Non-linear Mechatronic balancing system

In this project, **a non-linear mechatronic balancing system**, namely, the **Ball-on-Wheel (BOW)** system was designed, constructed and modelled to investigate the effectiveness of traditional control methods in comparison to modern neural network based control. The aim of the control system is to balance a series of balls without any assistance. Notably, the system makes use of standard industrial equipment including a PLC and servo drive. The project currently serves as an entertaining educational tool for teaching various aspects of non-linear control theory.