



Master Thesis Offer #001 @ Universität der Bundeswehr

A power-efficient integrated comparator design in CMOS technology

APPLICATION AREA

Wireless body networks, wireless sensor networks, sensor front-ends, low-power RF transceivers

OBJECTIVE

The objective of this master thesis is to propose, develop, and design an advanced low-power and high-resolution analog comparator in CMOS technology which will be the main building block for an analog-to-digital converter to be integrated in a body sensor front-end.

CONTENTS

The initial phase will contain investigation of the current state-of-the art in the most recent comparator topologies proposed in industry or scientific literature. The evaluation of these comparators will lead to a novel topology which will be developed by the candidate. The selected comparator then will be designed full-custom (schematic to layout) in CMOS technology with the most recent industrial integrated circuit design tools (Cadence ADE).

DURATION

6 months.

CANDIDATE PROFILE

We are looking for a self-motivated, passionate, and not easily yielding candidate which strives for achieving results and has excellent analytical skills. The applicant ideally should have received the fundamental electronic design lectures, and should have practice and understanding of the basics of analog design. English knowledge is necessary to work in the field. Previous knowledge of Cadence ADE is a big advantage, but is not a must.

DEAL

What we propose in return is an excellent support (both for the technical knowledge and for the available infrastructure) and guidance during your work which will prepare you for a future career in semiconductor industry or research in this domain.

WORK PLACE

This project is conducted in cooperation with Fraunhofer Institute for Modular Solid-State Technologies (EMFT). Most of the work will be performed at Universität der Bundeswehr with occasional visits to Fraunhofer EMFT for disseminating results and cooperating with excellent scientists.

CONTACT

Please send your inquiries or applications to:

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