

Recent Progress in Superconductive Digital Electronics Part II Japanese Contributions

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Abstract – This overview (Part II) contains highlights of articles contributed by Japanese authors to the Special Section of IEICE Transactions on Electronics, vol. E91-C (March 2008). We focus on the project developments performed by several research groups in Japan under projects sponsored by NEDO. A new generation of RSFQ related research projects was launched there in 2006/07. Very important steps towards the future application of RSFQ circuits were; (a) the demonstration of cryocooled systems with high-speed I/O interface and MCM carrier in the past network project, and (b) the wideband hybrid ADC system. The design capabilities demonstrated with the CORE1 microprocessor are developed to a VLSI level and demonstrate the transition from analog circuit design towards automatic integrated circuit design based on hardware description languages.

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