

ACAT2013

Report of Contributions

Contribution ID: 0

Type: **plenary talk**

Analitical calculation of heavy quarkonia production processes in computer

Friday, May 17, 2013 11:45 AM (45 minutes)

Primary author: Dr BRAGUTA, Victor (IHEP)

Presenter: Dr BRAGUTA, Victor (IHEP)

Session Classification: Plenary

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 1

Type: **parallel talk**

Theory of phase transitions and critical phenomena : new approach for numerical calculation of anomalous dimensions.

Friday, May 17, 2013 2:25 PM (25 minutes)

Primary authors: Prof. ADZHEMYAN, Loran (St-Petersburg State University, Russia); Dr KOMPANIETS, Mikhail (St-Petersburg State University, Russia)

Co-authors: Mr DOVJENKO, Gleb (St-Petersburg State University, Russia); Dr NOVIKOV, Sergey (Google Switzerland GmbH)

Presenter: Dr KOMPANIETS, Mikhail (St-Petersburg State University, Russia)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 2

Type: **parallel talk**

QCD Corrections to the Drell-Yan Process for Experiments at the Large Hadron Collider

Friday, May 17, 2013 4:35 PM (25 minutes)

Primary author: Dr ZYKUNOV, Vladimir (Belarussian State University of Transport)

Presenter: Dr ZYKUNOV, Vladimir (Belarussian State University of Transport)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 3

Type: **parallel talk**

ALICE expert system

Thursday, May 16, 2013 2:50 PM (25 minutes)

Primary author: Mr IONITA, Costin (CERN)

Presenter: Mr IONITA, Costin (CERN)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 4

Type: **parallel talk**

Contraction of 1-loop 5-point tensor Feynman integrals

Thursday, May 16, 2013 2:25 PM (25 minutes)

Primary author: Prof. FLEISCHER, Jochem (University of Bielefeld, Germany)

Co-author: RIEMANN, Tord (DESY, Zeuthen)

Presenter: Dr RIEMANN, Tord (DESY)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 5

Type: **parallel talk**

TGeoCad –An interface between ROOT and CAD systems

Saturday, May 18, 2013 4:10 PM (25 minutes)

Primary author: Mrs LUZZI, Cinzia (University of Ferrara - CERN)

Co-author: Dr CARMINATI, Federico (CERN)

Presenter: Mrs LUZZI, Cinzia (University of Ferrara - CERN)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 7

Type: **parallel talk**

DELPHES 3: A modular framework for fast-simulation of generic collider experiments

Saturday, May 18, 2013 2:25 PM (25 minutes)

Primary author: Dr SELVAGGI, Michele (UCL)

Presenter: Dr SELVAGGI, Michele (UCL)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 8

Type: **parallel talk**

Special functions in Higher Loop Calculations: harmonic, generalized harmonic, and binomial sums, polylogarithms and special constants

Saturday, May 18, 2013 4:10 PM (25 minutes)

Primary author: Prof. BLUEMLEIN, Johannes (DESY)

Presenter: Prof. BLUEMLEIN, Johannes (DESY)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 9

Type: **plenary talk**

Solution of Loop Integrals in Quantum Field Theory using Modern Summation Methods

Friday, May 17, 2013 11:00 AM (45 minutes)

Primary author: Dr SCHNEIDER, Carsten (RISC, J. Kepler University, Linz)

Presenter: Dr SCHNEIDER, Carsten (RISC, J. Kepler University, Linz)

Session Classification: Plenary

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: **10**

Type: **parallel talk**

New developments in FeynRules

Thursday, May 16, 2013 4:10 PM (25 minutes)

Primary author: Mr ALLOUL, Adam (IPHC Strasbourg)

Presenter: Mr ALLOUL, Adam (IPHC Strasbourg)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 11

Type: **parallel talk**

Performance optimizations for distributed analysis in ALICE

Saturday, May 18, 2013 2:25 PM (25 minutes)

Primary authors: GHEATA, Andrei (CERN); GRIGORAS, Costin (CERN); BETEV, Latchezar (CERN); GHEATA, Mihaela (Institute of Space Sciences, Bucharest); HRISTOV, Peter (CERN)

Presenter: GHEATA, Andrei (CERN)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 12

Type: **parallel talk**

A concurrent vector-based steering framework for particle transport

Thursday, May 16, 2013 2:25 PM (25 minutes)

Primary authors: GHEATA, Andrei (CERN); CARMINATI, Federico (CERN); BRUN, René (CERN)

Presenter: GHEATA, Andrei (CERN)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 13

Type: **parallel talk**

Multidimensional polynomial regression and fit function uncertainty

Friday, May 17, 2013 3:15 PM (25 minutes)

Primary author: Dr KÖVESÁRKI, Peter (University of Bonn)

Co-author: Prof. BROCK, Ian C. (University of Bonn)

Presenter: Dr KÖVESÁRKI, Peter (University of Bonn)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 14

Type: **parallel talk**

Three-loop beta-functions and anomalous dimensions in the SM

Thursday, May 16, 2013 4:35 PM (25 minutes)

Primary author: Dr BEDNYAKOV, Alexander (JINR)

