NTU- EDB IPP PROJECT

S/N	School	NTU Faculty	NTU Faculty's email contact	Collaborating Company	IPP Project Title	Description of IPP Project	Requirement	Duration of Project
1	CEE	Prof Tan Kang Hai	ckhtan@ntu.edu.sg	Kajima Singapore Office		To study durability of concrete structures using slag cement. When replacing ordiantyr Portland Cement with this type of cement, the concrete produced has low carbon footprint.	BEng in MSE or Chemistry	PhD Project (4 years)
2	EEE	Assoc Prof Tan Eng Leong	eeltan@ntu.edu.sg	Thales Alenia Space & Thales Solutions Asia	Physics-based modelling of ionospheric plasma dynamics for accurate positioning and navigation	Physics-based modelling of ionospheric plasma dynamics for accurate positioning and navigation	EDB-IPP	PhD Project (4 years)
3	EEE	Professor Erick Lansard	erick.lansard@ntu.edu.sg	Thales Alenia Space & Thales Solutions Asia	Earth Observation from Near-Equatorial Orbits	Earth Observation from Near-Equatorial Orbits	EDB-IPP scheme	PhD Project (4 years)
4	EEE	Assoc Prof Tan Eng Leong	eeltan@ntu.edu.sg	GLOBALFOUNDRIES	RF LNA/PA	RF LNA/PA	EDB-IPP	PhD Project (4 years)
5	EEE	Prof Wang Qijie	qjwang@ntu.edu.sg	GLOBALFOUNDRIES	Advanced optical IoT sensor development	Advanced optical/magnetic sensor development	Nil	PhD Project (4 years)
6	MSE	Prof Xu Zhichuan Jason	xuzc@ntu.edu.sg	Nanofilms	Advanced coating techniques for energy storage applications	This position is funded by EDB-IPP program with Nanofilm Technologies International Limited. The candidate should be a Singaporean or Permanent Residence. The project is a good one to provide training in R&D of electrocatalyst development, physical chemistry, fuel cells, electrolyzers, membrane electrode assembly (MEA), electrochemistry, materials characterization, modeling, etc. The candidate would be working on and acquire the below during his/her PhD: • Research into mechanisms of electrochemical reactions including oxygen reduction, hydrogen oxidation, oxygen evolution reaction and hydrogen evolution reaction. • Develop advanced materials for PEMFC and PEMWE and analyze constitutive relationship of structure-performance. • Experience in electrochemical device design and integration. • Quantify performance accuracy based on PEMFC and PEMWE performance.	B.S. degree in chemistry, physics, materials, and related. Experience in working in chemistry and materials research labs.	PhD Project (4 years)
7	SPMS	Assoc Prof S.N. Piramanayagam	prem@ntu.edu.sg	GLOBALFOUNDRIES	Investigations on spin-based Neuromorphic Computing	The collaborative project is in the field of spintronics, an emerging field of electronics. We are working on magnetic materials to achieve high-density, ultra-fast memory to replace SRAM.	Bachelors/Masters degree in Physics or Materials Science	PhD Project (4 years)
8	SPMS	Prof Lew Wen Siang	wensiang@ntu.edu.sg	GLOBALFOUNDRIES	Advanced Tunnel Junction Sensor for Automobile Sensing	Advanced Tunnel Junction Sensor for Automobile Sensing	Bachelors/Masters degree in Physics	PhD Project (4 years)
9	SPMS	Prof Lew Wen Siang	wensiang@ntu.edu.sg	GLOBALFOUNDRIES	Neural Accelerator Powered by Compute-in-Memory Spin-Orbitronics for Edge-AI Applications	Neural Accelerator Powered by Compute-in-Memory Spin-Orbitronics for Edge-AI Applications	Bachelors/Masters degree in Physics	PhD Project (4 years)