



# CHIRAL DYNAMICS 2012



**7<sup>th</sup> International Workshop**

**August 6-10, 2012, Jefferson Lab,  
Newport News, Virginia**

## **Third Circular**

This workshop is the 7th in the series which started in 1994 at MIT. Subsequent workshops were held at Mainz (1997), JLab (2000), Bonn (2003), Duke (2006) and Bern (2009). The 7th workshop will take place August 6-10, 2012, and will be hosted in the USA by Jefferson Lab, Newport News, Virginia. The purpose of this workshop series is to bring physicists together who are active in this field, as well as those who are interested, to discuss and debate the most recent and future developments in various topics related to the study of Chiral Dynamics. The workshop traditionally draws a near equal contribution from theorists and experimentalists and in the latest editions a strong synergy with the lattice community has developed.

Topics which will be discussed at this workshop are:

Goldstone Boson Dynamics

Hadron Structure and Meson-Baryon Interactions

Few-Body Physics

Lattice QCD and Chiral Dynamics

Experimental results and programs

In addition to the plenary talks, these topics will be the focus of three working groups, as described below.

The workshop's webpage is :

<http://www.jlab.org/conferences/CD12/>.

Registration and abstract submission are open.

**Abstract submission deadline: June 1.  
Early registration deadline: July 1.**

For any inquires please contact Jian-ping Chen or Jose Goity, or [CD12\\_program@jlab.org](mailto:CD12_program@jlab.org)

## **Organizing Committee**

Jian-pin Chen (JLab) and Jose Goity (Hampton Univ./JLab) (Co-chairs)  
Alexander Deur (JLab)  
Robert Edwards (JLab)  
Harald Grieshammer (George Washington Univ.)  
Dinko Pocanic (Univ. of Virginia)  
Rocco Schiavilla (Old Dominion Univ./JLab)  
Patricia Solvignon (JLab)

## **International Advisory Committee**

Mohammad W. Ahmed, Duke Univ., Durham, USA  
Balasubramanian Ananthanarayan, IIS, Bangalore, India  
Sinya Aoki, Tsukuba Univ., Tsukuba, Japan  
Paulo Bedaque, Univ. of Maryland, College Park, USA  
Mike Birse, Univ. of Manchester, Manchester, UK  
Veronique Bernard, IPN, Orsay, France  
Claude Bernard, Washington Univ., St Louis, USA  
Aron Bernstein, MIT, Cambridge, USA  
Hans Bijnens, Univ. of Lund, Lund, Sweden  
Gilberto Colangelo, Univ. of Bern, Bern, Switzerland  
Tom Cohen, Univ. of Maryland, College Park, USA  
Gerhard Ecker, Univ. of Vienna, Vienna, Austria  
Evgeni Epelbaum, Univ. Bochum, Bochum, Germany  
Ruben Flores-Mendieta, Univ. of San Luis Potosi, S. L. Potosi, Mexico  
Haiyan Gao, Duke Univ., Durham, USA  
Simona Giovannella, INFN, Frascati, Italy  
Maarten Golterman, San Francisco State Univ., San Francisco, USA  
Barry Holstein, Univ. of Massachusetts, Amherst, USA  
Karl Jansen, DESY/Zeuthen, Germany  
Heiri Leutwyler, Univ. of Bern, Bern, Switzerland  
Elizabeth Jenkins, Univ. of California, San Diego, USA  
Ulf G. Meissner, Univ. of Bonn, Bonn, Germany  
Fred Myhrer, Univ. of South Carolina, Columbia, USA  
Harald Merkel, Inst. fuer Kernphysik, Mainz, Germany  
Bachir Moussallam, IPN, Orsay, France  
Jose R. Pelaez, Univ. of Madrid, Madrid, Spain  
Antonio Pich, Univ. of Valencia, Valencia, Spain  
Mike Pennington, Jefferson Lab, Newport News, USA  
Craig D. Roberts, Argonne Nat. Laboratory, Argonne, USA  
Martin Savage, Univ. of Washington, Seattle, USA  
Marc Vanderhaegen, Univ. Mainz, Mainz, Germany  
Bira Van Kolck, Univ. of Arizona, Tucson, USA  
Yue Liang Wu, ITP, Beijing, China  
Zhengguo Zhao, USTC, Hefei, China

## Working Groups and Organizers

The three working groups with the corresponding organizers are shown below.

