahertz Communications
- Vertical Transportation Systems
- Smart Agriculture/ Farmbot
- Machine Learning for Communications
- Applications of Blockchain



CHULA **ENGINEERING**
Foundation toward Innovation

Asst. Prof. Pasu Kaewplung

Ph.D. (Chulalongkorn University)



- Fiber-Optic Communication
- Access networks
- Mobile communication



Asst. Prof. Charnchai Pluempitiwiriyaew

Ph.D. (Carnegie Mellon University, USA)

- Medical Image Segmentation
- Active Contour, Level Set Method
- 3D image Reconstruction and Modeling.
- Face Recognition
- Character Recognition



Assoc. Prof. Supavadee Aramvith

Ph.D. (University of Washington, USA)

- Computer Vision Techniques in Surveillance Applications
(Person Detection/Tracking/Event Analysis)
- Digital Video Coding and Processing
- Transmissions of digital video over Wireless and IP Networks
- Image/Video Retrieval Techniques - Video Classification
- Applications in Multimedia Communication System



CHULA **ENGINEERING**
Foundation toward Innovation



Assoc. Prof. Duang-rudee Worasucheeep

Ph.D. (Stanford University, California, USA)

- Optical Fiber Communication and Networks
- High-speed Optical Transceiver Development
- High-speed Digital Signal Integrity



Assist. Prof. Chaiyachet Saivichit

Ph.D. (Imperial College, London, U.K.)



- Network Reconfiguration Algorithm in case of Failure
- Network Performability Modelling
- Performance Analysis of Reconfiguration Algorithms
- Network Reliability, Survivability and Integrity
- Network Planning for Survivability & Trustworthiness
- Heterogeneous Networking
- Telecommunication Network Economics modeling
- Quality Issues in Telecommunications
- Ad Hoc & Sensor Networking
- Intelligent Transport System (Vehicular Communication Issues)
- Next Generation Networking (NGN)



Assoc. Prof. Chaodit Aswakul

Ph.D. (Imperial College, London, U.K.)



- Communication Networking for Smart Power Grid
- OpenFlow, Software Defined Network (SDN)
- Network/Application Function Virtualisation (NFV/AFV)
- Internet of Things (IoT) Cloud and Future Internet (FI) Platform
- Wireless Sensor Network and Mobile Vehicular Ad Hoc Network
- Quality of Service, Traffic Engineering and Queuing Theory
- Machine Learning, Game Theory and Network Optimisation
- Microscopic/Macroscopic Road Network Simulation Models
- Telecommunication Network Migration and Inter-Domain Analysis
- Network Security Analysis in On-line Voting, Wireless Mesh and Delay-Tolerant Networks
- IoT Cloud and Big Data Analytics in Building Energy Management System (BEMS) and Intelligent Transportation System (ITS)



CHULA **ENGINEERING**
Foundation toward Innovation



Dr. Panuwat Janpugdee

Ph.D. (The Ohio State University, USA)

- Electromagnetics
- Antennas and Phased Arrays
- Wireless train arrival warning system
- Biological effect of electromagnetic