19th REAL TIME CONFERENCE

May 25-30, 2014

Exhibition Guide

Lunch time Exhibitor Presentation

Nara Prefectural New Public Hall

IEEE NPSS NUCLEAR & PLASMA SCIENCES SOCIETY

RCNP

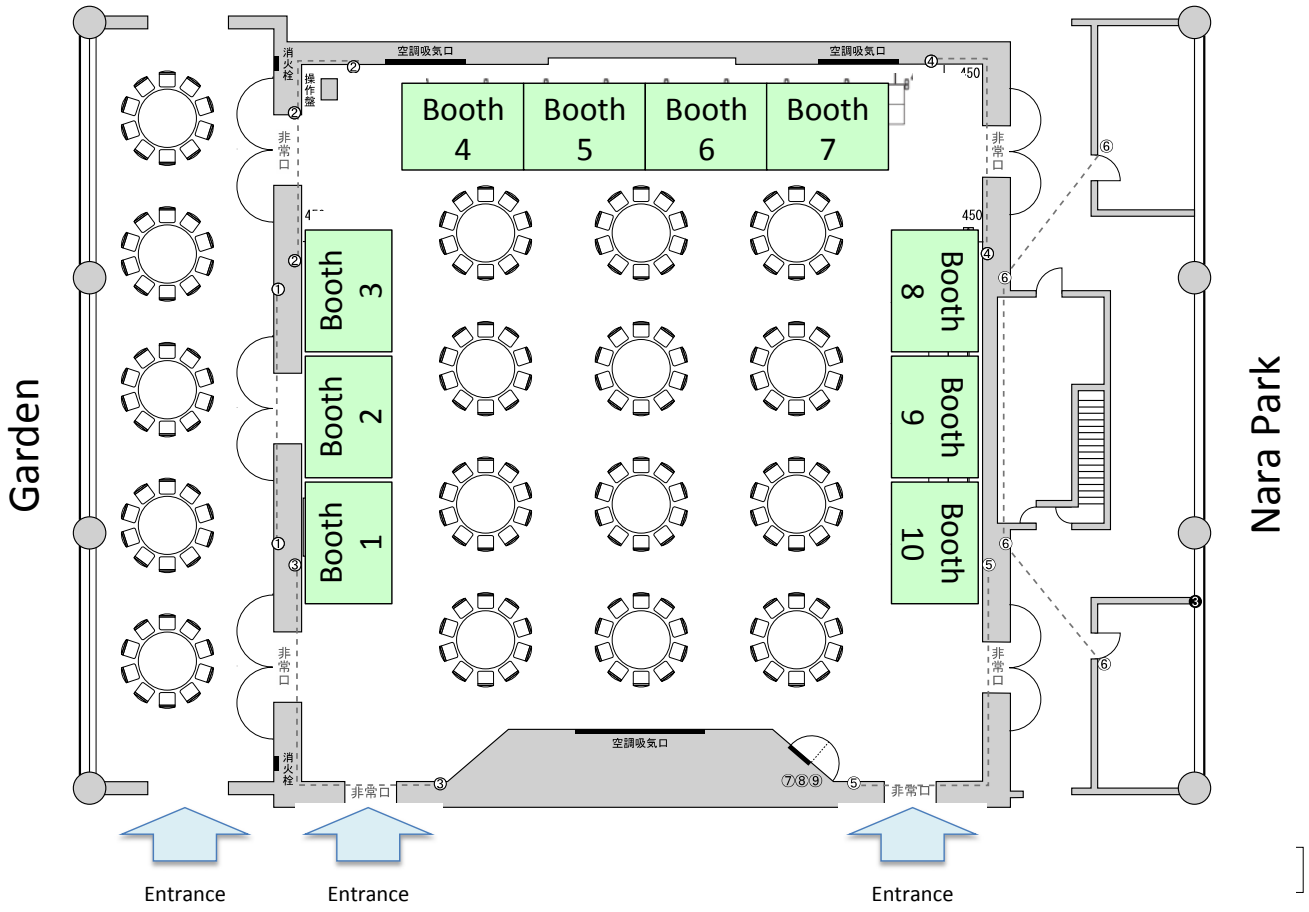
RIKEN NISHINA CENTER

Exhibitors

Exhibition will take place in Upstairs Reception Hall from May 26 to May 28

Booth #1	SEIKO EG&G and CAEN
Booth #2	TechnoAP
Booth #3	N.A.T.- DESY collaboration
Booth #4	KEK and RIKEN
Booth #5	ELMA
Booth #6	Struck Innovative Systeme GmbH
Booth #7	Uber Co. LTD.
Booth #8	W-IE-NE-R Plein & Baus Corp.
Booth #9	National Instruments
Booth #10	Pentair Schroff GmbH