### **Goldstone Bosons**

**Mario Antonelli** (CERN) marioantonelli@cern.ch

**Liping Gan** (UNC Wilmington) ganl@uncw.edu

**Jorge Portoles** (IFIC, Valencia) Jorge.Portoles@ific.uv.es

**Urs Wenger** (ITP Bern) wenger@itp.unibe.ch

### **Hadron structure and meson baryon interactions**

**Alessandro Bacchetta** (Pavia) alessandro.bacchetta@unipv.it

**Bastian Kubis** (ITKP Bonn) kubis@itkp.uni-bonn.de

**Kostas Orginos** (W&M/JLab) kostas@wm.edu

**Karl Slifer** (New Hampshire) karl.slifer@unh.edu

### **Few body physics**

**Andreas Nogga** (Jülich) A.Nogga@fz-juelich.de

**Assumpta Parreño** (Univ of Barcelona) aparrenog@ub.edu

**Michele Viviani** (INFN Pisa) Michele.Viviani@df.unipi.it

**Henry Weller** (Duke/TUNL) weller@tunl.duke.edu

The organizers will invite speakers and also unsolicited abstracts can be submitted online:

<http://www.jlab.org/conferences/CD12/abstracts.html>

**Deadline for submitting abstracts is fast approaching: June 1!**

Queries about the working groups can be directly sent to the groups organizers.

## Plenary Program

The plenary program is now complete and the topics and speakers are as follows (in blue the confirmed titles):

#	Topic/Title	Speaker
1)	Overview of TUNL	Mohammad Ahmed - ahmed@tunl.duke.edu
2)	Summary talk	Aron Bernstein - bernstein@mit.edu
3)	Overview of ChPT: Mesons	Hans Bijnens - bijnens@hep.lu.se
4)	NA62/NA48	Andrea Bizzeti - Andrea.Bizzeti@unimore.it
5)	"Recent results and perspectives for KLOE/KLOE-2"	Fabio Bossi - Fabio.Bossi@lnf.infn.it
6)	Baryon ChPT and connection to Lattice QCD	Jorge Martin Camalich - J.Camalich@sussex.ac.uk
7)	"Analyticity and unitarity constraints on form factors"	Irinel Caprini - caprini@theory.nipne.ro
8)	"Few body interactions in lattice QCD"	Will Detmold - wdetmold@jlab.org Monday anytime, Tuesday AM or Friday anytime
9)	Experimental programs at MAMI	Michael Distler - distler@kph.uni-mainz.de
10)	Meson spectrum from Lattice QCD	Jo Dudek - dudek@jlab.org
11)	"Transverse momentum-dependent parton distribution functions in lattice QCD"	Michael Engelhart - engel@nmsu.edu Schedule talk Th or Fr
12)	"Recent results from BESIII"	Shuang-shi Fang (IHEP Beijing) - fangss@ihep.ac.cn
13)	"Nuclear electromagnetic charge and current operators in ChEFT"	Luca Girlanda - girlanda@le.infn.it
14)	Baryon-baryon interactions	Noriyoshi Ishii - ishii@ribf.riken.jp
15)	Isospin violation, strong and QED from Lattice	Taku Izubuchi - izubuchi@quark.phy.bnl.gov
16)	" Recent Results of Single-Spin Asymmetry Measurements from Jefferson Lab Hall A"	Xiaodong Jiang - xjiang@lanl.gov xjiang@lanl.gov
17)	""The Muon Capture Program at PSI"	Peter Kammel - pkammel@uw.edu
18)	"Nuclear forces at low energy"	Hermann Krebs - hermann.krebs@rub.de
19)	" $\eta$ to 3 $\pi$ and quark masses"	Stefan Lanz - stefan.lanz@hep.lu.se
20)	"Meson chiral perturbation theory meets lattice QCD"	Laurent Lellouch - lellouch@cpt.univ-mrs.fr
21)	Overview of JLab Physics: past, present, future	Bob McKeown - bmck@jlab.org
22)	"A Walk Through the World of Chiral Dynamics"	Ulf-G. Meißner - meissner@hiskp.uni-bonn.de
23)	"Applications of chiral effective field theory to light nuclei"	Daniel Phillips - phillips@phy.ohiou.edu
24)	NNEFT and its uses in nuclei: structure, EW processes	Robert Roth - robert.roth@physik.tu-darmstadt.de
25)	"An Overview of Longitudinal Spin Structure Measurements from JLab"	Vincent Sulkosky - vasulk@jlab.org
26)	"Nonleptonic and Rare Kaon Decays from Lattice QCD"	Chris Sachrajda - cts@soton.ac.uk
27)	Baryons in Lattice QCD	André Walker-Loud - awalker-loud@lbl.gov

