

TTI Online Summer Seminar 2021 - LABORATORY LIST for Lab Experience

Lab Experience Overview: International students from TTI's partner universities (applicants) select up to four laboratories based on their academic interests and experiences. TTI will assign each student to one of the laboratories of their choice. Please note that application may be turned down if an applicant does not meet the requirements for Lab Experience. Also, applicants may not be assigned to their preferred laboratory in case others fill in the posts. For information on the laboratories, please visit [our website](#).

	Laboratory	Field of Engineering	Supervisor(s)	Maximum Number of Students Allocated	Lab Experience Theme	Lab Experience Summary	Required Skills and Background Knowledge for Lab Experience Applicants	Pre-seminar Preparation Required of Lab Experience Participants	Tools to Be Prepared by Lab Experience Participants
A	Computational Intelligence Laboratory	Electronics and Information Engineering	Professor Yutaka SASAKI Associate Professor Makoto MIWA	2	Neural Machine Translation	Experience training and test of English-French Neural Machine Translation	Basic level of Python programming, Google Colab account, English skills that is sufficient to understand technical English descriptions on Deep Learning.	Python programming (essential), PyTorch programming (optional), understanding of Jupyter Notebook	PC with stable Internet connection, Web browser, Google Colab account
B	Intelligent Information Media Laboratory		Professor Norimichi UKITA	2	Performance Analysis of Image Super-Resolution	The performance of super resolution using deep learning varies depending on learning constraints. In this class, students would analyze this performance.	Advanced skills of Python as an undergrad student	N/A	Web browser on a computer.
C	Control System Laboratory		Associate Professor Michihiro KAWANISHI	6	Control System Design based on Modern Control Theory	Students design an inverted pendulum motor control system using modern control theory and experience the effectiveness of control theory based on mathematical models.	Basic knowledge of mathematics and physics	N/A	Computer with MATLAB/Simulink, Control System Toolbox, and Web browser
D	Surface Science Laboratory	Materials Science and Engineering	Professor Masamichi YOSHIMURA Associate Professor Masanori HARA	2	Synthesis of carbon nanotube modified electrodes for Li ion battery	Students learn the synthesis and evaluation methods of CNT modified electrodes for Li ion battery by watching the movie of experiments and summarize the experimental result using supplied data.	Basic knowledge of chemistry and battery	Learning the principle of chemical vapor deposition, carbon nanotube, and Li ion battery	PC