



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**WCC**  
WIRELESS COMMUNICATION CENTRE

## FULLY FUNDED PH.D. VACANCY

- Project Title:** Wireless Charging System for Mobile Wearable Devices
- Source of Funding:** UTM-Intel CREST Research Grant
- Duration:** 3 Years
- Allowance:** RM 2, 500 to RM3,500\*
- Fees:** Fully sponsored by the project.
- Location:** [Wireless Communication Centre UTM](#)
- Project Summary:** Although wireless charging schemes have been incorporated in mobile devices, these do not support simultaneous charging and data transfers. The objective of this research is to develop a near-field communication (NFC)-based wireless charging scheme for mobile wearable devices supporting simultaneous data and wireless charging. Antenna and circuit designs will be developed using Computer Simulation Technology (CST) and Advanced Design System (ADS), and optimized for power transfer efficiency and operating distance. Proof-of-concept prototypes will be fabricated based on these designs. This research will provide novel insights into the performance limits of the NFC-based charging as well as deliver fully functional prototypes for mobile wearable devices.
- Benefits of Joining the Project:**
- 100% sponsorship (Fees and allowance).
  - Allowance is higher than average graduate salary in the field.
  - Opportunity for short term industrial attachment.
  - Opportunity to attend international conference.
  - Become co-inventor for new IP.
- Responsibilities:**
- Design innovative wireless charging front end (antenna and circuitry) using CST and ADS.
  - Fabricate prototype and perform measurement & validation.
  - Produce scientific journals in top publications.
- Requirement\*:**
- Malaysia citizen only
  - Applicant without a Master's degree must complete his/her Bachelor's degree in a field related to E&E engineering sector with a minimum CGPA of 3.67 (first class)
  - Or Applicant without a Master's degree must complete his/her Bachelor's degree in a field related to E&E engineering sector with a minimum CGPA of 3.00 and above
  - Applicant with a Master's degree in a field related to E&E engineering sector must publish at least 3 journal papers or possess working experience in E&E engineering sector of not less than 3 years after the graduation of Master's degree

Interested applicants shall submit their resume through email to the person in charge:



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