

The CHEP'15 Parallel Program

CHEP'15 Program Committee

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16 April 2015



21st International Conference on Computing in High Energy and Nuclear Physics **CHEP2015** Okinawa Japan: April 13 - 17, 2015

Overview of the CHEP'15 PC work



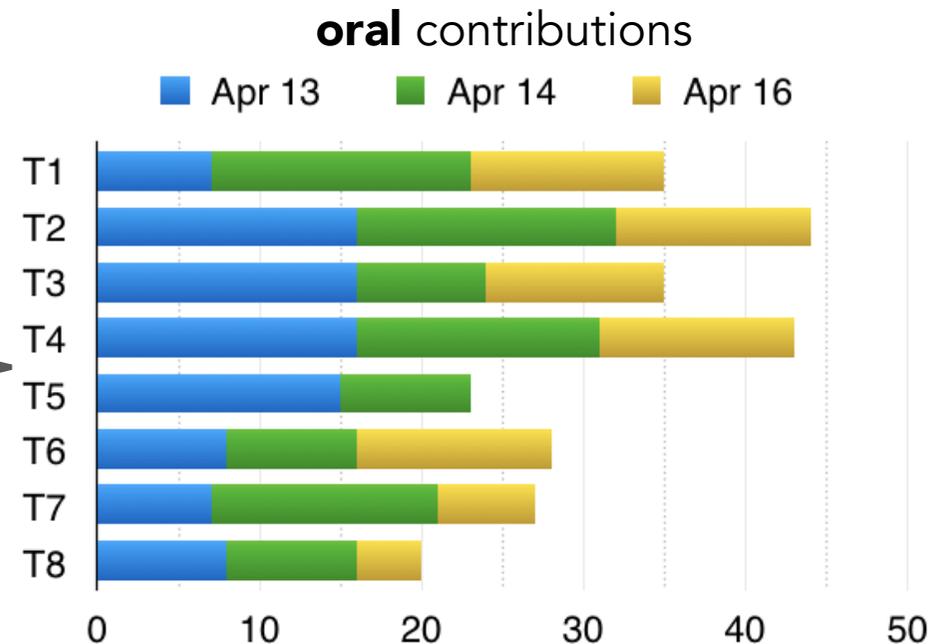
A total of **535 contributions** (after few merges)

Opted for a scheme in the parallel program that allowed a large number of oral slots (264 slots), the rest to go as posters

- ◆ “keywords process” **NEW**
- ◆ 15-min slots minutes talks **NEW**

Few withdrawals, so totals are:

- ◆ a total of **255 oral contributions**
- ◆ a total of **248 poster contributions**
- ◆ **424** individuals listed as “presenters”



Proceedings:

- ◆ max 8 pages for orals, max 8 pages for posters **NEW**
- ◆ due on **May 17th**
- ◆ one month after end of the conference, and ***no extension will be granted*** **NEW**

Keywords



Bottom-up approach to define tracks a-posteriori

- ◆ multiple topical “keywords” selectable at the abstract submission time

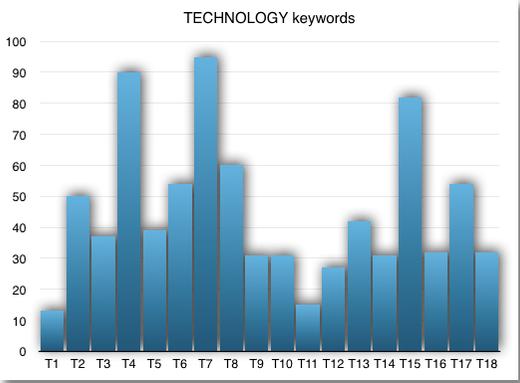
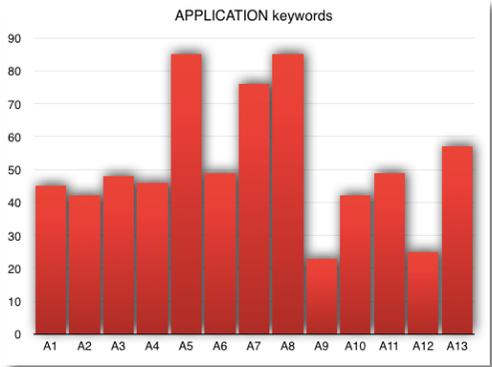
Application keywords
A01 DAQ
A02 Trigger
A03 Simulation
A04 Reconstruction
A05 Data analysis
A06 Data stores
A07 Experiment frameworks for WAN distributed computing
A08 Middleware and services for production-quality infrastructures
A09 Outreach
A10 Multi-discipline / multi-experiment topic
A11 Computing models
A12 Data Preservation
A13 Monitoring

