My name is C. Devon Lin and I am a Professor in the Department of Mathematics and Statistics at Queen's University.

My research lies in uncertainty quantification of computer models, design for computer experiments, design and analysis of experiments, active learning, and the interface of data collection and statistical learning.

Topic 1 Active learning in statistical modeling and machine learning refers to the iterative selection of the most informative samples with the aim of maximizing information acquisition. It has been domostrated the value comparing to one-shot selection of data. The strategies for active learning depend on the underlying statistical models and the goal of the analysis. My group is working on smart and theoretically sound strategies for active learning for compute models.

Topic 2 Computer experiments are essential to modern scientific and technological discovery. They study real systems using complex simulation models and have been widely used as alternatives to physical experiments. My group works on developing new methodologies for design, analysis and modeling of computer experiments with the various types of data, big data and high-dimensional data.

Topic 3 Fractional factorial designs (also known as orthogonal arrays) are used widely in manufacturing and high-technology industries for quality and productivity improvement experiments. Optimal fractional factorial designs are chosen based on various criteria such as minimum abberation, minimum moment, and discrepancy. These designs do not take into accout any prior knowledge of the underlying process and system. My group is working on theoretical development of designs for physical experiments and computer experiments when there is prior knowledge,

If you find any of these topics interesting or would like to hear more about my research, do not hesitate to contact me at devon.lin@queensu.ca