

# ELE829 – System Identification

- **Course Outline**

<http://www.ee.ryerson.ca/undergraduate/dcd/ele829.html>

- **Key Knowledge to Be Acquired**

Fundamental knowledge in system identification: nonparametric models in time and frequency domains, designing data collection experiments, deterministic-stochastic parametric models, least-squares identification algorithms, correlation analysis for diagnostics and model validation.

- **Key Skills to Be Mastered**

Data collection, diagnostics, model selection, identification and validation using MATLAB. Application of theory to real-time systems (identification of a servo-positioning system).

- **Potential Careers**

Control systems engineers, Power system engineers, Robotics engineers, Mechatronics engineers, Embedded systems engineers, System integration engineers, Instrumentation engineers

- **Potential Employers**

Potential employment are in the following industries: automotive, aerospace, oil and gas, power generation, financial institutions, etc. Some examples: Honeywell, Johnson Controls, MD Robotics, Hydro One, Ontario Power Generation, banks (financial modeling), etc.

- **Graduate Studies**

University of Toronto, University of Waterloo, University of BC, McGill University