Technologies Keywords

T01 Control systems
T02 Event processing frameworks
T03 Data structures and algorithms
T04 Data handling/access
T05 Databases
T06 Storage systems
T07 Computing facilities and infrastructures
T08 Software design
T09 Software development process
T10 Performance and validation tools
T11 Continuous integration systems
T12 Parallel programming
T13 Networking
T14 Collaborative tools
T15 Cloud computing
T16 Virtualisation
T17 High performance computing
T18 CPU architectures, GPU, FPGA

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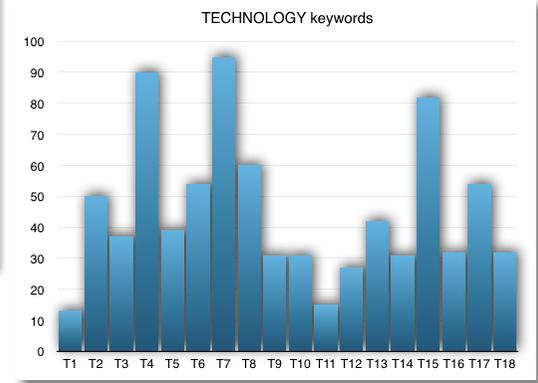
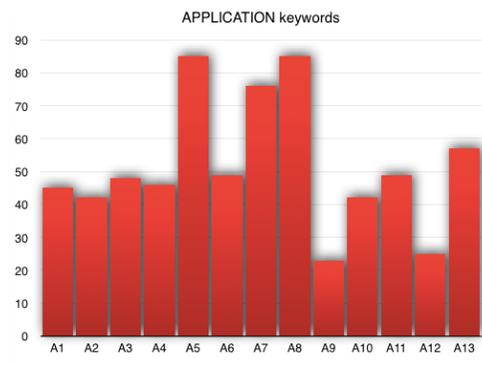
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PC chairs and keyword conveners

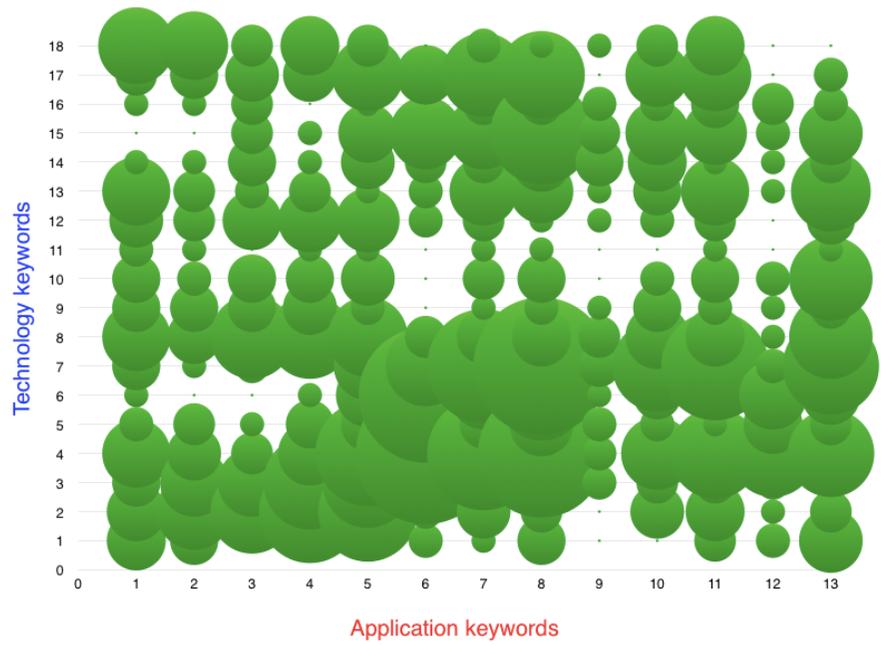
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CHEP'15 tracks



Track 1 - Online computing

DAQ and Trigger; development, design, architecture for filtering, reconstruction, etc. and use within experiments and facilities; evaluation and testing of such systems; parallelism, HPC, and accelerator use in such systems; event building and farm networks; compute farms for high-level triggering; configuration and run controls; describing and managing configuration data and conditions databases; online software frameworks and tools; online calibration procedures; remote access to (and control of) DAQ systems and experimental facilities.

Track 2 - Offline software

event generation, simulation and reconstruction; detector geometries, algorithms for physics analysis; tools and techniques for data classification and parameter fitting; event visualisation and data presentation; frameworks for event processing; toolkits for simulation, reconstruction and analysis; event data models.

Track 3 - Data store and access

Storage management; local I/O and data access; mass storage systems; object dictionaries; event stores; metadata and supporting infrastructure; databases; access patterns and caching strategies.