Co-authors: Mr PIKELNER, Andrey (JINR, Dubna, Russia); Dr VELIZHANIN, Vitaly (PNPI, Gatchina, Russia)

Presenter: Dr BEDNYAKOV, Alexander (JINR)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 15

Type: **parallel talk**

The automated matrix element methods and its applications at LHC

Friday, May 17, 2013 2:25 PM (25 minutes)

Primary author: Mr MERTENS, Alexandre (CP3 - Université Catholique de Louvain)

Co-authors: Prof. DELAERE, Christophe (CP3 - Université Catholique de Louvain); Dr SELVAGGI, Michele (CP3 - Université Catholique de Louvain)

Presenter: Mr MERTENS, Alexandre (CP3 - Université Catholique de Louvain)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 16

Type: **parallel talk**

Numerical multi-loop calculations with SecDec 2.1

Friday, May 17, 2013 2:00 PM (25 minutes)

Primary author: HEINRICH, Gudrun (Max Planck Institute for Physics)

Co-author: BOROWKA, Sophia (Max Planck Institute for Physics)

Presenter: HEINRICH, Gudrun (Max Planck Institute for Physics)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 17

Type: **poster presentation**

Data Quality Monitoring for the ATLAS trigger System during the first data taking period of the Large Hadron Collider

Sunday, May 19, 2013 5:35 PM (5 minutes)

Primary author: Prof. WIELERS, Monika (University of Lund)

Presenters: Dr KRASZNAHORKAY, Attila (New York University); Dr OLIVEIRA DAMAZIO, Denis (Brookhaven National Laboratory)

Session Classification: Poster Presentation

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 18

Type: **parallel talk**

The evolution of the Trigger and Data Acquisition System in the ATLAS experiment

Saturday, May 18, 2013 5:00 PM (25 minutes)

Primary author: Prof. WIELERS, Monika (University of Lund)

Presenter: Dr KRASZNAHORKAY, Attila (New York University)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 20

Type: **parallel talk**

The ATLAS Muon and Tau Trigger

Saturday, May 18, 2013 4:35 PM (25 minutes)

Primary author: Dr DELL'ASTA, Lidia (Boston University)

Presenter: Dr DELL'ASTA, Lidia (Boston University)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 21

Type: **parallel talk**

Sophisticated high-resolution deconvolution algorithms for data processing in nuclear spectroscopy

Thursday, May 16, 2013 3:15 PM (25 minutes)

Primary author: Dr MATOUŠEK, Vladislav (Institute of Physics, Slovak Academy of Sciences)

Presenter: Dr MATOUŠEK, Vladislav (Institute of Physics, Slovak Academy of Sciences)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 22

Type: **parallel talk**

Study of cache performance in distributed environment for data processing

Saturday, May 18, 2013 3:15 PM (25 minutes)

Primary authors: Mr MAKATUN, Dzmitry (Nuclear Physics Institute of Academy of Science of Czech Republic); Dr LAURET, Jerome (Brookhaven National Laboratory); Dr SUMBERA, Michal (Nuclear Physics Institute of Academy of Science of Czech Republic)

Presenter: Mr MAKATUN, Dzmitry (Nuclear Physics Institute of Academy of Science of Czech Republic)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 23

Type: **parallel talk**

MadAnalysis 5: a framework dedicated to phenomenological investigations at LHC

Saturday, May 18, 2013 2:00 PM (25 minutes)

Primary authors: Mr FUKS, Benjamin (CERN / IPHC Strasbourg); Mr CONTE, Eric (GRPHE / IPHC Strasbourg)

Presenter: Mr CONTE, Eric (GRPHE / IPHC Strasbourg)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 24

Type: **parallel talk**

FormCalc 8

*Friday, May 17, 2013 2:50 PM (25 minutes)***Primary author:** HAHN, Thomas (MPI for Physics)**Co-author:** MIRABELLA, Edoardo (MPI for Physics)**Presenter:** HAHN, Thomas (MPI for Physics)**Session Classification:** Track 3**Track Classification:** 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 25

Type: **parallel talk**

Automated NLO calculations with GoSam

*Saturday, May 18, 2013 2:00 PM (25 minutes)***Primary author:** HEINRICH, Gudrun (Max Planck Institute for Physics)**Co-authors:** TRAMONTANO, Francesco (University of Naples); CULLEN, Gavin (DESY Zeuthen); LUISONI, Gionata (Max Planck Institute for Physics); OSSOLA, Giovanni (CUNY); GREINER, Nicolas (Max Planck Institute for Physics); MASTROLIA, Pierpaolo (Max Planck Institute for Physics)**Presenter:** HEINRICH, Gudrun (Max Planck Institute for Physics)**Session Classification:** Track 3**Track Classification:** 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 26

Type: **parallel talk**

Designing DAG-shaped classifiers for fast triggers

Friday, May 17, 2013 5:25 PM (25 minutes)

Primary authors: Dr KÉGL, Balázs (LAL/LRI, University of Paris-Sud, CNRS); Mr BENBOUZID, Djalel (LAL, University of Paris-Sud, CNRS); Prof. WILLIAMS, Michael (Massachusetts Institute of Technology, Cambridge, MA, USA); Dr GLIGOROV, Vladimir Vava (Organisation Européenne pour la Recherche Nucléaire, Geneva, Switzerland)

