

Title: Virtual Platform for FW/SW development

Speaker: Alessandra Neri, Controller Virtual Prototyping Engineer, PUNCH Softronix

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Abstract:

In the development of Embedded Systems, Virtual prototyping is overcoming the limitations of the standard approach where HW and SW development are typically serialized or only partially overlapped, because of the unavailability of engineering samples of a new microcontroller. Unfortunately, to maximize the benefits of a Virtual Prototype, working with a standalone microcontroller model is not sufficient. For this reason, in PUNCH Softronix we develop Virtual Prototypes of the complete embedded system, modeling in SystemC all ASICs and the logic surrounding the main microcontroller. In addition, we also develop an integrated Virtual Testbench to provide an easy-to-use and self-consistent development/debug/validation environment. Virtual Prototypes and Virtual Testbench are combined in a complete Virtual Platform, that has been widely used during the development of our PUNCH Electronic Platform, providing several benefits in early SW development, verification tests, stress tests, finally accelerating the adoption a new microcontroller family.

Speaker Bio: Alessandra Neri is working in PUNCH Softronix since 2020 as Controller Virtual Prototyping Engineer. She has a degree in Electrical Engineering (2006) and a Ph.D. in Metrology, Electronic Systems (2009), both from Politecnico di Torino. She joined General Motors Powertrain Europe in 2012 covering different roles in engine control modules field. Since 2020 she supports the Virtual Prototyping in PUNCH Softronix, and she is now technical responsible for the Virtualization of the PUNCH Electronic Platform