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Title: “Towards Reliable and Ultra Low Energy Digital Circuits with Sub/Near Threshold Supply Voltage”

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The first author Pu Yu is a joint Ph.D. student of National Univ. of Singapore and Eindhoven Univ. of Technology. He started the Ph.D. from January 2005, working on ultra low-energy digital circuit design. Since Dec. 2006, he was on an internship at NXP Semiconductor Research, Eindhoven.

In this poster the authors proposed to use a sub/near threshold supply voltage for digital applications to achieve many times energy per operation reduction. A series of techniques to handle the throughput degradation and process variation tolerance degradation brought along by the sub/near threshold supply are also proposed.

ProRISC (Program for Research on Integrated Systems and Circuits) is the Micro-Electronic design division of the Technology Foundation in the Netherlands. It serves as a platform for all the researchers in the field of microelectronics and the users of the results of the research projects. Around 200 posters were presented this year. The best post award was judged by an european expert jury. This year the best poster is cosponsored by IEEE EDS Benelux and IEEE CAS Benelux.