Presenter: Mr BENBOUZID, Djalel (LAL, University of Paris-Sud, CNRS)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 27

Type: **parallel talk**

Precise calculation for heavy gauge boson production in the LHT model

Friday, May 17, 2013 5:00 PM (25 minutes)

Primary author: Mr GUO, Lei (University of Science and Technology of China)

Co-author: Mr ZHANG, Ren-You (University of Science and Technology of China)

Presenter: Mr GUO, Lei (University of Science and Technology of China)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 31

Type: **parallel talk**

SANC system and its applications for LHC

Thursday, May 16, 2013 3:15 PM (25 minutes)

Primary author: Dr SADYKOV, Renat (JINR, Dubna, Russia)

Presenter: Dr SADYKOV, Renat (JINR, Dubna, Russia)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 33

Type: **plenary talk**

Automatic calculation in Quarkonium Physics

*Saturday, May 18, 2013 11:45 AM (45 minutes)***Primary author:** Dr GONG, Bin (IHEP)**Presenter:** Dr GONG, Bin (IHEP)**Session Classification:** Plenary**Track Classification:** 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 34

Type: **parallel talk**

Simulation-aided optimization of detector design using portable representation of 3D objects

Friday, May 17, 2013 2:00 PM (25 minutes)

Primary author: Mr BALEWSKI, Jan (Massachusetts Institute of Technology)

Presenter: Mr BALEWSKI, Jan (Massachusetts Institute of Technology)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 35

Type: **parallel talk**

The computation of cross sections in brane world models

Friday, May 17, 2013 5:25 PM (25 minutes)

Primary author: Mr KIRPICHNIKOV, Dmitry (INR RAS, MSU)

Presenter: Mr KIRPICHNIKOV, Dmitry (INR RAS, MSU)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 36

Type: **parallel talk**

High performance computing activities in hadron spectroscopy at BESIII.

Friday, May 17, 2013 2:50 PM (25 minutes)

Primary author: Dr LIU, Beijiang (IHEP)

Presenter: Dr LIU, Beijiang (IHEP)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 37

Type: **parallel talk**

Multi-loop Integrand Reduction with Computational Algebraic Geometry

Saturday, May 18, 2013 4:35 PM (25 minutes)

Primary author: Dr BADGER, Simon (Niels Bohr Institute)

Presenter: Dr BADGER, Simon (Niels Bohr Institute)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 38

Type: **parallel talk**

Less is more. Why Oberon beats mainstream in complex applications

Friday, May 17, 2013 5:00 PM (25 minutes)

Primary author: Prof. TKACHOV, Fyodor (Institute for Nuclear Research RAS)

Presenter: Prof. TKACHOV, Fyodor (Institute for Nuclear Research RAS)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 39

Type: **parallel talk**

Computation of multi-leg amplitudes with NJet

*Saturday, May 18, 2013 2:25 PM (25 minutes)***Primary author:** Dr YUNDIN, Valery (Niels Bohr Institute)**Co-authors:** Mr BIEDERMANN, Benedikt (Humboldt University of Berlin); Prof. UWER, Peter (Humboldt University of Berlin); Dr BADGER, Simon (Niels Bohr Institute)**Presenter:** Dr YUNDIN, Valery (Niels Bohr Institute)**Session Classification:** Track 3**Track Classification:** 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 40

Type: **parallel talk**

Automated One-loop Computation in Quarkonium Process within NRQCD Framework

Thursday, May 16, 2013 2:00 PM (25 minutes)

Primary author: Mr FENG, Feng (CHEP)

Presenter: Mr FENG, Feng (CHEP)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 41

Type: **parallel talk**

LiteRed: a new powerful tool for the reduction of multiloop integrals

Saturday, May 18, 2013 3:15 PM (25 minutes)

Primary author: Dr LEE, Roman (Budker Institute of Nuclear Physics)

Presenter: Dr LEE, Roman (Budker Institute of Nuclear Physics)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 42

Type: **parallel talk**

Quasi-optimal weights: a versatile tool of data analysis

Friday, May 17, 2013 4:10 PM (25 minutes)

Primary author: Prof. TKACHOV, Fyodor (Institute for Nuclear Research RAS)

Presenter: Prof. TKACHOV, Fyodor (Institute for Nuclear Research RAS)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 43

Type: **parallel talk**

Event Reconstruction and Analysis in the R3BRoot Framework

Saturday, May 18, 2013 2:50 PM (25 minutes)

Primary author: Dr KRESAN, Dmytro (GSI, Darmstadt, Germany)

Presenter: Dr KRESAN, Dmytro (GSI, Darmstadt, Germany)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 45

Type: **plenary talk**

"Multiloop QCD: 33 years of continuous development"

Thursday, May 16, 2013 11:10 AM (45 minutes)

Primary author: Dr CHETYRKIN, Konstantin (Karlsruhe Institute of Technology (KIT))

Presenter: Dr CHETYRKIN, Konstantin (Karlsruhe Institute of Technology (KIT))

