Contribution ID: **46** Type: **Poster presentation**

Brain Emulation for Image Processing

Tuesday 7 June 2016 15:00 (1h 30m)

We present an innovative and high performance embedded system for real-time pattern matching. The design uses Field Programmable Gate Arrays (FPGAs) and the powerful Associative Memory chip (an ASIC) to achieve real-time performance. The system works as a contour identifier able to extract the salient features of an image. It is based on the principles of cognitive image processing, which means that it executes fast pattern matching and data reduction mimicking the operation of the human brain.

Author: LUCIANO, Pierluigi (UNICLAM and INFN)

Co-authors: SOTIROPOULOU, Calliope-louisa (Universita di Pisa & INFN (IT)); DELL'ORSO, Mauro (INFN-Pisa); GIANNETTI, Paola (Universita di Pisa & INFN (IT)); CITRARO, Saverio (Universita di Pisa & INFN (IT)); GKAITATZIS, Stamatios (Aristotle Univ. of Thessaloniki (GR))

Presenter: LUCIANO, Pierluigi (UNICLAM and INFN)

Session Classification: Poster session 1

Track Classification: Real Time System Architectures and Intelligent Signal Processing