Offer for Master / Bachelor Thesis

» Design and Comparative Analysis of low phase noise wideband VCO with frequency doubler. «
System and Circuit Design

Background
Voltage controlled oscillator (VCO) typically form one of the most important components of phase locked loops (PLL). They are used in wide range of applications that include, but not limited to, high frequency wired/wireless communications and radar sensing systems.

Task
• Analysis of different VCO topologies while reasoning the selection criteria.
• Theoretical and analytical phase noise analysis.
• Design of the VCO topologies at 60 GHz with frequency doubler in 130nm SiGe BiCMOS technology.
• Development of physical layout and post-layout analysis.

Requirements
• Lecture “Circuit and System Design”.
• Cadence Virtuoso and ADS experience.

If you are interested send an email to:
Vijayalakshmi Surendranath Shroff
vss@hni.uni-paderborn.de