

Scientific program ICFP2012



1st International Conference on New Frontiers in Physics (ICFP 2012)
10-16 June 2012, Kolymbari, Creta, Greece

Sunday, 10 June 2012, Lectures

14h00-14h55 C. ANASTASIOU Physics of electroweak symmetry breaking

14h55-15h50 G AULETTA Entanglement, Information, Causality

15h50-16h10 COFFEE BREAK

16h10-17h05 N. KOROLKOVA Quantum Entanglement

17h05-18h00 W. FLORKOWSKI Heavy Ion Physics (I)

18h00-18h55 R. SNELLINGS Heavy Ion Physics (II)

19h00-20h00 RECEPTION

19h00-20h00 DINNER

Plenary Sessions

Monday, 11 June 2012, Plenary

08h15-8h30 Welcome

Higgs Boson

08h30-9h00 C. ANASTASIOU Higgs production at the LHC

09h00-9h30 K. PROKOFIEV Higgs Boson Searches with ATLAS

09h30-10h00 S. CHOUDHURY Higgs Boson search at the CMS

10h00-10h30 C. WAGNER Implications of an Enhanced Diphoton Decay Width of the Higgs Boson

Quantum Physics

10h30-11h00 G AULETTA Classical and Quantum Information Acquisition: Measurement and POVM

11h00-11h20 COFFEE BREAK

Heavy Ion Physics

11h20-11h50 R. SNELLINGS Anisotropic flow at RHIC and the LHC.

11h50-12h20 B. WYSLOUCH High-pt physics in Heavy Ion collisions

12h20-12h50 C. HOELBLING Recent results from lattice QCD

Extra Dimensions

12h50-13h20 I. ANTONIADIS Extra dimensions theory

13:30- 17:00 LUNCH BREAK

17h00-17h25 G. ZOUPANOS Finite Unified Theories and the prediction of the Higgs boson mass

17h25-17h50 A. SAFONOV Tevatron Higgs boson searches overview

17h50-18h10 COFFE BREAK

Tuesday, 12 June 2012, Plenary

Particle Physics, Mathematical Physics

- 08h30-9h00 A. CHAMSEDDINE Overview of Non Commutative Geometry and the Standard Model
- 09h00-9h30 S. SEIDEL Highlights from the ATLAS Experiment
- 09h30-10h00 T. DORIGO New Results from The CMS Experiment
- 10h00-10h30 M. CARENA Higgs Physics as a probe of New Physics

Heavy Ion Physics

- 10h30-11h00 I. TSERRUYA The strongly interacting Quark Gluon Plasma: from RHIC to LHC
- 11h00-11h20 **COFFEE BREAK**
- 11h20-11h50 P. CHRISTAGOKLOU Overview of results from the ALICE experiment at the CERN LHC
- 11h50-12h20 E. SHURYAK The sounds of the Big and the Little Bangs

Dark Matter, Astroparticle Physics

- 12h20-12h50 P. JETZER Limits on compact halo objects as dark matter from gravitational microlensing
- 12h50-13h20 F. SPADA AMS Highlights
- 13:30- 17:00 **LUNCH BREAK**

QCD

- 17h00-17h25 M. KARLINER New States with Heavy Quarks
- 17h25-17h50 T. FRIEDMANN New QCD Effect: the Shrinking Radius of Hadrons
- 17h50-18h10 **COFFEE BREAK**

Thursday, 14 June 2012, Plenary

Quantum Physics

08h20-8h50 E. COHEN Can a Future Choice Affect a Past Measurement's Outcome?

08h50-9h20 N. KIESEL Quantum Physics with Massive Objects

Interdisciplinary

9h20-9h50 I. LICATA QFT in de Sitter Universe: an Approach to Quantum Theory and Cosmological nonlocality

9h50-10h15 E. KIRITSIS Holography, energy loss at strong coupling and Lorentz violation

10h15-10h40 N. EVANS Holographic Description of QCD Phase Structure and Out of Equilibrium Dynamics

Cosmology, Dark Matter and Dark Energy

10h40-11h10 S. RAMAZANOV Primordial scalar perturbations via conformal mechanisms

11h10-11h30 COFFEE BREAK

11h30-12h00 M. BUCKLEY Dark Matter Theory

12h00-12h30 P. BELLI The Dark Matter annual modulation results from DAMA/LIBRA

12h30-13h00 S. JOUVEL Dark Energy Survey (DES) overview

Neutrinos

13h00-13h30 M. VIGNATI Present and future strategies for Neutrinoless Double Beta Decay

