

# **PhD scholarships**

## **Radio Frequency module design on RFSOI (Industrial Postgraduate Program)**

The objective of the PhD projects is to research and develop innovative radio frequency (RF) functional blocks that meet the latest wireless standards and demonstrate process capabilities of GlobalFoundries's SOI technologies. The goal is to demonstrate improved RF performance at a circuit level harnessing device, process, and technology innovations.

### Project scope

- Identify specific functional blocks of interest in a RF front-end module, e.g., low noise amplifiers, power amplifiers, RF switches.
- Identify a targeted application space and its corresponding specifications.
- Design circuits using available GlobalFoundries RF-SOI PDK (GF will provide space on test chips for tapeout and run the wafers for measurements).
- Characterize designed circuits and compare against simulated data and targeted specifications.
- Work closely with RF technology development team in GF to either engineer new devices or tweak process for improved circuit performance.
- Demonstrate GlobalFoundries RF-SOI technology capabilities (and candidate's proposed device/process enhancements) using the designed circuits through journal/conference publications.

### Further information

- The scholarships are for SC and SPR.
- You will be hired by Globalfoundries and enroll as a full-time postgraduate student at the National University of Singapore.
- PhD applications must be submitted by 1 January 2023 (see the [College of Design and Engineering Graduate Research Programmes page](#)).
- If you are interested, please contact A/P Koen Mouthaan (k.mouthaan@nus.edu.sg).