

REPORT ABOUT LIGHT-CONE 2015 CONFERENCE

The 2015 edition of the Light-Cone meeting took place at the INFN National Laboratories in Frascati, Italy, on 21-26 September

(http://www.roma1.infn.it/conference/light_cone_2015/)

The local organizing committee consisted of B. Pasquini (Co-Chair, Pavia U. and INFN Pavia) and G. Salmè (Co-Chair, INFN Roma1), M. Battaglieri (INFN Genova), D. Binosi (ECT*, Trento), M. Boglione (Torino U. and INFN Torino), U. D'Alesio (Cagliari U. and INFN Cagliari), M.P. Lombardo (LNF, INFN Frascati), M. Mirazita (LNF, INFN Frascati), S. Scopetta (Perugia U. and INFN Perugia), with D. Pierluigi providing administrative support. This series of meetings is held under the auspices of the International Light Cone Advisory Committee (ILCAC), Inc. (<http://www.ilcacinc.org>). The Workshop was supported in part by generous contributions from INFN, and the Jefferson Science Association (JSA). In particular, the support from JSA allowed ILCAC to award this year's McCartor Fellowships to four young physicists, enabling them to attend the conference and present the results of their research. This year it was remarkable the number of applications for the McCartor Fellowships, which resulted in 8 awards. Below is a detailed description about the use of JSA funds.

LIGHT-CONE 2015 had 79 registered participants, and was also attended by several researchers working at the LNF. The program of the workshop consisted in a total of 65 talks and 6 posters. Each participant was invited to vote for the two best posters. The presenters of the two most voted posters (L. Bellantuono and C. Mondal) have been awarded the possibility to present a written contribution that will be published in the proceedings of the conference. Emphasis on the interface between theory, phenomenology and experiment in hadron physics was a feature of this year's meeting, with several experimental talks from Jefferson Lab (H. Avakian, M. Battaglieri, R. De Vita, S. Malace, S. Pisano, P. Rossi), COMPASS at CERN (F. Bradamante), and HERMES (L. Pappalardo), discussing recent results and future perspectives of hadron physics at their facilities. In addition we had an overview talk about the future perspectives at an EIC (A. Deshpande).

The workshop covered many topics in hadron phenomenology related to the deep inelastic processes under study at several facilities, including nucleon generalized parton distributions (GPDs) (D. Mueller, H. Moutarde) and Compton form factors (B. Bakker), transverse momentum dependent distributions (TMDs) (M. Anselmino, A. Bacchetta, M. Echevarria, L. Mantovani, A. Signori), and double parton distributions (W. Broniowski, J. Gaunt, M. Rinaldi). There was discussion on flavor asymmetries in the nucleon sea (C.-R. Ji), the spin and orbital angular momentum structure of the nucleon (M. Burkardt, C. Lorcé, S. Pisano, J. Zhang), hadron reaction and spectroscopy study (A. Szczepaniak). Results from QCD lattice studies covering these different topics were also presented (C. Alexandrou, S. Ryan, G. Bali).

A variety of other, more formal theoretical topics in QCD and QED were also presented. like, for example, the Faddeev approach (G. Eichmann), Bethe-Salpeter and Dyson-Schwinger equation (J. Carbonell, W. De Paula, T. Frederico, V. Karmanov, G. Salmè), light-front models (H. Choi, T. Pena), and issues involving bound states and zero-modes (W. Polyzou). Recent progress in light-front holography and AdS/QCD (Guy de Teramond, S. Cotogno, V. Lyubovitskij A. Vega), as well as computational developments in many-body dynamics (J. Vary) was also highlighted. The closing presentation was given by S. Brodsky.

A half-day excursion was made to Villa Adriana in Tivoli and was followed by the Workshop dinner. During the dinner, the Chair of LC2015 and ILCAC presented awards to the 8 McCartor Fellowship recipients: Arkadiusz Trawinski (Warsaw U.), Xiaonu Xiong (Pavia U.), Kelly Chiu (SLAC), Frederik Van der Veken (CERN), Matteo Rinaldi (Perugia U.), Henry Lamm (Arizona State U.), Sabrina Cotogno (Nikhef and Amsterdam U.), and Andrea Signori (Nikhef and Amsterdam U.).

The Proceedings of the workshop will be refereed and published as a special issue of Few Body Systems. The detailed program and all the presentations can be found at the workshop website,
http://www.roma1.infn.it/conference/light_cone_2015/sc_program.html/.

Use of JSA funds (Total: 4944.16\$)

- 1) JSA support: 1000\$ - Arkadiusz Trawinski, graduate student at Warsaw U. – McCartor Fellow
- 2) JSA support: 600\$ - Xiaonu Xiong, post doc at Pavia U. – McCartor Fellow
- 3) JSA support: 600\$ - Kelly Chiu, graduate student at SLAC – McCartor Fellow
- 4) JSA support: 600\$ - Frederik Van der Veken, post doc at CERN – McCartor Fellow
- 5) JSA support: 600\$ - Matteo Rinaldi, post doc at Perugia U. – McCartor Fellow
- 6) JSA support: 600\$ - Henry Lamm, graduate student at Arizona State U. – McCartor Fellow
- 7) JSA support: 549.36\$ - Guy De Teramond, professor at Costa Rica U. – invited speaker
- 8) JSA support: 394.80\$ - Wayne De Paula, researcher at Sao Paulo, Inst. Tech. Aeronautical - invited speaker

Leverage support: 7000 Euro from INFN.

Matching resources: INFN National Laboratories in Frascati provided the conference hall, the secretariat and the network resources without any additional cost.

Sincerely,

Co-chair of LC2015
Barbara Pasquini

Co-chair of LC2015
Giovanni Salmè