Session Classification: Plenary

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 46

Type: **parallel talk**

GPU for Real Time processing in HEP trigger systems

*Friday, May 17, 2013 2:00 PM (25 minutes)***Primary author:** Dr VICINI, Piero (INFN)**Co-authors:** Dr LONARDO, Alessandro (INFN); Dr BIAGIONI, Andrea (INFN); Dr MESSINA, Andrea (CERN); Dr ROSSETTI, Davide (INFN); Dr PANTALEO, Felice (CERN); Dr LO CICERO, Francesca (INFN); Dr SIMULA, Francesco (INFN); Dr COLLAZUOL, Gianmaria (Univ. Padova); Dr TOSORATTO, Laura (INFN); Dr SOZZI, Marco (Univ.Pisa); Dr FIORINI, Massimiliano (CERN); Dr PICCINI, Mauro (INFN); Dr CAMARLINGHI, Niccolò (INFN); Dr FREZZA, Ottorino (INFN); Dr PAOLUCCI, Pier Stanislao (INFN); Dr AMMENDOLA, Roberto (INFN)**Presenter:** Dr VICINI, Piero (INFN)**Session Classification:** Track 1**Track Classification:** 1.Computing Technology for Physics Research

Contribution ID: 47

Type: **poster presentation**

A Web-Based Development Environment for Collaborative Data Analysis

Sunday, May 19, 2013 5:20 PM (5 minutes)

Primary author: Mr RIEGER, Marcel (RWTH Aachen, III. Physikalisches Institut A)

Co-authors: Mr GLASER, Christian (RWTH Aachen, III. Physikalisches Institut A); Mr KLINGEBIEL, Dennis (RWTH Aachen, III. Physikalisches Institut A); Mr MÜLLER, Gero (RWTH Aachen, III. Physikalisches Institut A); Mr STEGGEMANN, Jan (RWTH Aachen, III. Physikalisches Institut A); Mr ERDMANN, Martin (RWTH Aachen, III. Physikalisches Institut A); Mr URBAN, Martin (RWTH Aachen, III. Physikalisches Institut A); Mr KOMM, Matthias (RWTH Aachen, III. Physikalisches Institut A); Mr FISCHER, Robert (RWTH Aachen, III. Physikalisches Institut A); Mr WINCHEN, Tobias (RWTH Aachen, III. Physikalisches Institut A)

Presenter: Mr RIEGER, Marcel (RWTH Aachen, III. Physikalisches Institut A)

Session Classification: Poster Presentation

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 49

Type: **plenary talk**

Automated computation of scattering amplitudes

Sunday, May 19, 2013 9:00 AM (45 minutes)

Primary author: OSSOLA, Giovanni (New York City College of Technology - CUNY)

Presenter: OSSOLA, Giovanni (New York City College of Technology - CUNY)

Session Classification: Plenary

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 51

Type: **parallel talk**

Advanced Analysis Techniques in the Search for Production of a Higgs Boson in Association with Top Quarks at CMS

Thursday, May 16, 2013 5:00 PM (25 minutes)

Primary author: SLAUNWHITE, Jason (CMS / Notre Dame)

Presenter: SLAUNWHITE, Jason (CMS / Notre Dame)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 53

Type: **parallel talk**

ATLAS Trigger Simulation with Legacy Code using Virtualization Techniques

Friday, May 17, 2013 5:00 PM (25 minutes)

Primary authors: Mr GALSTER, Gorm (The Niels Bohr Institute); Prof. WIELERS, Monika (University of Lund)

Presenter: Mr GALSTER, Gorm (The Niels Bohr Institute)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 54

Type: **parallel talk**

Supernova Trigger in the Daya Bay Reactor Neutrino Experiment

Thursday, May 16, 2013 4:10 PM (25 minutes)

Primary author: Mr WEI, Hanyu (Center for High Energy Physics, Tsinghua University)

Presenter: Mr WEI, Hanyu (Center for High Energy Physics, Tsinghua University)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 55

Type: **parallel talk**

Initial explorations of ARM processors for scientific computing

Friday, May 17, 2013 4:10 PM (25 minutes)

Primary author: Dr ELMER, Peter (Princeton University)

Co-authors: ABDURACHMANOV, David (Vilnius University); EULISSE, Giulio (FNAL); MUZAF-FAR, Shahzad (FNAL)

Presenter: Dr ELMER, Peter (Princeton University)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 56

Type: **parallel talk**

FAPT: a Mathematica package for calculations in QCD Fractional Analytic Perturbation Theory

Saturday, May 18, 2013 5:00 PM (25 minutes)

Primary author: Mr KHANDRAMAI, Viacheslav (Gomel State Technical University)

Presenter: Mr KHANDRAMAI, Viacheslav (Gomel State Technical University)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 57

Type: **parallel talk**

Fast event generation system using GPU

Thursday, May 16, 2013 5:25 PM (25 minutes)

Primary author: Prof. KANZAKI, Junichi (KEK)

Presenter: Prof. KANZAKI, Junichi (KEK)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 59

Type: **parallel talk**

The NLO Calculations of heavy quarkonium production at B factories

Sunday, May 19, 2013 2:55 PM (25 minutes)

Primary author: Dr ZHANG, Yu-Jie (Beihang University)