Exhibition Floor Plan



SEIKO EG&G

CAEN
Tools for Discovery

A SUCCESSFUL WORLDWIDE LEADING COMPANY IN ELECTRONIC TOOLS FOR DISCOVERY

CAEN was established in 1979 and is today one of the most important industrial players in the nuclear physics research market. Its products are currently used in the most prestigious laboratories, research centers, and universities worldwide. Throughout the years CAEN has strengthened by inserting a "massive" number of young physicists in all of its business activities: today 10% of the total employees are physicists. CAEN operates in a highly specialized international market: the design, production and supply of electronic instrumentation for radiation and low light sensors. The company targets two main areas: nuclear physics research (both at high and medium-low energies) and its fall-out applications. CAEN is involved in several leading-edge R&D collaboration projects and has also been involved in R&D projects in the fields of security and environment.

N.A.T. - DESY Collaboration on High Performance Control Systems

N.A.T., a privately owned company based in Germany, provides solutions based on common hardware standards for the communication, defense & aerospace, test & measurement and research markets.

DESY is one of the world's major accelerator centres and a leading developer of high performance control systems. As part of its mission as a public research organization, DESY collaborates with industry and business to promote new technologies that will benefit society and encourage innovations.

N.A.T. and DESY have joined forces to create board and system level products based on the MicroTCA standard and the AMC form factor. The main focus of this cooperation is the development of system components in preparation for the European XFEL, a next-generation free electron laser facility currently under construction at DESY. N.A.T. adapted its MicroTCA Carrier Hub (MCH) for use in large scale physics research applications and incorporated intelligent switching and system management features as well as multi-core processing capabilities to accommodate custom hardware and software extensions.

N.A.T.'s product range covers all standard form factors, including AdvancedTCA, while DESY's focus is on the MicroTCA.4 standard. DESY develops MicroTCA boards (both AMCs and RTMs) and makes these design available to industry through licensing. A broad portfolio of support, consulting and training activities complements the joint contribution of N.A.T. and DESY to the rapidly growing MicroTCA community.

Techno AP

Techno AP is specialized in development, manufacturing and sale in the radiation measurement field. All of our products are developing at ourselves. Our company is located in Ibaraki, Japan. The Ibaraki is located at northeast of Tokyo. In Ibaraki, there are many research facilities, such as KEK (High Energy Accelerator Research Organization), JAEA (Japan Atomic Energy Agency), J-PARC (Japan Proton Accelerator Complex) etc. and our company is located close to them. Additionally, we have supplied our products to them many times.

Our main products are as following;
We can customize the VME, NIM, and unit (chassis)-type.

[Digitizer]
・APV7108-8(1GSPS, 8CH, 8Bit, GbEther)
・APV7104-14(1GSPS, 4CH, 14Bit, GbEther)
・APV7516-8(500MSPS, 16CH, 8Bit, GbEther)
・APV7508-14(500MSPS, 8CH, 14Bit, GbEther)
[Time Spectrometer]
・APV7502(3GSPS, 2CH, 8Bit)

[DSP(TDC, QDC, PSA, WAVE for scintillator)]
・APV8104-12(1GSPS, 4CH, 12Bit, GbEther)
・APV8516-8(500MSPS, 16CH, 8Bit, GbEther)
・APV8508-14(500MSPS, 8CH, 14Bit, GbEther)
[DSP(Trapezoidal Filter for Ge, Si, SDD)]
・APV8016(100MSPS, 16CH, 8kch)

Furthermore, we can provide the scintillation detectors, such as LaBr3(Ce) and NaI(Tl) etc., and the high-speed preamp and the Handheld instruments etc. In addition, Techno AP can also develop the special specifications product.
For more information, please visit our booth.

RIKEN NiSHiNA CENTER

High Energy Accelerator Research Organization
Institute of Particle and Nuclear Studies
RIKEN Nishina Center for Accelerator-Based Science

The RIKEN Nishina Center for Accelerator-Based Science is a research facility for nuclear physics in Japan. Some NIM/CAMAC/VME modules have been developed for our experiments. In this exhibition, we'd like to show a FPGA-based NIM module named as General Trigger Operator (GTO). It is a versatile NIM logic I/O module having Ethernet and USB connectivities.

ELMA
Your Solution Partner

Elmas embedded and electronics industry solutions serve a wide range of markets, including Scientific Research, Industrial, Transportation, Military, Aerospace, Medical, Telecommunications, Broadcast, and handheld Radio. Elmas modular approach allows fast, cost-effective, and proven performance from customized designs to standard platforms. The base products are centered around 19" and 23" Eurocard specifications, ATR, and Small Form Factor as well as custom designs. Elmas system platforms, backplanes, storage, and related embedded products employ creative design innovations based upon OpenVPX/VPX, MicroTCA, CompactPCI Serial and other architectures. Supporting the electronics ecosystem, Elma also offers modular cabinet enclosures, cases, and front panels & handles for pluggable boards and power supplies.

