



Department of Physics and Electronics, Faculty of Science, University of Kelaniya RA (Full Time) Opportunities

The Department of Physics and Electronics, Faculty of Science, University of Kelaniya seeks dynamic and energetic candidates for Five RA (Full Time) positions for a project funded by AHEAD/RIC (Accelerating Higher Education Expansion and Development/Research, Innovation and Commercialization) Grant. The candidates should have a strong background in Electronics circuits design and implementation with a good academic record.

Project Title: Research, Innovation and Commercialization of Consumer Electronics Products for Futuristic Smart Cities targeting International Market

Stipend: Maximum of LKR 55,000 + EPF/ETF per month (Amount will depend on qualification)

Interested candidates should send their curriculum vitae along with a letter of motivation, copies of academic transcripts, list of publications (if applicable, Google Scholar, Research Gate) and the contact information (e-mail) of two potential referees to arunaran@kln.ac.lk on or before 17th of February 2020. Initially the appointments are for a period of one-year and will be extended based on performance. All the appointed RAs have the opportunity to register for higher degrees (MPhil [24 Months] or PhD [36 Months]) at the Faculty of graduate studies, University of Kelaniya. For further information, please contact Dr. A L A K Ranaweera[0112903342(Office) 0777179201(Mobile)], Department of Physics and Electronics, Faculty of Science, University of Kelaniya.

Main Research Areas:

1. Consumer Electronics for Smart Cities
 - a. Parametric Speaker for Precise Audible Control with directional sound propagation - Design and Characterization
 - b. Piezo-electric based energy harnessing and management
 - c. Wireless Power Transfer and its Applications
2. Supercapacitor Assisted Products and Technologies
 - a. Extended application of supercapacitor-assisted low-dropout regulator (SCALDO)- SCALED, SCA White goods, and SCA Surge Absorber optimized for equatorial countries etc
3. Smart PV Energy Harnessing
 - a. Solar Irradiance prediction based control, Smart String Combiners etc

Preferred Competencies and Skills:

1. Comprehensive understanding on Electronics circuit design, analysis and implementation (CAD tools, PCB design, Soldering, Testing, Troubleshooting, and etc)
2. Computer Programming Knowledge (Including Matlab/Python Programming)
3. Circuit Simulation (ADS, PSPICE), EM Simulation (HFSS or CST Microwave Studio)
4. Embedded System Design with Microcontrollers
5. Ability to work in English fluently
6. Ability to work efficiently and meet deadlines
7. Strong communication and good interpersonal skills (Ability to work as a team)

Final deliverables must be commercializable products with a substantial research component. Therefore awareness on how to use following sites will be an added advantage: InnovationQ Plus, DWPI - Derwent World Patents Index, and WIPO