13:30- 17:00 LUNCH BREAK

17h00-17h25 N. MAURI Highlights from the OPERA experiment

17h25-17h50 L. KALOUSIS Double Chooz overview

17h50-18h10 COFFE BREAK

Friday, 15 June 2012, Plenary

Neutrinos

08h30-9h00 S. JETTER Results from the Daya Bay Reactor Neutrino Experiment

09h00-9h30 T. SEKIGUCHI Highlights from the T2K experiment

Perspectives and CERN Reports

09h30-10h00 B. LIST International Linear Collider

10h00-10h30 E. TSESMELIS CERN physics: Status and Plans

10h30-11h00 T. NAKADA Report on European Strategy for Particle Physics from the Strategy Session of CERN Council

11h00-11h20 COFFEE BREAK

CP-Violation

11h20-11h50 T. NAKADA CP-Violation

11h50-12h20 M. VYSOTSKY CP violation in D-meson decays and the fourth generation

12h20-12h50 U. EGEDE LHCb highlights

12h50-13h20 N. ARNAUD Highlights from the BABAR experiment

13:30- 14:30 LUNCH BREAK

Perspectives, String Cosmology, Heavy Ion Physics

14h30-15h00 P. ODDONE ICFA Report

15h00-15h25 T. BURTON The eRHIC project

15h25-15h55 V. BOZZA The String and the Cosmic Bounce

15h55-16h20 R. LACEY New Constraints for the Transport Coefficients of the Quark Gluon Plasma
Produced in RHIC and LHC collisions

Saturday, 16 June 2012, Plenary

Theory, Interdisciplinary

- 08h30-9h00 S. MAJID Quantum spacetime and noncommutative Schwarzschild black holes
- 09h00-9h30 N. MAVROMATOS String Cosmology and the LHC
- 09h30-10h00 J. MINAR Experimental perspectives of atom photon-interactions: From fundamental tests to quantum simulations

Perspectives and EPS report

- 10h00-10h30 P. BRAUN MUNZINGER Quo Vadis Heavy Ions
- 10h30-10h55 R. LEDNICKY NICA Complex - Status and Plans
- 10h55-11h20 L. CIFARELLI Activities and programs of the European Physical Society

11h20-11h40 COFFEE BREAK

Perspectives

- 11h40-12h05 N. ARNAUD The SuperB experiment
- 12h05-12h30 A. SAILER CLIC: Status and Plans
- 12h30-12h55 R. PALMER Muon Colliders
- 12h55-13h25 T. NAKADA ECFA Report

END OF THE CONFERENCE

Parallel Sessions

Monday, 11 June 2012, Parallel Sessions

Paralle (1) Particle Physics Experiment

18h10-18h35 N. SAOULIDOU SUSY searches at the CMS

18h35-19h00 M. MENEGHELLI Search for the Standard Model Higgs boson at CMS in the 4-lepton channel

19h00-19h25 N. Ch. EDWARDS W, Z and diboson physics with ATLAS

19h25-19h50 R. STRINGER Searches for Extra Dimensions at the LHC

19h50-20h15 G. LAFFERTY Searches for low-mass Higgs and dark gauge bosons at BABAR

20h15-20h40 V. SIMAK Highlights from D0

20h45 DINNER

Paralle (2) Heavy Ion Physics, Thermal Models

18h10-18h35 J. CLEYMANS The Thermal Model at the LHC

18h35-19h00 W. FLORKOWSKI Highly-anisotropic hydrodynamics and the early thermalization puzzle in relativistic heavy-ion collisions

19h00-19h25 E. ZABRODIN Effect of jets on v_4/v_2^2 ratio and constituent quark scaling in relativistic heavy-ion collisions

19h25-19h50 M. CSANAD Hydrodynamic models of the sQGP and the elliptic flow

19h50-20h15 H. OESCHLER Production of Strange Particles from the Lowest to the Highest Energies

20h15-20h40 M. SPYROPOULOU STASSINAKI Identified hadrons in pp and Pb-Pb collisions with the ALICE experiment at the LHC

20h45 DINNER

Monday, 11 June 2012, Parallel Sessions

Paralle (3) Particle Physics Theory

18h10-18h35 F. VON DER PAHLEN Higgs and Dark Matter from SUSY Decays in the Complex MSSM

18h35-19h00 T. FRIEDMANN Two Perspectives on the String Landscape

19h00-19h25 M. VYSOTSKY Modification of the Coulomb law and atomic levels in a superstrong magnetic field.