The Enclosures & Components product line offers modular instrument cases, enclosures, and accessories for the electronics industry as well as subracks and components that support the Embedded market. The Rotary Switch product line is a technology leader in precision rotary and coded switches, mechanical and optical encoders and LED arrays, light-pipes, and light tubes. Customization is offered "in any quantity".

The Elma Group has its headquarters in Wetzikon, Switzerland. The Elma Group incorporates design and production facilities in Switzerland, Germany, China, United Kingdom, France, Israel and the USA as well as a production facility in Romania. Elma also has a company owned sales organization in Singapore. Since 1996, the Group has been listed on SIX Swiss stock exchange.

struck innovative systeme

Struck Innovative Systeme offers board-level electronics and data acquisition systems. The main focus is on VME, MTCA.4 and PCI Express designs. The product range spans digitizers, interface cards and digital I/O. Recent developments in the VME standard comprise the 16-channel 250 MSPS 14-bit and 125 MSPS 16-bit SIS3316 digitizer cards and the SIS3153 USB3.0 to VME interface. Our SIS8300 10-channel 16-bit 125 MSPS MTCA.4 digitizer was developed for applications at the European XFEL and other accelerators. The upcoming SIS8325 10-channel 16-bit 250 MSPS MTCA.4 digitizer is under development in the Helmholtz Validation Funds (HVF) framework in a close cooperation with DESY. The MTCA.4 digitizers are complemented by the 10-channel downconverter DWC10 and the 8-channel downconverter one channel vector modulator DWC8VM1. Both are built under license of DESY and used in low-level radio frequency (LLRF) applications.

www.uber-corp.co.jp

ÜBER CO., LTD.

ÜBER Company is a member of PICMG and our products fully comply with the international standard. We can meet the wide variety of packaging requirements for our customer's specific system from designing to manufacturing by using our various kinds of equipment and technologies. We will continually evolve our company, responding to the customers' latest needs.

AdvancedTCA, AdvancedMC, µTCA

- Shelf, Subrack, Front Panel for debug in conformity with PICMG3.0.
- Available for Custom specification for installation and wiring of power supply, Backplane, Fan, EMC Shields.

VME

- MPS, Custom Subrack, Front Panel in conformity with IEEE1101.1 VMEbus.
- Available for Custom specification of design and manufacturing of Subrack with power supply, Backplane, Cooling System, EMC Shields

CompactPCI

- MPS, Custom Subrack, Front Panel in conformity with PICMG2.0 CompactPCI.
- Available for Custom specification of design and manufacturing of Subrack with power supply, Backplane, Cooling System, EMC Shields.

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2nd Factory	5-5 Yaogikita, Yao-city, Osaka, 5810016 JAPAN
Osaka Sales Office	4-8-1 Yaogikita, Yao-city, Osaka, 5810016 JAPAN
Tokyo Sales Office (Showroom)	Gotanda NT Blg. 4-5-2 Higashi-Gotanda, Shinagawa-ku, Tokyo, 1410022 JAPAN
Contact us	sales@uber-corp.co.jp

W-IE-NE-R Plein & Baus

Werk für Industrie-elektronik, Nuklear-elektronik, Regelungs-technik

A Phoenix Mecano Company

W-IE-NE-R Plein & Baus GmbH is providing a full line of electronics for detector read-out, experiment control and diagnostics.
Combining superior designed mechanic chassis with high quality, microprocessor controlled, low noise power supplies and a high level of integrated diagnostic and monitoring W-IE-NE-R became a world leader for powered chassis in all standards as VME, VME64x, VXS, MTCA, … .
In a joint venture between W-IE-NE-R and ISEG we provide the new high density, multi-channel low and high voltage power supply system MPOD. MPOD can house up to 480 independent high voltage, 80 low voltage channels or any mixture of low and high voltage. With MARATON in addition to laboratory style power supplies also a range of radiation hard and magnetic field tolerant units was developed.
A family of high performance controllers for VME and CAMAC with USB2 interface, multi-functional VME and NIM modules as well as a new VME display and bus-analyzer completes our line of instrumentation.

NATIONAL INSTRUMENTS™

Since 1976, National Instruments (NI) has equipped engineers and scientists with tools that accelerate productivity, innovation and discovery. Global leaders in nearly every industry rely on NI products to help them work better, smarter, and faster to achieve their goals from design to production. NI's graphical system design approach provides an integrated software and hardware platform that simplifies and accelerates the development of any application requiring control and measurement.

