EE 381 Probability & Statistic with Applications to Computing (Fall 2020)

Course Introduction

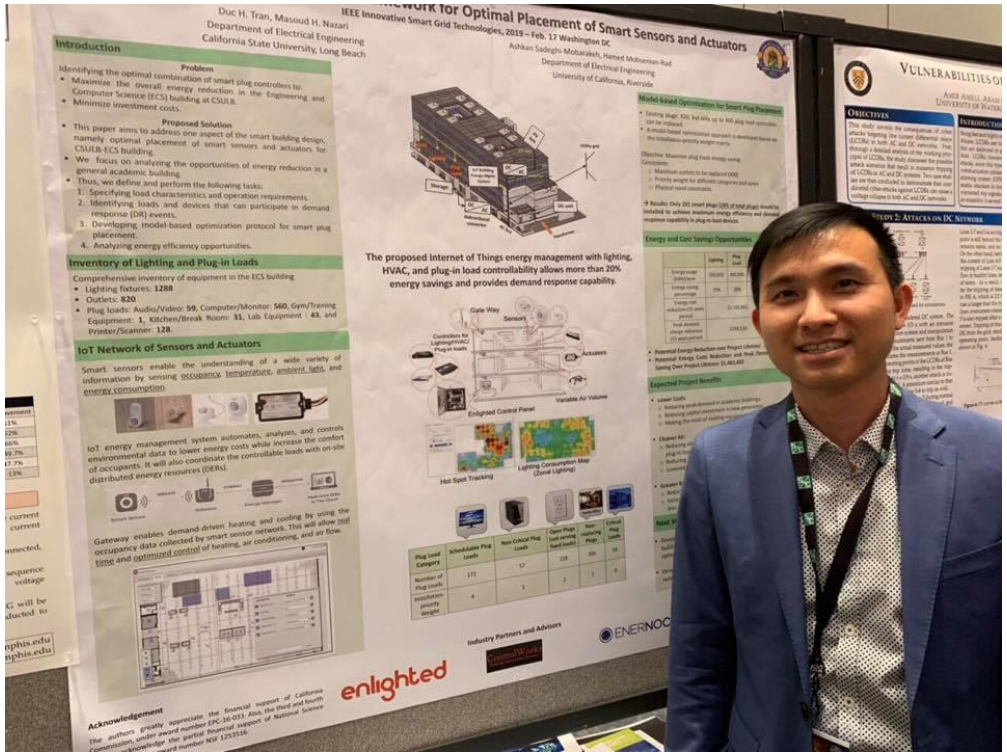
Duc H. Tran, Ph.D.

Outline

- Let’s get to know each other
- Course objective
- Topics covered
- Course information and policy

Instructor

- Duc Tran
- Email: Duc.Tran@csulb.edu
- Office hour: Monday 11AM – 12Noon



Note: Links for class meetings and office hour will be put on the course homepage on Beachboard.

Instructor

- BSEE in Communication (2009) HCMIU
- MSEE in DSP and Power System (2014) CSULB
- PhD in Engineering and Industrial Applied Mathematics (2019) CGU & CSULB
- Current research:
  - Smart grid and smart building
  - Internet of Things (IoT)

Course Objective

Upon successful completion of the course, students are expected to:

- Understand the fundamental concept of probability and statistical methods.
- Have a working knowledge of various methodologies used in the process of formulating and solving statistical problems.
- Have a working knowledge of simulation methods used to confirm, verify or solve complex probability and statistics problems.

Major Course Topics

- Discrete and continuous random variables and their statistics
- Probability distributions
- Sampling techniques
- Hypothesis testing
- Regression
- Markov chains

Laboratory

- Lab experiments: 5 experiments.
- Programming language: Python (I use Pycharm as the Python compiler).
- You can work on the labs by yourself, or work in group (maximum 2 students). Group working is recommended.

Course Information

We will use Beachboard for course's materials, announcements, grades, etc.

Textbook:

- "Probability and Statistics", by Spiegel, Schiller and Srinivasan, ISBN 987-007-179557-9 (McGraw-Hill/Schaun's)

Grading:

- Homework: 10%
- Lab: 20%
- Midterm 1: 20%
- Midterm 2: 20%
- Final Exam: 30%

**Extra credits (for solving in-class exercises): 10%

Homework & Exams

- Homework will be assigned every week. You will have 1 week to solve your homework, scan and upload it on Beachboard.
- Exams: 2 midterm exams and 1 final exam. You will have 2 hours and 10 minutes to do each exam, scan an upload it on Beachboard. Each 5-minutes late submission will take 10 points from your total points.

Notice:

✓Homework solution can be group work.

✓Exams' solution **must be individual work**. Group work will be considered cheating.

Homework & Exams

- Exams are opened Book and Notes (not Internet).
- Exams problems are extracted from in-class Materials/Examples, Textbook Exercises/Problems, and HWs.
- **There are no make-ups for Exams for any reason.**

University Policy on Plagiarism and Cheating

- ***Cheating*** and ***plagiarism*** are not tolerated. Any individual caught cheating on quizzes, homework, lab projects, or the final exam will be punished to the full extent allowed under University regulations. Plagiarism on papers or assignments is not acceptable and work that is plagiarized will not receive credit. Plagiarism is considered cheating.

Note: any time another person's work is used without giving them proper credit, it is considered plagiarism and cheating.

- ***At a minimum****,* any student caught cheating will receive no credit for the work concerned, and will receive a reduction of one letter grade from their final course grade. The official CSULB Policy on Cheating and Plagiarism can be found here:

http://web.csulb.edu/divisions/aa/catalog/current/academic_information/cheating_plagiarism.html