19h25-19h50 A RACIOPPI Fermiophobic Higgs boson and supersymmetry

Particle Physics Experiment

19h50-20h15 D. NICOLO Measurement of the muon to gamma branching ratio in the MEG experiment

20h15-20h40 V. POZDNIAKOV Measurements of Z boson in lepton pair decays in heavy ion collisions at ATLAS

20h45 DINNER

Paralle (4) QCD and Heavy Ion Physics Phenomenology

18h10-18h35 K. TYWONIUK Decoherence of QCD radiation in a quark-gluon plasma

18h35-19h00 Y. SINYUKOV Hadronic observables in hydrokinetic picture of A+A collisions at RHIC and LHC

19h00-19h25 L. BRAVINA pp-collisions in Quark Gluon String Model

19h25-19h50 A. DI GIACOMO Monopoles, holonomy and chiral symmetry breaking in QCD

19h50-20h15 P. MINKOWSKI Thermal characteristics confronting trace anomaly and intrinsic canonical structure of QCD

20h15-20h40 M. D'ELIA Constraints on the QCD phase diagram from imaginary chemical potentials

20h45 DINNER

Tuesday, 12 June 2012, Parallel Sessions

Paralle (1) Experiments, Detector Performances

18h10-18h35 E. GAZIS ATLAS Detector Performance

18h35-19h00 D. F. TEYSSIER CMS detector performance

19h00-19h25 J. BELIKOV Event reconstruction and particle identification in the ALICE experiment at the LHC

QCD

19h25-19h50 M. GOUZEVITCH QCD at the CMS

19h50-20h15 S. ADOMEIT Hard and soft QCD physics in ATLAS

20h45 DINNER

Paralle (2) Heavy Ion Physics, Experiments

18h10-18h35 Z. CITRON Heavy Ion Physics Highlights from ATLAS

Interdisciplinary, Holography

18h35-19h00 O. TAANILA Holographic dilepton production in a thermalizing plasma

19h00-19h25 V. NIARCHOS Holographic Josephson junction networks

19h25-19h50 A. TALBOTIS Multiplicities from black-hole formation in heavy-ion collisions

19h50-20h15 A. CONTU Production and spectroscopy at LHCb

20h45 DINNER

Tuesday, 12 June 2012, Parallel Sessions

Paralle (3) Heavy Ion Physics, Phase Diagram

18h10-18h35 N. SU QCD thermodynamics and quark number susceptibilities at intermediate coupling

18h35-19h00 B. K. SRIVASTAVA Clustering of Color Sources and the Equation of State of the QGP

19h00-19h25 M. SZUBA The Old New Frontier: Studying the CERN SPS Energy Range with NA61/SHINE

19h25-19h50 D KEANE Production of Antinuclei at the Relativistic Heavy Ion Collider

Particle Physics, Spectroscopy

19h50-20h15 U. TAMPONI New bottomonium(-like) resonances' spectroscopy and decays at Belle

20h45 DINNER

Paralle (4) Astroparticle physics, Astrophysics, Cosmology

18h10-18h35 E. CALLONI Status and developments of Advanced Ligo and Advanced Virgo gravitational wave detectors

18h35-19h00 L. GONZALEZ-MESTRES Pre-Big Bang, fundamental Physics and noncyclic cosmologies

19h00-19h25 A. CHAMSEDDINE Massive Gravity

19h25-19h50 B. HUGHEY Listening to the Universe with gravitational-wave interferometers: Recent observational results from LIGO and Virgo

19h50-20h15 J. MATTHEWS The Telescope Array - Ultra High Energy Cosmic Rays

20h45 DINNER

Thursday, 14 June 2012, Parallel Sessions

Paralle (1) Cosmology, Particle and Astroparticle Physics

18h10-18h35 U. YAJNIK The relevance of light dark matter

18h35-19h00 L. GONZALEZ-MESTRES High-energy cosmic rays and tests of basic principles of Physics

19h00-19h25 J. BLEIBEL Cosmology in a petri dish? Simulation of collective dynamics of colloids at fluid interfaces

19h25-19h50 V. KRYVDYK Generation of high-energy particles, neutrinos and photons in the magnetosphere of collapsing stars

19h50-20h15 P. FERMANI Indirect dark matter search with the ANTARES Deep-Sea Cherenkov detector

20h45 CONFERENCE DINNER

Paralle (2) Particle Physics

18h10-18h35 A. S. METE New Physics searches with ATLAS

18h35-19h00 L. CERRITO Top Physics with ATLAS

19h00-19h25 F. RATHMANN Search for permanent Electric Dipole Moments of light ions (p, d, ^3He) in storage rings

19h25-19h50 G. TRIANTAPHYLLOU Unification with mirror fermions

19h50-20h15 S. HABIB Structure Function Measurements and QCD results from HERA (H1 and ZEUS)

20h45 CONFERENCE DINNER

Thursday, 14 June 2012, Parallel Sessions

Paralle (3) Quantum Physics

18h10-18h35 E. COHEN Unusual Interactions of a Pre-and-Post-Selected Particles
Interdisciplinary

18h35-19h00 M. MORIKAWA EPR measurement and the origin of cosmic density fluctuations
Particle and Astroparticle Physics

