Abstract: In order to enhance the teacher’s teaching effect and promote students’ understanding of engineering-related courses, we’ve built a Networked Laboratory (it is called E-Lab here). The E-Lab is B/S (Browser/Server) structure via internet. Different from the traditional E-learning, teachers can by means of E-Lab give lessons meanwhile perform the experiment at the same time in a multi-media classroom (not only show the demo video in advance recorded). Students can log in the E-Lab website to browse teacher’s PPT and operate the control experiments by themselves after class.

When the undergraduate and graduate students design and realize a new experiment or a new control algorithm, they can upload the experiment or the algorithm to the E-Lab website as an open laboratory experiments for Web Clients. The E-Lab can return a report automatically for clients about their experiment results such as response curve, teacher comments, etc.

The main experiments of E-Lab include:
- Controller design and operation with the plants of pendulums, ball-beam system, helicopter modular;
- Machine fish system design and application;
- Image processing and light controlling in Intelligent transportation system;
- Remote passive upper limb rehabilitation robot and its application.

Brief biography: Yaping Dai got the Ph.D from Beijing Institute of Technology (BIT) in 1994. She worked at BIT after graduated as a lecturer from 1994 to 1997, and as associate professor from 1997 to 2002. From 1998 to 1999, she studied and worked at Kyushu University as a visit researcher. She got the title of professor from BIT in 2002. In 2005, she visited Tokyo Institute of Technology as visit researcher for half a year. And at 2007, she got the sustentation fund from Waseda University, worked in Waseda University for a month.