Presenter: Dr ZHANG, Yu-Jie (Beihang University)

Session Classification: Plenary

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: **60**Type: **parallel talk**

Automatic one-loop calculations with OpenLoops

Saturday, May 18, 2013 2:50 PM (25 minutes)

Primary authors: CASCIOLI, Fabio (Institute for Theoretical Physics, University of Zurich); MAIERHOEFER, Philipp (Institute for Theoretical Physics, University of Zurich); POZZORINI, Stefano (Institute for Theoretical Physics, University of Zurich)

Presenter: MAIERHOEFER, Philipp (Institute for Theoretical Physics, University of Zurich)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 61

Type: **parallel talk**

Managing a Tier-2 Computer Centre with a Private Cloud Infrastructure

Friday, May 17, 2013 5:25 PM (25 minutes)

Primary authors: BERZANO, Dario (INFN Torino & CERN PH-SFT); BRUNETTI, Riccardo (INFN Torino); BAGNASCO, Stefano (Istituto Nazionale di Fisica Nucleare); LUSSO, Stefano (INFN Torino)

Presenter: BAGNASCO, Stefano (Istituto Nazionale di Fisica Nucleare)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 62

Type: **parallel talk**

Data Analysis of Tracks of Heavy Ion Particles in Timepix Detectors

Thursday, May 16, 2013 5:25 PM (25 minutes)

Primary author: Mr HOANG, Son (University of Houston)

Co-authors: Dr IDARRAGA, John (University of Houston); Prof. PINSKY, Lawrence (University of Houston); Dr KROUPA, Martin (University of Houston); Mr STOFFLE, Nicholas (University of Houston); Prof. VILALTA, Ricardo (University of Houston)

Presenter: Mr HOANG, Son (University of Houston)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 65

Type: **parallel talk**

Development of an object oriented lattice QCD code “Bridge++”

Thursday, May 16, 2013 5:00 PM (25 minutes)

Primary author: Dr UEDA, Satoru (High Energy Accelerator Research Organization, KEK)

Co-authors: Dr NEMURA, Hidekatsu (Tsukuba U.); Prof. MATSUFURU, Hideo (High Energy Accelerator Research Organization, KEK); Prof. KANAYA, Kazuyuki (Tsukuba U.); Dr UKITA, Naoya (Tsukuba U.); Dr MOTOKI, Shinji (High Energy Accelerator Research Organization, KEK); Prof. AOKI, Sinya (Tsukuba U.); Dr AOYAMA, Tatsumi (Nagoya U., KMI); Dr NAMEKAWA, Yusuke (Tsukuba U.); Dr TANIGUCHI, Yusuke (Tsukuba U.)

Presenter: Dr UEDA, Satoru (High Energy Accelerator Research Organization, KEK)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 66

Type: **parallel talk**

One loop integration with hypergeometric series by using recursion formulae

Saturday, May 18, 2013 5:25 PM (25 minutes)

Primary author: Dr WATANABE, Norihisa (KEK)

Co-author: Prof. KANEKO, Toshiaki (KEK)

Presenter: Dr WATANABE, Norihisa (KEK)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 67

Type: **parallel talk**

The Alignment of the CMS Silicon Tracker

*Thursday, May 16, 2013 2:25 PM (25 minutes)***Primary author:** Dr LAMPÉN, Tapio (Helsinki Institute of Physics)**Presenter:** Dr LAMPÉN, Tapio (Helsinki Institute of Physics)**Session Classification:** Track 2**Track Classification:** 2. Data Analysis - Algorithms and Tools

Contribution ID: 68

Type: **parallel talk**

ATLAS Distributed Computing: Experience and Evolution

Sunday, May 19, 2013 2:30 PM (25 minutes)

Primary authors: Prof. FILIPCIC, Andrej (Jozef Stefan Institute); Dr NAIRZ, Armin (CERN)

Presenter: Dr NAIRZ, Armin (CERN)

Session Classification: Plenary

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 69

Type: **parallel talk**

A Neural-Network Clusterisation Algorithm for the ATLAS Silicon Pixel Detector

Thursday, May 16, 2013 2:00 PM (25 minutes)

Primary authors: Prof. FILIPCIC, Andrej (Jozef Stefan Insitute); Dr LENEY, Katharine (University of the Witwatersrand)

Presenter: Dr LENEY, Katharine (University of the Witwatersrand)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 70

Type: **parallel talk**

Optimizing the ATLAS code with different profilers

Saturday, May 18, 2013 5:25 PM (25 minutes)

Primary authors: Prof. FILIPCIC, Andrej (Jozef Stefan Insitute); Mr KAMA, Sami (Southern Methodist University)

Presenter: Mr KAMA, Sami (Southern Methodist University)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 71

Type: **parallel talk**

FLES: First Level Event Selection Package for the CBM Experiment

Friday, May 17, 2013 4:35 PM (25 minutes)

Primary author: Prof. KISEL, Ivan (University of Frankfurt)

Co-authors: Mr KULAKOV, Igor (University of Frankfurt); Mr ZYZAK, Maksym (University of Frankfurt); Ms AKISHINA, Valentina (University of Frankfurt)