For the Scientific Research & Big Physics community, National Instruments adapts customizable commercial off-the-shelf (COTS) products to suit the needs of experimental physics applications. When combined with Linux and Epics support, along with radiation and magnetic field testing, National Instrument's PXI and CompactRIO modular instrumentation platforms offer compelling advantages for control, measurement, and diagnostic applications in projects such as accelerators, fusion reactors, synchrotron light sources, and telescopes.

PENTAIR

Schroff®

Pentair Technical Solutions is a global leader of systems and solutions that safeguard industrial controls, electrical components, communications hardware, electronic devices, and electrical heat management systems.

About Schroff
The Schroff brand contains a broad portfolio of products from printed circuit board (PCB) accessories, such as card retainers, conduction cooled frames, front panels and handles to subracks, cases, backplanes, power supplies, cabinets and pre-assembled chassis for embedded computing systems.
Schroff provides AdvancedTCA, MicroTCA, CPCI Serial and VPX platforms with superb physical construction, optimal cooling, reliable power supplies, efficient data distribution and system management.

Exhibits
• ATCA Chassis 14-Slot 450W/40G P/N 11990-604
The physics community is working on one hand based on MTCA and on the other hand with ATCA.
• 2-Slot AdvancedMC System P/N 11850-023
This chassis represents the MTCA.0 standard and can be used for really small applications.
• MTCA.4 Chassis 7-Slot P/N 11850-021
This chassis is mainly used for Physics applications where no redundancy is required.
• MTCA.4 Chassis 12-Slot P/N 11850-026
Chassis used for maintaining the accelerators.

Lunch time Exhibitor presentation

Ground floor Conference room 1-2

Lunch time Exhibitor Presentations will take place in Ground floor Conference room 1-2. The presentation will be in the lunch time. The attendees should bring your BENTO (lunch box) to hear the presentation.

Monday, May 26

12:20 – 12:50
The Real-Time Digital Signal Processors with radiation detector produced by Techno AP
TechnoAP Co. Ltd.

Tuesday, May 27

12:20 – 12:50
Digital Pulse Processing for Physics Applications
CAEN

Lunch time presentation

Techno AP

The Real-Time Digital Signal Processors with radiation detector produced by Techno AP.

Techno AP is specialized in development, manufacturing and sale in the radiation measurement field. All of our products are developing at ourselves. In this lunchtime session, we would like to introduce our new products, DSP (Digital Signal Processor) and Digitizer. The APV8508-14 of new model of DSP is a waveform analysis board for scintillation detectors with equipped ADC (500 MHz, 14 bit, 8 CH) of high-speed and high resolution with each channels. The APV8508-14 has not dead time because of 500 MHz TDC, QDC, PSA analysis by FPGA and the real-time pipeline processing based on waveform processing. Therefore, the APV8508-14 is able to measure the high-count rate of more than 1 Mcps. Furthermore, the APV8508-14 is able to correspond to the high rates of more than 100 kcps per CH in the list mode with using the Gigabit ethernet (GbEther) connection. Time stamp has 64 bit width in 7.8 pico second LSB and the list data acquisition is possible without losing the time resolution of a few hundred pico seconds of the detector.

In addition, the new products of DSP include APV8104-12 (1GSPS, 4CH, 12Bit, GbEther), APV8516-8 (500MSPS, 16CH, 8Bit, GbEter), APV8016 (100MSPS, 16CH, 8kch) etc. In the digitizer, our new products are APV7108-8 (1GSPS, 8CH, 8Bit, GbEther), APV7104-14 (1GSPS, 4CH, 14Bit, GbEther), APV7516-8 (500MSPS, 16CH, 8Bit, GbEther), APV7508-14 (500MSPS, 8CH, 14Bit, GbEther). We would like to introduce the details of these new products in a lunchtime session.

Please visit the lunchtime session.

Lunch time presentation

CAEN
Tools for Discovery

Digital Pulse Processing for Physics Applications

Nowadays, the availability of very fast and high precision ADC chips has driven physicists and engineers to realize acquisition systems in which the analog-to-digital conversion is performed as close as possible to the detector. This approach is reversed with respect to more traditional acquisition chains which were made out of mainly analog circuits with the A-to-D conversion at the end of the chain. The use of fast digitizers to acquire signals coming from radiation detectors opens new possibilities and make the front-end and readout electronics much more flexible and compact. The extraction of the quantities of interest, such as energy, timing, etc. is now performed on the digital data stream by means of dedicated digital pulse processing (DPP) algorithms. The purpose of this Digital Pulse Processing Workshop is to present the basic principle of operation of a waveform digitizer with DPP capabilities and how it can be used for physics applications.