SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
FACULTY OF ENGINEERING
Website: https://cde.nus.edu.sg/ece

Area: Microelectronic Technologies & Devices

Host: Dr Xie Hang

TOPIC	:	**Eddy Current Testing Of Metal Cracks Using Spin Hall Magnetoresistance Sensor**
SPEAKER	:	**Ms Lu Ling** **Graduate Student, ECE Dept, NUS**
DATE	:	**Thursday, 6 January 2022**
TIME	:	**10.00AM to 11.00AM**
WEBINAR	:	**Join Zoom Meeting** **https://nus-sg.zoom.us/j/89174193220?pwd=N0pBb2xwZUJpTWJFS0VxaTNKVFA3QT09** **Meeting ID: 891 7419 3220** **Passcode: 917824**

ABSTRACT

Eddy current testing (ECT) is a common non-destructive technique for inspection of conductive materials. The probe used in ECT to detect change in eddy current and the induced magnetic field is important to improve this technique. Traditional single-coil or dual-coil probe has an inherent drawback of decreasing sensitivity at low frequency and poor spatial resolution. Hall effect sensors suffer from limited sensitivity. MR sensors are attractive for ECT to realize high sensitivity and high spatial resolution. In this seminar, ECT using SMR sensor is presented. The AC-excited SMR sensor with DC output is uniquely suitable for ECT as it does not require any demodulator or lock-in amplifier. Cracks of different features on Aluminium plates are successfully detected and identified with the assistance of principal component analysis (PCA).

BIOGRAPHY

Ling Lu received her B. App. Sc. degree in 2015 from National University of Singapore. She has been working in WinTech-Nano Technology Services Pte Ltd as a failure analysis (FA) engineer since 2016. She is also pursuing the Ph. D degree at ECE of NUS. Her research focuses on study of spin-orbit torque and its applications.