Prof. Sumiko Miyata

Laboratory name

Information and Communication Network Laboratory

Keyword

Network Traffic Analysis, Bit Rate Control for Streaming Application, Copyright Protection, Management, Information Security

Tasks in the laboratory

In my laboratory, we have analyzed internet network traffic and information network security. In network traffic analysis, we are theoretically analyzing control of image quality in streaming communication and load balancing control in cloud edge computing. In addition, we are developing a method to protect and manage copyrights to images and videos by using watermarking and blockchain, and an attack detection method by using the degree of information distribution.

Program period

Eligibility-school year

- Third year undergraduate
- ☑ Fourth year or higher undergraduate
- ✓ First year master degree
- Second year or higher master degree
- ✓ First year doctoral degree
- ✓ Second year doctoral degree
- ☑ Third year or higher doctoral degree

Eligibility-student's major/fields

- Mechanical
- Chemistry
- Material
- Electrical
- Electronic
- ✓ Computer Science
- Lifescience
- Mathematical
- Civil Engineering
- Architecture
- ☑ Engineering and design

Required skills

Knowledge of computer communication such as TCP, UDP, IP, Wi-Fi, Ethernet.

- Basic programming skills
- Good communication skills

Desired skills (Preferred skills)

URL: <u>https://www.shibaura-it.ac.jp/en/research/lab/engineering/ice/sumiko_miyata.html</u>