The WaveCatcher Digitizers
High End Instrumentation for characterization of Advanced Fast Detectors

Dominique Breton, Jihane Maalmi, Pascal Rusquart - CNRS/IN2P3/LAL (Orsay)
Eric Delagnes - CEA/IRFU (Saclay)
2 to 64-channel Oscilloscope-like Plug and Play Synchronous Systems

- Based on the SAMLONG Analog Memory ASIC
- Sampling rate ranging between 400 MS/s and 3.2 GS/s.
- 1024 samples/channel
- 12 bits of dynamic range
- Sampling jitter < 5 ps rms at the system level!
- Advanced Oscilloscope-Like Software (Plug and Play)
  - Advanced triggering options
  - Individual Rate counters
  - Embedded feature extraction: Baseline, Peak, Charge, Digital CFD (TDC-like mode)

Example: Jitter on a $\Delta t$ of 10 ns = 5 ps rms
You are welcome!

Even more if you are interested in:

- Waveform digitizers
- Fast Analog Memories
- Trigger Architecture
- Our custom Readout architecture and Protocol
- System optimisation
- Picosecond Time Measurements
- Detector Characterization