Presenter: Prof. KISEL, Ivan (University of Frankfurt)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 72

Type: **parallel talk**

Flexible data transport for the online reconstruction of FAIR experiments

Friday, May 17, 2013 2:25 PM (25 minutes)

Primary authors: KLEIN, Dennis (GSI Darmstadt); Dr AL-TURANY, Mohammad (GSI Darmstadt)

Presenter: Dr AL-TURANY, Mohammad (GSI Darmstadt)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 73

Type: **parallel talk**

The FairRoot Framework

Saturday, May 18, 2013 5:25 PM (25 minutes)

Primary authors: Dr BERTINI, Denis (GSI Darmstadt); Dr KRESAN, Dmytro (GSI Darmstadt); Dr UHLIG, Florian (GSI Darmstadt); Dr AL-TURANY, Mohammad (GSI Darmstadt); Dr KARABOWICZ, Radoslaw (GSI Darmstadt)

Presenters: Dr KRESAN, Dmytro (GSI Darmstadt); Dr UHLIG, Florian (GSI Darmstadt); Dr AL-TURANY, Mohammad (GSI Darmstadt); Dr KARABOWICZ, Radoslaw (GSI Darmstadt)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 74

Type: **parallel talk**

Analysis of performance improvements for host and gpu interface of the APENet+ 3D Torus network.

Saturday, May 18, 2013 2:00 PM (25 minutes)

Primary authors: Dr LONARDO, Alessandro (INFN Roma); Dr BIAGIONI, Andrea (INFN Roma); Dr ROSSETTI, Davide (INFN Roma); Dr LO CICERO, Francesca (INFN Roma); Dr SIMULA, Francesco (INFN Roma); Dr TOSORATTO, Laura (INFN Roma); Dr FREZZA, Ottorino (INFN Roma); Dr PAOLUCCI, Pier Stanislao (INFN Roma); Prof. VICINI, Piero (INFN Roma); Dr AMMENDOLA, Roberto (INFN Roma Tor Vergata)

Presenter: Prof. VICINI, Piero (INFN Roma)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 75

Type: **poster presentation**

Experience of ROOF cluster maintenance and operation at Joint Institute for Nuclear Research for ALICE data analysis.

Sunday, May 19, 2013 5:25 PM (5 minutes)

Primary author: Dr SHABRATOVA, Galina (Joint Institute for Nuclear Research)

Co-authors: STIFOROV, Gleb (Joint Institute for Nuclear Research); VALOVA, Lucia (Joint Institute for Nuclear Research); Mr VALA, Martin (Joint Institute for Nuclear Research); SEMENOV, Roman (Joint Institute for Nuclear Research)

Presenter: Mr VALA, Martin (Joint Institute for Nuclear Research)

Session Classification: Poster Presentation

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 76

Type: **parallel talk**

Influence of distributing a Tier-2 data storage on physics analysis

Friday, May 17, 2013 3:15 PM (25 minutes)

Primary author: Mr HORKY, Jiri (Institute of Physics of the Academy of Sciences of the Czech Republic)

Co-authors: Dr MILOS, Lokajicek (Institute of Physics of the Academy of Sciences of the Czech Republic); Mr JAKUB, Peisar (CESNET a.l.e.)

Presenter: Mr HORKY, Jiri (Institute of Physics of the Academy of Sciences of the Czech Republic)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 77

Type: **poster presentation**

Flasher Identification at Daya Bay

Sunday, May 19, 2013 5:30 PM (5 minutes)

Primary author: Mr ZHAO, Qingwang (IHEP)

Presenter: Mr ZHAO, Qingwang (IHEP)

Session Classification: Poster Presentation

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 78

Type: **parallel talk**

Experience, Use, and Performance Measurement of the Hadoop File System in a Typical Nuclear Physics Analysis Workflows

Thursday, May 16, 2013 5:00 PM (25 minutes)

Primary authors: Mr SANGALINE, Evan (UC Davis); Dr LAURET, Jerome (BNL)

Presenter: Mr SANGALINE, Evan (UC Davis)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 79

Type: **parallel talk**

Performance quality monitoring system(PQM) for the Daya Bay reactor neutrino experiment

Thursday, May 16, 2013 2:00 PM (25 minutes)

Primary author: LIU, Yingbiao (IHEP)

Presenter: LIU, Yingbiao (IHEP)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 80

Type: **parallel talk**

Maximum likelihood reconstruction in the Daya Bay Reactor Antineutrino Experiment

Thursday, May 16, 2013 2:50 PM (25 minutes)

Primary author: XIA, Dongmei (IHEP)

Presenter: XIA, Dongmei (IHEP)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 82

Type: **parallel talk**

Recent developments on FORM

*Thursday, May 16, 2013 5:25 PM (25 minutes)***Primary author:** Dr UEDA, Takahiro (Karlsruhe Institute of Technology)**Co-author:** Dr VERMASEREN, Jos (NIKHEF)**Presenter:** Dr UEDA, Takahiro (Karlsruhe Institute of Technology)**Session Classification:** Track 3**Track Classification:** 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 85

Type: **parallel talk**

CMS Use of a Data Federation

Thursday, May 16, 2013 4:10 PM (25 minutes)

