

Embedded Systems: WIP projects' list (13/12/2024)

- GPP/ASP
 - o Analysis and experimental evaluation of ASIP design flows
 - <https://www.synopsys.com/dw/ipdir.php?ds=asip-designer>
 - <https://codasip.com/products/codasip-studio/>
 - <http://ip.cadence.com/ipportfolio/tensilica-ip>
 - <https://www.andestech.com/en/homepage/>
 - <http://www.archc.org/>
 - <http://openasip.org/>
 - ...
- Memory
 - o Update and presentation of
 - <https://people.freebsd.org/~lstewart/articles/cpumemory.pdf>
- GCD use case
 - o Development of GCD for both a soft-GPP and a SPP on the same FPGA
- Digital Camera use case
 - o Development of a parallel Digital Camera
 - Multi-GPP/SPP for DCT
- Advanced Operating Systems
 - o FREERTOS
 - Analysis and experimental evaluation of FreeRTOS on ATmega328P
 - o MIOSIX
 - <http://miosix.org/>
 - o TI-RTOS for Tiva
 - <https://www.ti.com/lit/ug/spruhu5d/spruhu5d.pdf>
- SystemC
 - o Analysis and experimental evaluation of SystemC-TLM (Transaction Level Modeling)
- Design Methodologies
 - o Analysis and experimental evaluation of ESL methodologies
 - ESP
 - Research platform for heterogeneous system-on-chip design that combines a scalable tile-based architecture and a flexible system-level design methodology
 - o <https://esp.cs.columbia.edu/>
 - Others
 - SystemCoDesigner, CoFluent, Daedalus/Sesame, SpaceStudio, Metropolis, ForSyDE, Poseidon Design, SCE (System-on-Chip Environment), Koski, PeaCE/HoPES, MAPS, ...
 - o Experimental evaluation and improvement of HEPSYCODE
 - Use cases modeling
 - MDE Eclipse-based GUI and code-generation
 - Improvement of Concurrency metric
 - Improvement of arbitration mechanisms
 - ...
 - o Analysis and experimental evaluation of CPS methodologies
 - MODELICA, Ptolemy/Ptolemy2, ...

Please, check also here for other opportunities (some are still available):

http://www.pomante.net/sito_gg/Thesis2021.htm