PhD Student in Variation-aware Model-based Design of AMS/RF Systems

Carna Zivkovic <carna.zivkovic@nxp.com>

NXP Semiconductors Hamburg

Overview:
We are seeking a self-motivated PhD student to join the NXP research team responsible for developing design flow solutions to enable high sigma simulation and verification of AMS/RF systems. This PhD position focuses on building a top-down flow for model-based system specification including impairments and performance parameters of analog blocks that are subject to (statistical) variability. As NXP is the world’s No 1 supplier of automotive semiconductors, you will have an opportunity to be part of developing high quality solutions to address future customer requirements.

Your tasks (responsibilities):

- Introduce a top-down approach to model-based specification of AMS/RF systems including statistical parameter variations
- Break down specification data of a system-level model to IP blocks
- Be involved in the statistical modelling of analog/RF block performance parameters
- System performance optimization with respect to requirements constraints and statistical variability
- Create prototype/demonstrator of AMS/RF system modeling and simulation environment
- Participate in the dissemination and exploitation of the results (scientific publications, present at conferences, workshops...)

Education and requirements:

- Master’s degree in electrical engineering or related fields
- Interest in statistics and mathematics
- Good understanding of RF/analog/mixed-signal design and modeling
- Good programming skills in object-oriented programming languages such as C++
- Familiarity with SystemC/SystemC-AMS modelling concepts is a plus
- Good knowledge in statistical modeling and analysis is a plus
- Knowledge in communication technology is a plus
- Good communication and presentation skills
- Fluent in spoken and written English