

Advertisement for RA and MPhil/Ph.D. Position for AHEAD funded project

MPhil/Ph.D. Research Assistant position in Electrical Engineering.

The successful candidate will research on developing smart four limbs-based energy harvesters controlling embedded system. Develop the ECG and other sensor system to capture the bio data and feedback control the energy harvester load and other settings. Designing the energy harvesters AI based controlling system, user interface, Display GUI of the embedded system. Also, will research sensor network fusion and data acquisition system developments. A successful candidate for the position would have the experience and skills in following areas.

- Develop embedded system to control the energy harvester

A model should be designed to capture the bio data from ECG and other bio feedback sensors. A feedback from sensor system will be sent to controllers to control the difficulty level of the energy harvester automatically & get the maximum energy output for each human. Also, from a manual input setting, user should be able to change the difficulty level of the machine. A User Interface and a Display should be designed to show the energy output, difficulty level and bio data from the sensors etc.

- Background in Electrical, Electronics, Mechatronics and Computer Engineering, control systems and embedded systems

Study in electrical engineering including automation & control technologies, control systems, embedded systems to build and optimize the AI based controlling system. Also, knowledge in sensors, measuring equipment and controllers are required.

- Experience with energy harvesters

Study and research about previous human energy harvesting models to understand the benefits & drawbacks of each energy harvesting model types. Study energy harvestings models & their embedded systems to implement new features to maximize the energy output from the human body.

- Knowledge in AI and sensors and data acquisition practical experience

Learn more about ECG and other sensors which can capture bio data from the human body while doing exercises. Also, knowledge in AI & data acquisition practical experience are required. Knowledge in software coding is required to build the User Interface.

Preferred Skills

1. Embedded systems, OS Linux , Arduino, Sensor integration
2. Control systems
3. FPGA programming
4. B.Sc. 1st or 2n Upper in Electrical or Electronics or Mechatronics or Computer Engineering

Monthly salary all inclusive LKR 80,000

position available for 2 years and 5 months

Application should be forwarded with contact details two referees

Closing Date: 25/8/2020

The applications should be sent to:

Dr. R. Wijesiriwardana,
Department of Electrical Engineering
University of Moratuwa.
Email: rwijesiriwardana@uom.lk

Via Email or registered post