19h00-19h25 N. CANCI The ICARUS experiment at LNGS underground laboratory

19h25-19h50 A. PADILLA Cleaning up the cosmological constant

19h50-20h15 K. HOFFMAN Recent Results from the IceCube Neutrino Observatory

20h45 CONFERENCE DINNER

Paralle (4) Heavy Ion Physics, Heavy Flavour

18h10-18h35 J. BIELCIK Open heavy flavor and quarkonia measurements in heavy ion collisions at RHIC

18h35-19h00 G. BRUNO Charm production at LHC: an overview

19h00-19h25 S. LAPOINTE Open heavy flavour measurements in pp and Pb-Pb collisions with ALICE at the LHC

19h25-19h50 C. BLUME J/Psi Measurements with the ALICE Experiment at the LHC

19h50-20h15 A. FRANCIS Charmonium dissociation and heavy quark transport in hot quenched lattice QCD

20h45 CONFERENCE DINNER

Friday, 15 June 2012, Parallel Sessions

Paralle (1) Heavy Ion Physics, Charmonium, Phenomenology, HBT, flow

16h20-16h45 Ch. KUHN Present and future investigations of hadron formation mechanisms in heavy-ion collisions at LHC with the ALICE experiment

16h45 -17h05 COFFEE BREAK

17h05-17h30 B. KOPELIOVICH Nuclear effect in charmonium production

17h30-17h55 M. RODRIGUEZ CAHUANTZI J/psi production in ultra-peripheral heavy-ion collisions at forward rapidity with the ALICE experiment

17h55-18h20 W. BRONIOWSKI Event-by-event hydrodynamics and correlations in relativistic heavy-ion collisions

18h20-18h45 G. WOLSCHIN Charged-hadron production in the three-sources RDM at LHC energies

18h45-19h10 D. R. GANGADHARAN Femtoscopic results in pp and Pb-Pb collisions from ALICE

19h10-19h35 N. DAVIS Signatures of critical fluctuations in intermittency analysis of the proton transverse momenta in A+A collisions at the NA49 experiment

19h35-20h00 G. EYYUBOVA Directed flow measurement in Pb-Pb collisions with ALICE at the LHC

20h00 DINNER

Friday, 15 June 2012, Parallel Sessions

Paralle (2)

16h20-16h45 Y. FOKA IPPOG report on Masterclasses - Bringing LHC data into the classroom

Particle Physics, Neutrinos

16h45 -17h05 COFFEE BREAK

17h05-17h30 A. GLEIXNER The neutrino telescope ANTARES

17h30-17h55 D. FURSE KATRIN overview

Perspectives

17h55-18h20 I. VASSILIEV New Frontiers in Heavy-Ion Physics: the CBM experiment

18h20-18h45 S. HILLIER Future Plans and Upgrades of the ATLAS Experiment

18h45-19h10 A. PENZO CMS upgrades

19h10-19h35 P. HOPECHEV LHCb upgrades

19h35-20h00 D. PEREVALOV NOvA experiment in light of non-zero θ_{13}

20h00 DINNER

Friday, 15 June 2012, Parallel Sessions

Paralle (3) Particle Physics

16h20-16h45 T. J. KIM Top Physics at the CMS

16h45 -17h05 COFFEE BREAK

Particle Physics, CP Violation

17h05-17h30 V. A. MITSOU Highlights from SUSY Searches with ATLAS

17h30-17h55 C. GRAB B Physics at the CMS

17h55-18h20 N. L. MARCH Mixing and CP violation in the B and charm sectors

18h20-18h45 T. BRAUNER CP violation and electroweak baryogenesis in the Standard Model

18h45-19h10 G. SIMI Searches for new sources of CP violation at BABAR

19h10-19h35 A. MARTENS Charmless B decays as a venue to New Physics: status and prospects

19h35-20h00 B. SCIASCIA Rare B decays as a probe for new physics

20h00 DINNER

Friday, 15 June 2012, Parallel Sessions

Paralle (4) Mathematical Physics

16h20-16h45 P. CORTESE Neutron emission from electromagnetic dissociation at LHC measured with the ALICE ZDC

16h45 -17h05 COFFEE BREAK

Particle Physics, Mathematical Physics

17h05-17h30 G. VOLKOV Can Extra Space-Time Dimensions elucidate the Mysteries of the Standard Model ?

17h30-17h55 B. KOPELIOVICH Diffractive neutrino interaction: breakdown of PCAC

Heavy Ion experiments

17h55-18h20 S. KABANA STAR highlights

18h20-18h45 N. NOVITZKY Recent results from PHENIX on the evolution of hot QCD

Interdisciplinary

18h45-19h10 D. CHATTERJEE Implication of results from heavy-ion experiments for compact stars

19h10-19h35 E. HAMMARI Realization of electronic systems operating on dynamical physical signals

20h00 DINNER