

CIPANP 2015: Fourth Bulletin

The 12th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2015: cipanp2015.yale.edu) will be held May 19-24, 2015, at the Vail Marriott Mountain Resort, Vail, Colorado.

Abstract Submission Deadline: April 1st 2015

The objectives of the CIPANP Conference series are to encourage communications and interactions among experimental and theoretical elementary particle physicists, nuclear physicists, particle and nuclear astrophysicists, and accelerator physicists over a wide range of topics of current interest. CIPANP 2015 will include plenary session talks, parallel session talks arranged by and summarized by conveners, as well as a poster session.

Please see the CIPANP 2015 conference website for full details.

Scientific Program

Topics and Plenary Session Speakers:

Physics at High Energies

- “What are we learning in BSM physics from the LHC and where are we going?”
 - Ann Nelson
- “What are we learning in SM physics from the LHC?”
 - Sabine Lammers

High Intensity and Precision Physics:

- “Recent results and Future Directions in Precision Physics”
 - Paul Langacker
- “From tabletop experiments to LHC physics”
 - Vincenzo Cirigliano

Cosmic Physics and Dark Energy/Inflation

- “Planck results: State of the Cosmological Standard Model”
 - Lloyd Knox
- “Where are we on Dark Energy?”
 - Brenna Flaugher

Neutrino Masses and Neutrino Mixing

- “What BSM physics can we learn from Neutrinos?”
 - Andre de Gouvea
- “Overview of neutrino-less double beta decay”
 - Karsten Heeger
- “What are we learning from Oscillation Measurements?”

- Francesca di Lodovico

Tests of Symmetries and the Electroweak Interaction

- “Overview of Electroweak Physics”
 - Roger Carlini
- “Overview of EDMs”
 - Blayne Heckel

Dark Matter

- “Review of Dark Matter”
 - Neal Weiner
- “Dark Matter Direct Detection: Signals and Limits”
 - Harry Nelson
- “Indirect Detection of Dark Matter”
 - Tracy Slayter

Particle and Nuclear Astrophysics

- “Review of Astrophysical Neutrinos”
 - Frank Calaprice
- “Supernova explosions and Nucleosynthesis – r-process”
 - Yong-Zhong Qian

Heavy Flavor and the CKM Matrix

- “Lattice Gauge theory and the CKM matrix”
 - Ruth Van de Water
- “Experimental Overview of Heavy Flavor Physics”
 - Paula Collins

QCD, Hadron Spectroscopy and Exotics

- “The Search for Exotic Mesons Worldwide”
 - Matthew Shepherd
- “Hadron Physics and QCD”
 - Xiangdong Ji

Partonic Distributions in Nucleon and Nuclei

- “Present and Future Directions in Disentangling the spin of the nucleon”
 - Anselm Vossen
- “3-Dimensional Structure of the nucleon from hard exclusive processes.”
 - Nicole d’Hose

Hadronic Physics and Structure of the Nucleus and Nuclei

- “A Bridge Between Non-perturbative Strong Interactions and QCD: Form Factors, Polarizabilities and Electromagnetic Sum Rules”
 - Marc Vanderhaeghen
- “Modifications of Nucleons in Nuclei”
 - Sebastian Kuhn

- “Nuclear physics on the Lattice”
 - Martin Savage
- “The Nuclear Landscape and the Big Questions”
 - Joe Carlson

Quark Matter and High Energy Heavy Ion Collisions

- “Recent results and Future Directions – RHIC and the LHC”
 - Christine Aidala

Conference “Vision” talk:

- **Dr. Hugh Montgomery, Director of Jefferson Laboratory**

Conference Public Lecture:

- **Professor Chang Kee Jung: “The Physics of Sports”**

The Convenors for the 12 sets of Parallel Sessions corresponding to the above topics are:

Physics at High Energies: Meenakshi Narain (meenakshi_narain@brown.edu), Brigitte Vachon (vachon@physics.mcgill.ca) and Adam Martin (amarti41@nd.edu)

High Intensity and Precision Physics: Brendan Kiburg (kiburg@fnal.gov), Dave Armstrong (arnd@jlab.org), and Adam Ritz (aritz@uvic.ca)

Cosmic Physics and Dark Energy/Inflation: Klaus Honscheid (kh@physics.osu.edu) and Eduardo Rozo (erozo@email.arizona.edu)

Neutrino Masses and Neutrino Mixing: Jason Detwiler (jasondet@uw.edu), Alysia Marino (amarino@colorado.edu), and Silvia Pascoli (silvia.pascoli@durham.ac.uk)

Tests of Symmetries and the Electroweak Interaction: Mark Pitt (pitt@vt.edu) and Jens Erler (erler.jens@gmail.com)

Dark Matter: Hugh Lippincott (hugh@fnal.gov) and Tim Tait (ttait@uci.edu)

Particle and Nuclear Astrophysics: Barry Davids (davids@triumf.ca) and Markus Ahlers (markus.ahlers@icecube.wisc.edu)

Heavy Flavor and the CKM Matrix: Kay Kinoshita (kinoshky@ucmail.uc.edu) and Chris Bouchard (embouchard@wm.edu)

QCD, Hadron Spectroscopy and Exotics: Robert Edwards (edwards@jlab.org) and Raffaella De Vita (Raffaella.Devita@ge.infn.it)

Partonic Distributions in Nucleon and Nuclei: Harut Avakian (avakian@jlab.org) and Cédric Lorce (c.lorce@ulg.ac.be)

Hadronic Physics and Structure of Nucleus and Nuclei: Barbara Pasquini (barbara.pasquini@pv.infn.it), Douglas Higinbotham (doug@jlab.org), and Bradley Sherrill (sherrill@frib.msu.edu)

Quark Matter and High Energy Heavy Ion Collisions: Rosi Reed (rosijreed@gmail.com) and Hannah Petersen (petersen@fias.uni-frankfurt.de)

Proceedings

Proceedings will be published through Electronic Conference Proceedings Archive ([eConf](#)).

Abstract Submission

CIPANP 2015 abstract submission is open. Please submit your abstract to the CIPANP 2015 Indico site: <http://indico.wlab.yale.edu/indico/event/2/call-for-abstracts/>

1 April 2015 **Abstract submission deadline**

All abstracts will be reviewed by the Conveners of the particular topic. Contributors will be informed whether their contributions have been selected for oral presentation in the parallel sessions or accepted as posters by 7 April 2015.

Conference Facilities

Speakers will be requested to upload their talk files to the Indico site at least a day before their scheduled sessions. Only PDF (preferred) or PowerPoint files will be accepted. For safety, speakers are advised to bring a copy on a USB stick. The conference presentation laptops must be used. The use of personal laptops will not be allowed.

Registration and Hotel Accommodations

Further information about the CIPANP 2015 scientific and social program, registration, accommodations, area attractions, and the Vail Marriott is available on the CIPANP 2015 website. The CIPANP 2015 registration and hotel accommodation reservation page are open.

Important Dates

29	January	2015	Abstract Submission begins 'Early Bird' Registration begins
13	March	2015	Early bird Abstract submission deadline
1	April	2015	Final Abstract submission deadline
9	April	2015	'Early Bird' Registration ends
10	April	2015	Standard Registration begins
23	April	2015	Student Early Registration ends
24	April	2015	Student Late Registration begins
4	May	2015	Standard Registration ends
18	May	2015	On-Site Registration begins
19	May	2015	CIPANP 2015 begins
24	May	2015	CIPANP 2015 conference ends

Please direct enquiries to the Chair of the Organizing Committee, Prof. Bonnie Fleming by emailing cipanp2015_questions@yale.edu