



CALL FOR APPLICATION

PhD Scholarship - Industrial Postgraduate Programme (IPP)

Industry:	Medical Technologies
Company:	Hill-Rom Services Private Limited
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Company Profile:	<p>Hill-Rom is a leading worldwide manufacturer and provider of medical technologies and related services for the health care industry, including non-invasive therapeutic products for respiratory care, patient support systems, surgical products, and safe mobility and handling solutions. Hill-Rom first established its presence in Singapore in 2008 to support the development of the business in the Asia-Pacific region and around the world. Today, the Singapore facility is home to research and development, the company's global respiratory care business and the Asia-Pacific regional headquarter. The Hill-Rom team in Singapore has played a critical role in the development and commercialization of several new products in the past few years, such as the MetaNeb 4.0 airway clearance system, the VitalCough system as well as the Centuris bed. Hill-Rom's comprehensive product and service offerings are used by health care providers across the health care continuum and around the world in hospitals, extended care facilities and home care settings to enhance the safety and quality of patient care.</p>

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IPP Trainees
Position:

Software Engineer (Sensors and Algorithms)

Proposed Project: Lung Imaging Technologies

Airway clearance to keep our lungs clear of mucus is really important to our respiratory health. Retained secretions can be accumulated in the lungs, which could create an environment for various respiratory infections leading to both acute and chronic respiratory conditions. The Hill-Rom's respiratory care products are able to provide the treatment therapies to mobilize and remove the mucus from the patients. These treatments depend on the patient's lung conditions and each patient may require to adjust the therapy parameters manually. Besides, it is difficult to check whether patient is getting better after the treatment therapy. Therefore, it will be very helpful to assess patients' lung health conditions to provide the personalized therapy. The applicant is expected to work on various advanced sensing technologies for lung imaging, to study, research, and develop the cutting edge software algorithms with shortlisted technologies for imaging the lung in order to design a robust and reliable patient's lung health assessment system in MATLAB/Simulink software.

Requirements:

- Electrical/Electronic/Biomedical Engineering
- Experienced in Digital Signal Processing and algorithms development
- Programming skills in MATLAB, and C/C++
- Good problem solving, mathematics, and analytical skills
- Knowledge of embedded software implementation is preferred
- Resourceful and ability to work independently with minimal guidance
- Strong team player with good written and communication skills