Projects related to Embedded Systems and IoT



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Embedded System Engineering - DTU Compute

Hardware accelerators – FPGA and VLSI

Weighted-order statistics and other filters

System design and implementation for real-time non-linear signal processing. Example: noise reduction with edge preservation

Accelerators for numerical methods

Engineer a digital system to find numerical solutions fast. Can we compete with HPC and GPUs?

Neural Processing Units

Explore systems for executing neural networks in edge computing where energy is extremely limited

Arithmetic Circuits

Implement and optimize digital circuits for performing various arithmetic operations at the core of all computer systems

More is available...

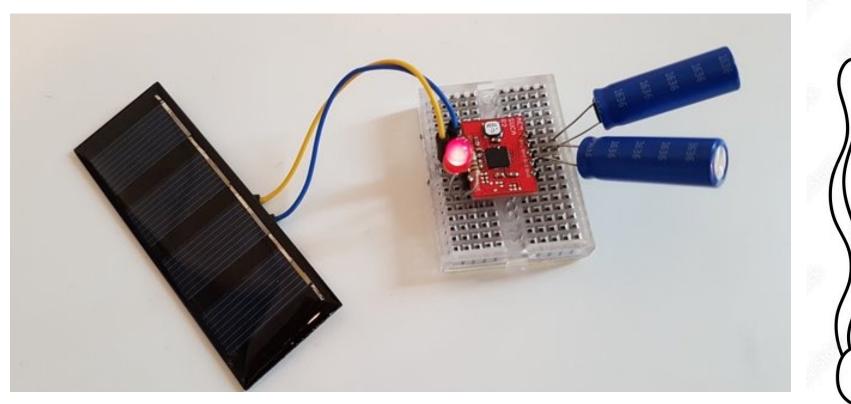
Internet of (Underwater)Things at DTU





Project related to:

- drones, energy harvesting
- intermittent computing
- sensing nodes
- and more...





Projects with companies

Broad experience in projects with industry within digital design for FPGAs, microchips, general embedded systems, medical imaging and more. Bring your own project or come talk to us, and we may be able to facilitate contact.

Digital design and embedded systems

Asynchronous circuit design

Build digital circuits without a clock signal for reduced power consumption and explore other benefits, for example aliasing-free convolution filters.

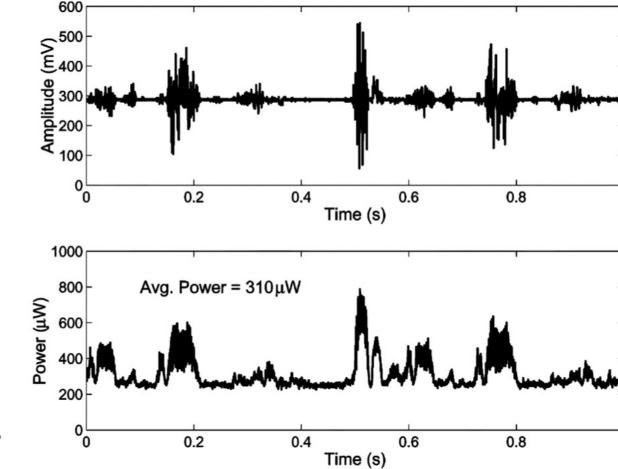
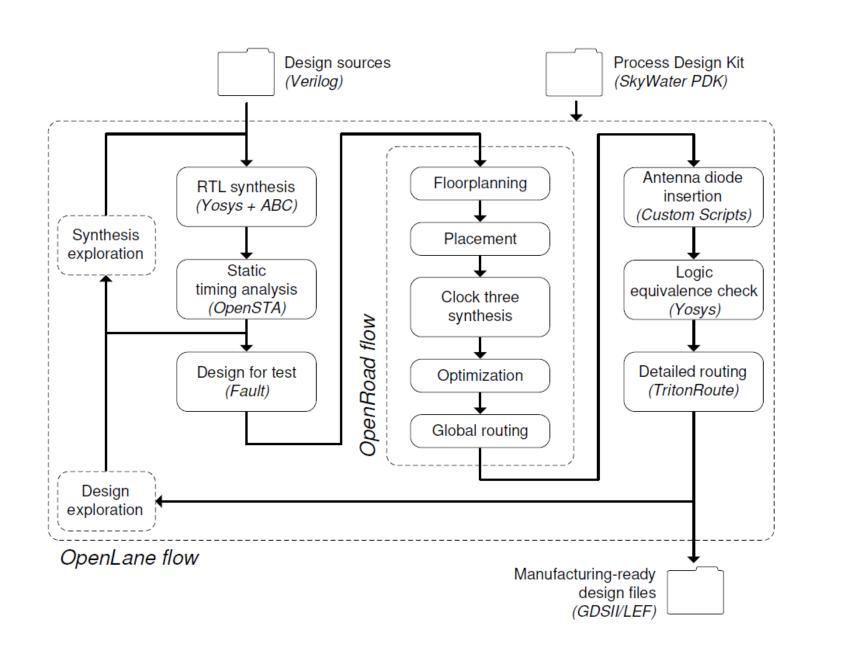
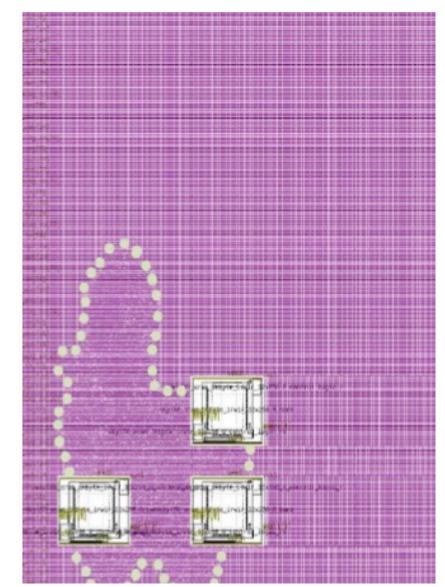


Figure from Schell, Tsividis, IEEE J Solid-State Circ, 2008

Open-source chip design tools

Further explore the tool-chain to design and implement a hardware design in open-source or help improve the tools





Neuromorphic computing

Explore topics in neural networks close to biological neurons including spiking neural networks and hardware to execute them

