

CHALMERS

Open Ph.D student position in Microwave Electronics

PhD Student Position in MMIC design

Application deadline March 31, 2007

The Microwave Electronics Laboratory (MEL) at Chalmers University of Technology, Göteborg, Sweden, has a PhD student position open for work on multi-functional millimeter wave (mm-wave) MMIC (Monolithic Microwave Integrated Circuits) design. The research area is described below.

Multi-functional millimeter wave MMIC design

Within MEL, we have been working on MMIC design for mm-wave frequencies for more than ten years and we have constructed MMICs for such diverse areas as WLAN, WPAN, radio-link communication, radiometers for space instrument, and different kind of radars. In all of those applications, the MMICs are often the key components since they contain the critical front-end stage of both the transmitter and receiver. Traditionally, an mm-wave front-end has been built by several MMICs, each of them representing one function such as an amplifier, mixer, multiplier, or a VCO. To reduce cost of the overall system, it is important to cut down on the number of discrete MMICs and integrate as much of the functionality as possible into one MMIC, i.e. a multi-functional MMIC.

At MEL, we have over the last few years designed multi-functional MMICs operating at 60 GHz with state-of-the-art level of integration. We are now aiming to become one of the world's best groups in the design of multi-functional MMICs operating above 100 GHz. In an on-going project, we are working towards a single-chip front-end receiver MMIC operating a 220 GHz and this work will be extended to other frequency bands as well. Those MMICs are developed to be used in future ground-based surveillance and space instruments. All of this work is done in a group with close internal and external collaboration and we now need to employ an additional PhD student who is eager to be a part of this very experienced team.

The research will partially be carried out within the newly formed GigaHertz Centre. The centre is a joint venture partially funded by Chalmers, VINNOVA, and industrial partners including Ericsson, Saab, Infineon technologies, ComHeat Microwave, and NXP Semiconductors. This particular project is done in cooperation with Omnisys Instruments AB.

We seek one PhD student with a Master of Science degree in Electrical Engineering or Applied Physics (or an equivalent degree), preferably with a sound knowledge in the design of microwave electronics. Experience in the areas of semiconductors and MMICs would be an important merit. You should be a good team player and it's very important that you have the ability to take initiative. Female candidates are particularly encouraged to apply.

For further information, please contact:

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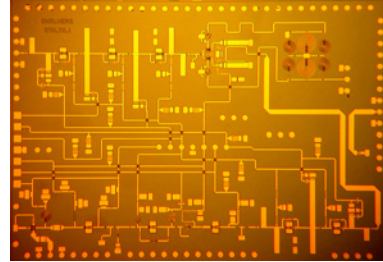
We look forward to receiving your application, which may be submitted by e-mail, containing: application letter, CV, exam with grades, contact details of at least two references and your MSc thesis.

Send your expression of interest quoting reference number 2007/27, by 2007-03-31 to:

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A multi-functional 60 GHz MMIC containing amplifiers, mixer, and multipliers developed at MEL (5×3.5 mm²).

