

PBL on Campus Tour by Teleoperated Robots from Overseas

Date	Place	Partner Organization	Students' Major and Grade	Participants' Information	SIT Instructor
2021/11/29 ~2021/12/06	Japan	Indian Institute of Technology Delhi	<ul style="list-style-type: none"> •Department of Engineering Science and Mechanics, Department of Engineering Science and Mechanics, Department of Engineering Science and Mechanics, Department of Engineering Science and Mechanics, Department of Materials Science and Engineering, Department of Applied Chemistry •Undergraduate 2nd grade, Undergraduate 3rd grade, Undergraduate 4th grade, Master 2nd grade, Doctor 3rd grade 	(SIT) Students 9, Student Staff 1, Professor 1 (Indian Institute of Technology Delhi) Students 5, Professor 1, Staff 2	MATSUHIRA Nobuto (Department of Engineering Science and Mechanics)



Image1 Final Presentaion

We conducted a global PBL with the Indian Institute of Technology Delhi (IITD) on the theme of "Campus Tour by Teleoperated Robot" via ZOOM online. This is the fourth time for this PBL project. Seven students from the Intelligent Mechanical Systems Laboratory of the Department of Engineering Science and Mechanics of SIT participated in the PBL, and five students and two staff members (IHFC, Cobotics project) from IITD participated.

As in the previous year, we used international standard software such as ROS for control system and Gazebo for simulation, and Slack for communication. Students from France, Malaysia, Thailand, and Delhi conducted teleoperation experiments with four robots in four countries, including students in the online internship program being conducted at the same time. The basic characteristics such as communication time delay, operability and visibility were confirmed. A campus tour experiment using teleoperated robots is a very important theme in COVID-19, and each student was able to work on it with great interest. The results of this experiment were also incorporated into the manuscript of the international conference SEATUC. In addition, the students had a chance to observe the demonstration that our laboratory participated in at Haneda Innovation City, which was held during this period, and they were able to participate remotely.



Image2 Campus Tour Experiment

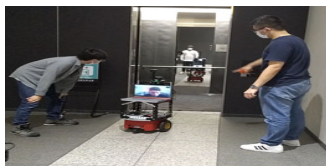


Image3 Going into the Elevator

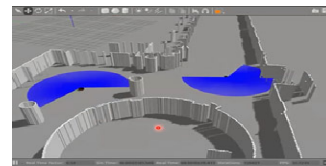


Image4 Simulation in SIT lobby