Analysis, Design, and Implementation of a High Speed Serial Interface (SerDes) in GF22nm FDSOI

• Design and modelling of a complete high speed interface
• Bit-level, word-level, and lane-level synchronisation
• Implementation (design and layout) of core analog-mixed signal components
  – Comparators, equalising amplifiers, DFF, reserialiser
• Implementation of DSP blocks to process the received bit stream
• FPGA programming for the transmitter

• You need/will gain experience in:
  – CMOS design, VHDL/Verilog, Cadence, FPGA design
  – High speed serial interfaces
  – Understanding of digital design
  – Analog-Mixed-Signal design experience

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