
Ph.D. Position in Out of Band Antenna Performance Modeling

The aim of this project is to model the out of band performance of the antenna based on its in band performance and the physical dimension of the antenna. Whenever an antenna is purchased, the detailed specifications such as gain, radiation pattern, impedance, voltage standing wave ratio (VSWR) are always provided. Some data sheets provide actual measurement results while others provide simulation results. The specifications on these data sheets give critical information about the in band performance of the antenna design. As wireless telecommunication becomes an essential part of our daily lives, and since the antenna is a “must have” component in any transmitter/receiver design, one has to be able to fully understand the performance of the antenna. This means that, not only is the in band performance of the antenna critical, the out of band performance of the antenna is also of significant importance. By knowing the out of band performance of the antenna, electromagnetic compatibility of different antenna systems and potential electromagnetic interference can be avoided.

In this research, the out of band performance of antennas will be characterized. The performance of the antenna over a wide bandwidth, both in band and out of band, will be characterized to study the potential electromagnetic compatibility of different antenna systems. The out of band performance of the antenna will be modeled by using already known information such as the in band performance of the antenna and the physical dimensions of the antenna. The derived model will allow system designers to study the possible electromagnetic compatibility of different antenna systems through a simple and direct way.

Research scholarship is for 3 years. Details and application forms can be found at <http://admissions.ntu.edu.sg/graduate/scholarships/Pages/DSOPhDResearchAwardScheme.aspx>

Interested applicants should send their motivation letter and curriculum vitae (preferably via email) to Assistant Professor LEE Yee Hui <eyhlee@ntu.edu.sg> (other contact info. below).

ABOUT NTU: <http://www.ntu.edu.sg>

Nanyang Technological University (NTU) was ranked 50th globally and 7th in Asia by The Times Higher Education Supplement in a 2004 ranking of the world's best universities. Expanding rapidly on a solid foundation of science and technology, the university is breaking new ground in global education as a comprehensive university.

ABOUT SINGAPORE: <http://www.sg/>

Singapore is a diverse multi-cultural and multi-lingual society. The city offers a very high standard of living at relatively low cost as well as state-of-the-art facilities. Singapore also has excellent connections to all of Asia, with many destinations only a few hours away.