

# CONFERENCE PROGRAMME

## The Proton Mass: At the Heart of Most Visible Matter

09:20-9:30 Welcome

### Monday April 03, 2017 (Morning)

#### Introductory Session

Chair: Marc Vanderhaeghen

09:30-10:15 How to test the mass decomposition? Jianwei Qiu 35'+10'

10:15-11:00 Impacts of dynamical chiral symmetry breaking on hadron masses  
Ian Cloët 35'+10'

11:00-11:20 Coffee Break

11:20-12:05 The composition of the proton mass from light-front holography and  
superconformal algebra Stan Brodsky 35'+10'

12:05-12:50 Superconformal and supersymmetric constraints on hadron masses in light-front  
holographic QCD Guy de Teramond 35'+10'

12:50-13:00 Discussion 10'

13:00-14:30 Lunch Break

### Monday April 03, 2017 (Afternoon)

#### Models of QCD and the mass of hadrons

Chair: Bob Jaffe

14:30-15:10 Dynamical origin of the proton mass Xiangdong Ji 30'+10'

15:10-15:50 The dynamics of the gluon mass  
Joannis Papavassiliou 30'+10'

15:50-16:30 The QCD effective charge Daniele Binosi 30'+10'

16:30-17:00 Coffee Break

17:00-17:40 Proton mass decomposition Yi-Bo Yang 30'+10'

17:40-18:00 Discussion 20'

18:00 Adjourn

**Tuesday April 04, 2017 (Morning)****Hadron mass decomposition calculations****Chair: Barbara Pasquini**09:00-9:45 Longitudinal and transverse spin-orbit correlations **Cédric Lorcé** 35'+10'9:45-10:30 Quark's angular momentum densities in position space  
**Luca Mantovani** 35'+10'

10:30-11:00 Coffee Break

11:00-11:45 Hadron charges and currents, and the contribution of excited states  
**David Richards** 35'+10'11:45-12:30 Proton without confinement **Pietro Faccioli** 35'+10'

12:30-13:00 Discussion 30'

13:00-14:30 Lunch break

**Tuesday April 04, 2017 (Afternoon)****Experimental/ Threshold J/Psi****Chair: Kawtar Hafidi**14:30-15:00 Early results from the GlueX experiment **Eugene Chudakov** 25'+05'15:00-15:30 J/psi at threshold at JLab (Hall A,B) **Jian-Ping Chen** 25'+05'15:30-16:00 Accessing the real part of the amplitudes of the forward scatterings  
of J/psi and phi mesons off the proton from photoproduction on proton around threshold  
**Oleksii Gryniuk** 25'+05'

16:00-16:30 Coffee Break

**Tuesday April 04, 2017 (Afternoon)**16:30-17:00 Quarkonium nucleus bound states with lattice **Huey-Wen Lin** 25'+05'17:00-17:30 Novel Physics with Tensor Polarized Target **Karl Slifer** 25'+05'

17:30-18:00 Discussion 30'

18:00 Adjourn

**Wednesday April 05, 2017 (Morning)****Lattice QCD calculations****Chair: Stan Brodsky**

09:00-9:45	Perspective on the origin of hadron masses	Craig Roberts	35'+10'
9:45-10:30	Bound states in perturbation theory	Paul Hoyer	35'+10'
10:30-10:50	Discussion		20'

10:50-11:20 Coffee Break

11:20-12:05	QCD at the heart of the Standard Model	Piet Mulders	35'+10'
12:05-12:45	Nucleon quark content from lattice QCD	Christian Hoelbling	35'+05'
12:45-13:00	Discussion		15'

13:00-14:30 Lunch break

**Wednesday April 05, 2017 (Afternoon)****Mass decomposition****Chair: Jianwei Qiu**

14:30-15:15	Probing the origin of the proton mass with heavy quarkonium	Dima Kharzeev	35'+10'
15:15-16:00	Quark and spin content of the nucleon	Constantia Alexandrou	35'+10'
16:00-16:35	Quark-Gluon Correlations in the Nucleon	Matthias Burkardt	30'+05'

16:35-17:00 Coffee break

17:00-17:40	Origin of nucleon mass in lattice QCD	Keh-Fei Liu	30'+05'
17:40-18:00	Discussion		20'

18:00 Adjourn

**Thursday April 06, 2017 (Morning)****Quark Masses Contribution****Chair: Mauro Anselmino**

09:00-9:45 Impact of proton structure on the proton-neutron mass difference  
and the (muonic-) hydrogen spectrum **Vladimir Pascalutsa** 35'+10'

9:45-10:30 Sigma terms in ChEFT **Jose M. Alarcon** 35'+10'

10:30-10:50 Discussion 20'

10:50-11:20 Coffee Break

11:20-12:05 Lattice on quark masses **Huey-Wen Li** 35'+10'

12:05-12:45 Sigma-term determination from Roy-Steiner equations.  
**Jacobo de Elvira** 35'+05'

12:45-13:00 Discussion 15'

13:00-14:30 Lunch break

**THURSDAY APRIL 06, 2017 (Afternoon)****Experiments/Pentaquarks****Chair: Jian-Ping Chen**

14:30-15:10 J/psi and upsilon production at threshold at the EIC  
**Abhay Deshpande** 30'+10'

15:10-15:40 LHCb pentaquark **TBD** 30'+10'

15:40-16:00 Discussion 20'

16:00-16:30 Coffee Break

16:30-17:05 Deuteron Energy Momentum Tensor and Gluonometry **Simonetta Liuti** 30'+05'

17:05-17:40 LHCb pentaquark search in direct photoproduction at JLab  
**Sylvester Joosten** 30'+05'

17:40-18:00 Discussion 20'

18:00 Adjourn

20:00 Social dinner **Restaurant Orso de Grigio**

**Friday April 07, 2016 (Morning)**

**Conclusions**

**Chair: Jianwei Qiu**

09:00-9:45 Theory Summary *Barbara Pasquini/Marc Vanderhaeghen* 35'+10'

9:45-10:30 Summary Experimental *Zein-Eddine Meziani* 35'+10'

10:30-11:00 Discussion 30'

11:00-11:30 Coffee Break

11:30-12:30 Discussion & Plans for a white paper 60'

12:45-14:30 Lunch & Adjourn