Track 4 - Middleware, software development and tools, experiment frameworks, tools for distributed computing

Grid middleware; software reliability, interoperability and security; experiment specific middleware applications; software testing and quality assurance; programming techniques and tools; software build, release, distribution tools and documentation; configuration management; Grid monitoring tools; mobile computing.

Track 5 - Computing activities and Computing models

Distributed computing aspects with focus on operations; distributed data processing experience, including experience with grids and clouds; workflows and data management in operations; distributed data analysis; experience with production and data challenges; experience with analysis using distributed resources; interactive analysis using distributed resources; monitoring of user jobs and data; global usage and management of resources; data preservation; data curation and long-term data reproducibility.

Track 6 - Facilities, Infrastructure, Network

Hardware and benchmarks; fabric virtualisation; fabric management and administration; local (LAN) and wide-area networking (WAN); private networks; collaborative systems: progress in technologies and applications; tele-presence and teleconferencing systems; experience in the use of teleconferencing tools.

Track 7 - Clouds and Virtualisation

Cloud, virtual machine, container, volunteer computing technologies; frameworks and tools to exploit these technologies and environments; experiences in managing and using these technologies in production environments.

Track 8 - Performance increase and optimisation exploiting hardware features

CPU/GPU architectures; tightly-coupled systems; GPGPU; hardware and benchmarking; concurrency; vectorisation and parallelisation; mathematical libraries; foundation and utility libraries; documentation.

Thanks to all PC members!



Track-1: Ryosuke Itoh, Andrea Bocci, Jim Patrick

Track-2: Jim Kowalkowski, Hisaya Kurashige, Ivan Kisel, Andrew Norman, Liz Sexton-Kennedy

Track-3: Latchezar Betev, Christopher Pinkenburg, Alastair Dewhurst, Giacomo Govi

Track-4: Takanori Hara, Tony Wildish, Vincent Garonne, Marco Clemencic, Brett Viren, Cristina Aiftimiei

Track-5: Tadashi Maeno, Simone Campana, Mike Hildreth, Silvia Amerio, Stefan Roiser

Track-6: Phil Demar, Peter Hristov, Pepe Flix, Eric Yen, Helge Meinhard

Track-7: Andrew McNab, Federico Stagni, Claudio Grandi, Jeff Templon

Track-8: Amitoj Singh, Niko Neufeld, Tommaso Boccali, Danilo Piparo

We gratefully **thank** also who helped in the keywords phase only

- ◆ Gancho Dimitrov, Nicolò Magini, Chris Jones

SPECIAL THANKS:

- ◆ to **Sakamoto-san** for his constant help and support
- ◆ to the marvellous work by **Ueda-san**, the **LOC team**, and all the **scientific secretaries** on-site!

Stay tuned: more work will come with the proceedings..

Track summaries agenda



Track 1 - Online computing

DAQ and Trigger; development, design, architecture for filtering, reconstruction, etc. and use within experiments and facilities; evaluation and testing of such systems; parallelism, HPC, and accelerator use in such systems; event building; compute farms for high-level triggering; configuration and run controls; describing and managing configuration data; online software frameworks and tools; online calibration procedures; remote access to (and control of) DAQ systems and experimental facilities.

Tomorrow

Track 2 - Offline software

event generation, simulation and reconstruction; detector geometries, algorithms for physics analysis; classification and parameter fitting; event visualisation and data presentation; frameworks for event simulation, reconstruction and analysis; event data models.

Tomorrow

Track 3 - Data store and access

Storage management; local I/O and data access; mass storage systems; object dictionaries; event data supporting infrastructure; databases; access patterns and caching strategies.

Tomorrow

Track 4 - Middleware, software development and tools, experiment frameworks, tools for distributed computing

Grid middleware; software reliability, interoperability and security; experiment specific middleware; testing and quality assurance; programming techniques and tools; software build, release, distribution tools and configuration management; Grid monitoring tools; mobile computing.

Tomorrow

Track 5 - Computing activities and Computing models

Distributed computing aspects with focus on operations; distributed data processing experience, including experience with grids and clouds; workflows and data management in operations; distributed data analysis; experience with production data challenges; experience with analysis using distributed resources; interactive analysis using distributed resources; managing user jobs and data; global usage and management of resources; data preservation; data curation and long-term data reproducibility.

Today

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Tomorrow

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Today

Track 8 - Performance increase and optimisation exploiting hardware features

CPU/GPU architectures; tightly-coupled systems; GPGPU; hardware and benchmarking; concurrency; vectorisation and parallelisation; mathematical libraries; foundation and utility libraries; documentation.

Today