Primary authors: Dr BONACORSI, Daniele (University of Bologna); Dr FISK, Ian (Fermilab)

Presenter: ELMER, Peter (Princeton University)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 86

Type: **parallel talk**

Usage of the CMS Higher Level Trigger Farm as a Cloud Resource

Thursday, May 16, 2013 4:35 PM (25 minutes)

Primary authors: Dr BONACORSI, Daniele (University of Bologna); Dr COLLING, David (Imperial College)

Presenter: Dr COLLING, David (Imperial College)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 87

Type: **parallel talk**

A Wavelet Based Analysis System for Monitoring Information

Saturday, May 18, 2013 4:10 PM (25 minutes)

Primary author: Dr LEGRAND, Iosif (CALTECH / CERN)

Presenter: Dr LEGRAND, Iosif (CALTECH / CERN)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 88

Type: **parallel talk**

Generators BCVEGPY and GENXICC for doubly heavy mesons and baryons

Thursday, May 16, 2013 2:50 PM (25 minutes)

Primary author: Prof. WU, Xing-Gang (China Democratic League)

Presenter: Prof. WU, Xing-Gang (China Democratic League)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 92

Type: **parallel talk**

The BlackHat Library for One-Loop Amplitudes

*Friday, May 17, 2013 3:15 PM (25 minutes)***Primary author:** Dr KOSOWER, David (IPhT, CEA-Saclay)**Co-authors:** Dr MAÎTRE, Daniel (IPPP Durham); Dr FEBRES CORDERO, Fernando (Simon Bolivar); Prof. ITA, Harald (Freiburg); Dr OZEREN, Kemal (UCLA); Prof. DIXON, Lance (SLAC); Dr HOECHE, Stefan (SLAC); Prof. BERN, Zvi (UCLA)**Presenter:** Dr KOSOWER, David (IPhT, CEA-Saclay)**Session Classification:** Track 3**Track Classification:** 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 93

Type: **parallel talk**

Use of Checkpoint-Restart for Complex HEP Software on Traditional Architectures and Intel MIC

Saturday, May 18, 2013 2:50 PM (25 minutes)

Primary author: Dr ELMER, Peter (Princeton University)

Co-authors: Dr DOTTI, Andrea (SLAC); Prof. COOPERMAN, Gene (College of Computer and Info. Science, Northeastern University); Mr ARYA, Kapil (College of Computer and Info. Science, Northeastern University)

Presenter: Dr ELMER, Peter (Princeton University)

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: **101**Type: **parallel talk**

Feynman Loop Integral Computation on Hybrid Platforms

Friday, May 17, 2013 4:10 PM (25 minutes)

Primary author: Prof. DE DONCKER, Elise (Western Michigan University)

Co-authors: Dr YUASA, Fukuko (High Energy Accelerator Research Organization (KEK), Japan); Mr ASSAF, Rida (Western Michigan University)

Presenter: Prof. DE DONCKER, Elise (Western Michigan University)

Session Classification: Track 3

Track Classification: 3. Computations in Theoretical Physics: Techniques and Methods

Contribution ID: 102

Type: **parallel talk**

Concepts and Plans towards fast large scale Monte Carlo production for ATLAS

Saturday, May 18, 2013 4:35 PM (25 minutes)

Primary authors: Mr RITSCH, Elmar (University Innsbruck/Austria, CERN); CLARK, Philip

Presenter: Mr RITSCH, Elmar (University Innsbruck/Austria, CERN)

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 106

Type: **parallel talk**

Simulations of nuclear experiments framework

Saturday, May 18, 2013 3:15 PM (25 minutes)

Primary authors: Mr HNATIO, Bartlomiej (FLNR JINR, Dubna, Russia & AGH, Cracow, Poland); Mr PAPKA, Paul (Department of Physics, Stellenbosch University, Stellenbosch, South Africa); Mr SHAROV, Pavel (FLNR JINR, Dubna, Russia); Mr CHUDOBA, Vratislav (FLNR JINR, Dubna & Institute of Physics, SU in Opava)

Presenters: Mr HNATIO, Bartlomiej (FLNR JINR, Dubna, Russia & AGH, Cracow, Poland); BARAEVA, Sonya

Session Classification: Track 2

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 112

Type: **parallel talk**

JAliEn - A new interface between the AliEn jobs and the central services

Friday, May 17, 2013 4:35 PM (25 minutes)

Primary author: GRIGORAS, Alina Gabriela

Co-authors: GRIGORAS, Costin; PEDREIRA, Miguel Martinez

Presenter: GRIGORAS, Alina Gabriela

Session Classification: Track 1

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 120

Type: **poster presentation**

Documenting through activity diagrams

Sunday, May 19, 2013 5:40 PM (5 minutes)

Primary author: LOPEZ VILLAREJO, Juan Jose (CERN)

Presenter: LOPEZ VILLAREJO, Juan Jose (CERN)

Session Classification: Poster Presentation

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 121

Type: **plenary talk**

Large-Scale Application on TianHe-1A and HPC in China

Friday, May 17, 2013 9:45 AM (45 minutes)

Primary author: Dr MENG, Xiangfei (NSCC-TJ, China)

