

Thesis/Project proposal

Name	Energy/Power-Aware System-Level Design Space Exploration for Heterogeneous Parallel Dedicated Systems
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Type	Implementation, Research
Keywords	EDA, DSE, Energy, Dark Silicon
Description	<p>The work focuses on the extension of an ESL HW/SW Co-Design methodology in order to consider energy and power issues. In particular, the goal is to improve an existing DSE approach to suggest implementations that:</p> <ul style="list-style-type: none">- Satisfy both energy and timing requirements (or minimize energy consumption while satisfying timing requirements)- Satisfy both power and timing requirements (or minimize peak power dissipation while satisfying timing requirements)- Both of the previous ones
Expected Duration	3-6 months
References (Online)	<p>L. Pomante, D. Sciuto, F. Salice, W. Fornaciari, C. Brandolese. "Affinity-Driven System Design Exploration for Heterogeneous Multiprocessor SoC", IEEE Transactions on Computers, vol. 55, no. 5, May 2006.</p> <p>L. Pomante, "System-Level Design Space Exploration for Dedicated Heterogeneous Multi-Processor Systems". IEEE International Conference on Application-specific Systems, Architectures and Processors, Santa Monica, Settembre 2011.</p> <p>L. Pomante, G. Valente, V. Muttillio, D. Ciambone. "HEPSIM: an ESL HW/SW Co-Simulator/Analysis Tool for Heterogeneous Parallel Embedded Systems", In 6th EUROMICRO/IEEE Workshop on Embedded and Cyber-Physical Systems (ECYPS'2018), Budva, Montenegro, 2018.</p>
References (Attached)	