Design & Manufacturing of Knee Joint Laxity Measuring Device

Introduction: Knee joint is a diarthrodial joint in human body which is prone to sport injuries and diseases. For example, according to the Arthritis Research UK, around 440,000 males and 770,000 females have osteoarthritis disease in the UK. The treatments may vary from therapies to medication and joint replacement surgery as the replacement surgery is one of the costly treatments. After the joint treatments one of the most commonly faced problems is the joint laxity. Artificial knee joint laxity cause severe problems. Therefore it is important to understand the reason of knee joint laxity after the replacement surgery.

Scope of work: In order to measure the joint laxity and kinematics, a device will be designed and manufactured. In this project, prototypes of normal and artificial knee joints will be used to measure the joint laxity and kinematics.

Career Prospective: It is well acknowledged that the orthopaedic industry is a billion pound industry and lots of opportunities are available. Devices which are used in diagnosing joint problems and disorders are still demanded in orthopaedic and medical fields.