

The Hong Kong Polytechnic University
Department of Health Technology and Informatics

Enquiry:

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2007-2008 POTENTIAL FYP TOPICS

Prof. Daniel CHOW (Tel: 2766 7674, Email: htdaniel@inet.polyu.edu.hk)

1. Effects of different stimulation parameters on muscle activities during whole body vibration.
2. Physiological response during whole body vibration.

Dr. Thomas LEE (Tel: 2766 4931, Email: htmhlee@inet.polyu.edu.hk)

1. Nanomaterials for DNA and protein detection
2. Nanomaterials for bioimaging
3. Nanomaterials for drug delivery

Dr. Aaron LEUNG (Tel: 2766 7676, Email: htaaron@inet.polyu.edu.hk)

1. Evaluation of transfemoral prosthetic socket fitness
2. Measurement of ligament laxity in children
3. Foot orthotic design to simulate plantar pressure of barefoot walking on natural surface

Dr. Parco SIU (Tel: 3400 8593, Email: htpsi@inet.polyu.edu.hk)

1. Molecular mechanism of pressure ulcer
2. Therapeutic/preventive intervention for pressure ulcer

Dr. Eric TAM (Tel: 2766 7670, Email: hteric@inet.polyu.edu.hk)

1. Assistive technology for elderly and disabled (including geriatric chair, memory assistant device, head supports...etc)
2. Assessment and prevention of pressure ulcer (research type projects or product design)

Dr. Raymond TONG (Tel: 2766 7662, Email: htong@inet.polyu.edu.hk)

1. Brain computer interface(BCI) training with functional electrical stimulation (FES)
2. fMRI on stroke rehabilitation

Dr. MS WONG (Tel: 2766 7680, Email: htmswong@inet.polyu.edu.hk)

1. A study on the effectiveness of a new spinal Orthosis, Spinomed to Osteoporotic vertebral fracture
2. A design of hip protector for the patients with osteoporosis
3. A compliance study of the patients with Adolescent Idiopathic Scoliosis to the spinal orthosis

Dr. Mo YANG (Tel: 2766 4946, Email: htmems@inet.polyu.edu.hk)

1. Polymeric patch clamp for cell electrophysiological measurement
2. Micro-Particle Image Velocimetry (Micro-PIV) for polymeric microfluidic chip
3. Hydrogel (PEG) based microfluidic chip

Dr. Ming ZHANG (Tel: 2766 4939, Email: htmzhang@inet.polyu.edu.hk)

1. Biomechanical design and assessment of human support interface, such as foot/ shoe, residual limb/socket etc.
2. Biomechanical modeling of human body with support, such as finite element model and musculoskeletal models.
3. Design of biophysical stimulation device for prevention of bone loss and body fit.

Dr. Yongping ZHENG (Tel: 2766 7664, Email: htzheng@inet.polyu.edu.hk)

1. Assessment for skins after treatment with cosmetics using high frequency ultrasound imaging
2. Ultrasound assessment for fatty tissues, tendons, or muscles
3. Development of PDA-based medical devices