Presenter: Dr MENG, Xiangfei (NSCC-TJ, China)

Session Classification: Plenary

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 122

Type: **plenary talk**

Lessons learned from the Kei computer project

Thursday, May 16, 2013 9:10 AM (45 minutes)

Primary author: Prof. OYANAGI, Yoshio (Kobe University)

Presenter: Prof. OYANAGI, Yoshio (Kobe University)

Session Classification: Plenary

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 123

Type: **plenary talk**

Future Storage Architectures for Large Data-Analysis Systems

Sunday, May 19, 2013 11:00 AM (45 minutes)

Presenter: TRIENDL, Robert (Japan, DataDirect Networks)

Session Classification: Plenary

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 124

Type: **plenary talk**

Grid AND Cloud evolution from now onward

Sunday, May 19, 2013 11:45 AM (45 minutes)

Primary author: BIRD, Ian (CERN)

Presenter: BIRD, Ian (CERN)

Session Classification: Plenary

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 125

Type: **plenary talk**

Opportunities and choice in a new vector era

Saturday, May 18, 2013 11:00 AM (45 minutes)

Primary author: NOWAK, Andrzej (CERN openlab)

Presenter: NOWAK, Andrzej (CERN openlab)

Session Classification: Plenary

Track Classification: 1.Computing Technology for Physics Research

Contribution ID: 126

Type: **plenary talk**

Advances in tracking and trigger concepts

Sunday, May 19, 2013 9:45 AM (45 minutes)

Presenter: Prof. KISEL, Ivan (University of Frankfurt)

Session Classification: Plenary

Track Classification: 2. Data Analysis - Algorithms and Tools

Contribution ID: 127

Type: **plenary talk**

Role of Multivariate Analysis in LHC physics

*Saturday, May 18, 2013 9:45 AM (45 minutes)***Primary author:** BHAT, Pushpalatha**Presenter:** BHAT, Pushpalatha**Session Classification:** Plenary**Track Classification:** 2. Data Analysis - Algorithms and Tools

Contribution ID: **131**

Type: **not specified**

Opening

Thursday, May 16, 2013 9:00 AM (10 minutes)

Presenter: Prof. CHEN, Hesheng (IHEP,Beijing)

Session Classification: Plenary

Contribution ID: 132

Type: **not specified**

Summary Track 1

Tuesday, May 21, 2013 9:00 AM (45 minutes)

Presenter: NAUMANN, Axel (CERN)

Session Classification: Plenary

Contribution ID: 133

Type: **not specified**

Summary Track 2

Tuesday, May 21, 2013 9:45 AM (45 minutes)

Primary authors: Dr LENEY, Katharine (University of the Witwatersrand); Dr LI, Weidong (IHEP)

Presenter: Dr LENEY, Katharine (University of the Witwatersrand)

Session Classification: Plenary

Contribution ID: 134

Type: **not specified**

Summary Track 3

Tuesday, May 21, 2013 11:00 AM (45 minutes)

Presenters: Dr ARBUZOV, Andrej (JINR, Dubna, Russia); Dr MAÎTRE, Daniel (IPPP Durham)

Session Classification: Plenary

Contribution ID: 135

Type: **not specified**

Summary

Tuesday, May 21, 2013 11:45 AM (45 minutes)

Presenter: Mr CARMINATI, Federico (CERN)

Session Classification: Plenary

Contribution ID: 136

Type: **plenary talk**

Data-intensive High Performance Computing and Analysis in Solid Earth Sciences

Thursday, May 16, 2013 9:55 AM (45 minutes)

Primary author: Prof. VILOTTE, Jean-Pierre (Institut de Physique du Globe de Paris (CNRS - UMR7154))

Presenter: Prof. VILOTTE, Jean-Pierre (Institut de Physique du Globe de Paris (CNRS - UMR7154))

Session Classification: Plenary

Contribution ID: 137

Type: **plenary talk**

From Black Holes to Cosmology : The Universe in the Computer

Friday, May 17, 2013 9:00 AM (45 minutes)

Primary author: Prof. LUMINET, J.P

Presenter: Prof. LUMINET, Jean-Pierre (Observatoire de Paris - CNRS)

Session Classification: Plenary

Contribution ID: 141

Type: **not specified**

XData: Sugon all-in-one BigData Machine

Sunday, May 19, 2013 2:00 PM (30 minutes)

Co-author: Dr SONG, Huaiming (Sugon)

Presenter: Dr SONG, Huaiming (Sugon)

Session Classification: Plenary

Contribution ID: 142

Type: **not specified**

Round Table:Open-source, knowledge sharing and scientific collaboration

Sunday, May 19, 2013 3:50 PM (1h 30m)

Presenters: Dr PERRET-GALLIX, Denis (LAPP/IN2P3-CNRS); Prof. CHEN, Gang (Institute of High Energy Physics); Prof. PINSKY, Lawrence (Physics Department, University of Houston); Dr RIEMANN, Tord (DESY)

Session Classification: Plenary

Contribution ID: 145

Type: **not specified**

Visit to BEPCII

Saturday, May 18, 2013 8:30 AM (1h 15m)

Presenter: Dr GONG, Bin (IHEP)

Session Classification: Plenary