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Superconducting critical current measurements in pulsed magnets FEDOR F. BALAKIREV, Los Alamos National Laboratory, Los Alamos, NM, USA, PHILIP J.W. MOLL, NIKOLAI D. ZHIGADLO, JANUSZ KARPINSKI, BERTRAM BATLOGG, Laboratory for Solid State Physics, ETH Zurich, Switzerland — Measurements of critical current in single crystals of high temperature superconductor using pulsed magnetic fields are tricky due to short time scale, fast field sweep rate and sheer absolute current values in restricted sample space. We will present a measurement system design that addresses the challenges via a combination of Field Programmable Gate Array (FPGA) fast-response signal generation and detection architecture and Focused Ion Beam crystal shaping.

Prefer Oral Session
 Prefer Poster Session

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