ABSTRACT

An overview of bicycle and rider kinematic motions from a series of xperimental treadmill tests is presented. The full kinematics of bicycles and riders vere measured with an active motion capture system. Motion across speeds are ompared graphically with box and whiskers plots. Trends and ranges in amplitude are shown to characterize the system motion. This data will be used to develop a realistic biomechanical model and control model for the rider and for future experimental design.A treadmill is a device generally for walking or running while staying in the same place. Treadmills were introduced before the development of powered machines, to harness the power of animals or humans to do work, often a type of mill that was operated by a person or animal treading steps of a treadwheel to grind grain. In later times, treadmills were used as punishment devices for people sentenced to hard labour in prisons. The terms treadmill and treadwheel were used interchangeably for the power and punishment mechanisms.