

# Offer for a 3-Months Internship for Bachelor or Master Students

## Design methods for advanced integrated systems

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### Abstract:

Advanced 3D integration technologies as for example die stacking; allow the tight integration of microelectronic systems. The stacking of different parts as processors, wireless communications, sensors and other components allow the realization of smart systems. The design of those systems requires the extension of current design tools and the development of new algorithms and design flows. The design automation division of Fraunhofer IIS is investigating on 3D system design methodology.

### Tasks:

We are looking for students who support our activities in the development of new design flows for advanced integrated systems. The task will comprise the analysis of existing design tools, programming of algorithms, algorithm evaluation and benchmarking in one of the following disciplines of 3D design:

- Methods for place and route of electronic systems
- Methods for the integration of micro-electromechanical systems (MEMS)
- Partitioning of circuits into subsystems
- Extension of circuit synthesis methods
- Circuit design

The tasks for your traineeship will be defined individually according to your experiences and interests.

### Requirements:

- Study in the fields of computer sciences or electronics
- Programming experiences in Java or C/C++
- Basic knowledge of XML

### Payment Conditions & Application:

Fraunhofer IIS will pay an appropriate allowance to cover living costs and will also provide for accommodation and medical insurance during your stay in Dresden. Travel expenses will not be reimbursed.

If you are interested in the afore-mentioned topic please send your formal application including CV, a copy of your *valid* passport or ID card, motivation letter, latest grades report and the date of your earliest possible start to:

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**About the Institute's Division Design Automation – EAS in Dresden:**

The design of circuits and systems is bridging first specifications to engineering data for manufacturing and, therefore, it is considered to be an important part of the value creation chain from the first idea to the market launch of products. The models, methods, and tools developed and provided by us are designed for an efficient design process from product specifications into integrated circuits, boards, devices, or components. They complement commercial tools, improve application specific design flows, include specifics in process of implementation, and enable designers to increase their efficiency and the quality of designs.

For further information please visit our website: [www.eas.iis.fraunhofer.de](http://www.eas.iis.fraunhofer.de)