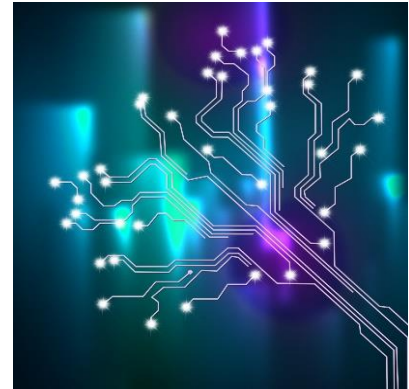


Bachelor-Thesis

Electronic-Photonic Integrated Circuits for Terahertz applications

The field of terahertz integrated technology is gaining momentum with rapidly developing state-of-the-art VLSI capable silicon technologies and recent progress in silicon photonics. The integration of high-performance photonics blocks with high-accuracy electronics blocks is one of the keys for enabling reliable practical solutions for THz applications such as imaging, sensing and next generation 6G communications.



© Colourbox ID# 10408701

IHCT is seeking a motivated Bachelor's student to contribute to the currently ongoing research activities in the cutting-edge field of electronic-photonic integrated circuits. The goal of this work is to investigate the feasibility of on-chip co-integration of photonic-electronic terahertz ICs. The candidate will have an opportunity to acquire most sought-after skills and hands-on experience in industry in the field of integrated circuits. More precisely, he/she will know to carry out 2D/3D optoelectronic electromagnetic simulations, circuit designing, and testing & data analysis for implementing niche Terahertz electronic-photonic integrated circuits.

Note: Students looking to acquire practical experience for their Bachelor's thesis or as an SHK in the field of Electronic-Photonic Integrated Circuits, are strongly encouraged to apply.

Requirements:

- Basic understanding of semiconductors (diode, transistor, bandgap, direct/indirect, etc.)
- Knowledge of silicon integrated circuits (would be an advantage but not necessary)
- Notions in fibre optics (would be an advantage but not necessary)
- Notions in programming with Python or MATLAB

For more information, please get in touch with

Betreuer: Dr. Vishal Jagtap
Raum: FE 00.15
Telefon: +49-202-439-1846
Email: jagtap@uni-wuppertal.de