From 16th August 2012 to 17th May 2013, two fourth year EE students (Pushpaleela Prabakar & Nallasamy Suriya) under the supervision of Assistant Professor Akash Kumar and Associate Professor Tham Chen Khong participated in iNEMO Design Challenge organized by ST Microelectronics. This year was the 1st batch of the competition to be held in Singapore, where 12 teams, each team comprising two students, participated in the competition. The teams were from Nanyang Technical University (NTU) and National University of Singapore (NUS). The team received the third prize in the competition and a cash prize of $3000.

The motivation behind the competition is to encourage students to think outside the box and create new applications for iNEMO MEMS motion sensors. In the competition, students have the freedom to use the technology to conceptualize, develop and build demonstrable prototypes, addressing new and diverse areas of application such as fitness, recreation, healthcare, navigation and industrial applications.

Our students created a smart cycle called "Cyclometer", which comprises of three main subsystems - Health, Safety and Environment. In the Health subsystem, it calculates the distance, speed and the calorie of the cyclist. In the case of safety, it can perform fall detection (especially useful for elderly patients), turn alert at blind corners and detection of obstacles that are in close proximity to the back of the cycle. The entire system is powered up by the bicycle dynamo, which harnesses the pedal power.

They were commended for fully maximizing the usage of the three sensors provided to them and for displaying evidences of how ST can make of its other products to make this system a more sophisticated one in the future. The videos of the different subsystems can be found at: https://www.dropbox.com/sh/gx41zxqjvgl0baw/lxKB-5s9uy The Tamil News report on this project can be found at: http://www.facebook.com/photo.php?v=568670763164184 while the ST press release can be found at : http://www.st.com/web/en/press/t3424