We are looking forward to your participation in CD12!

THEORY AND EXPERIMENT • 7TH INTERNATIONAL WORKSHOP

JEFFERSON LAB

AUGUST 6-10, 2012

NEWPORT NEWS, VA

# Chiral Dynamics

## Working Groups and Organizers

### • Goldstone Boson

Mario Antonelli (CERN)

Liping Gan (Univ. of North Carolina)

Jorge Portoles (IFIC, Valencia)

Urs Wenger (ITP, Bern)

### • Hadron Structure and Meson-Baryon Interactions

Alessandro Bacchetta (Univ. of Pavia)

Bastian Kubis (ITKP, Bonn)

Kostas Orginos (W&M/JLab)

Karl Slifer (Univ. of New Hampshire)

### • Few Body Physics

Andreas Nogga (IKP, Julich)

Assumpta Parreno (Univ. of Barcelona)

Michelle Viviani (INFN, Pisa)

Henry Weller (Duke Univ./TUNL)

### Organizing Committee

Jian-pin Chen, JLab, and  
Jose Goity, HU/JLab (Co-chairs)  
Alexander Deur, JLab  
Robert Edwards, JLab  
Harald Grieshammer, GWU  
Dinko Pocanic, UVA  
Rocco Schiavilla, ODU/JLab  
Patricia Solvignon, JLab

### International Advisory Committee

Mohammad Ahmed, Duke Univ./TUNL  
Balasubramanian Ananthanarayanan, IIS  
Simona Giovanella, INFN  
Sinya Aoki, Tsukuba Univ.  
Paulo Bedaque, Univ. of Maryland  
Michael Birse, Univ. of Manchester  
Veronique Bernard, IPN  
Claude Bernard, Washington Univ.  
Aron Bernstein, MIT  
Johan Bijnens, Univ. of Lund  
Gilberto Colangelo, ITP Bern  
Thomas Cohen, Univ. of Maryland  
Gerhard Ecker, Univ. of Vienna  
Evgeni Epelbaum, Univ. Bochum  
Ruben Flores-Mendieta, Univ. of San Luis Potosi  
Haiyan Gao, Duke University  
Maarten Golterman, San Francisco State Univ.  
Barry Holstein, Univ. of Massachusetts  
Karl Jansen, DESY/Zeuthen  
Heinrich Leutwyler, Univ. of Bern  
Elizabeth Jenkins, Univ. of California  
Ulf-G. Meissner, Univ. of Bonn  
Fred Myhrer, Univ. of South Carolina  
Harald Merkel, Inst. fuer Kernphysik  
Bachir Moussallam, IPN Orsay  
Jose R. Pelaez, Univ. of Madrid  
Antonio Pich, Univ. of Valencia  
Michael Pennington, Jefferson Lab  
Craig D. Roberts, Argonne Nat. Laboratory  
Martin Savage, Univ. of Washington  
Marc Vanderhaeghen, Univ. Mainz, Mainz  
Bira Van Kolck, Univ. of Arizona  
Yue Liang Wu, ITP Beijing  
Zhengguo Zhao, USTC Hefei

Nijm  
Weinberg NNLO  
Perturb LO  
Perturb NLO  
Perturb NNLO



[www.jlab.org/conferences/CD12](http://www.jlab.org/conferences/CD12)

JSA Jefferson Lab