



“CHANNELING 2010”
CHARGED AND NEUTRAL PARTICLES CHANNELING PHENOMENA
Ferrara (FE), Italy, October 3 - 8, 2010
Chairmen: S.B. DABAGOV, L. PALUMBO, and V. GUIDI

“Channeling 2010”
4th International Conference
Charged and Neutral Particles Channeling Phenomena

Ferrara (FE), Italy October 3 - 8, 2010

<http://www.lnf.infn.it/conference/channeling2010>

Organized by

Istituto Nazionale di Fisica Nucleare
Laboratori Nazionali di Frascati
University of Ferrara & INFN Ferrara

In cooperation with and sponsored by

SIF - the Italian Physical Society
LPI RAS - P.N. Lebedev Physical Institute RAS, Russia
CERN, Switzerland
HADRON PHYSICS2 – the FP7 EU Project
EuCARD AccNet – the FP7 EU Project

The “Channeling” (International Conference on Charged and Neutral Particles Channeling Phenomena) series are the conferences devoted to new developments in the field of coherent and incoherent scattering of hadrons and leptons (protons, ions, electrons, muons and related antiparticles) including X-ray and neutron beams in matter of various periodicity structures from the viewpoint of fundamental studies as well as applications. The organization of these conferences based on the traditions of the related successful meetings in Europe, America and Asia started more than 30 years ago.

The first two meetings of new series - "Channeling 2004" and "Channeling 2006" were organized by the National Institute for Nuclear Physics (INFN) at the National Laboratories of Frascati (LNF), and the third meeting, "Channeling 2008", at the Erice Majorana Centre (Erice, Italy). The proceedings of the Frascati's conferences were issued by SPIE - the International Society for Optical Engineering (Proc. of SPIE, Vol. 5974 and Vol. 6634), while the Erice's meeting - by the World Scientific Publishing, as a special issue of "The Science and Culture Series - Physics".

The conference represents a unique opportunity for the wide interdisciplinary community to gain information about current and future researches in the field of coherent/incoherent scattering of radiations in matter (crystals, nanoporous materials, capillaries), and in particular for young scientists who have interest in undertaking new investigations following the foreseen development of the next generation photon sources, as well as an important opportunity for exploring and discussing new international initiatives in radiation penetration science, such as channeling of charged and neutral particles and related studies.

The scientific program of conference will include invited talks, oral and poster presentations. Sufficient time for informal discussions will be allocated.

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Conference topics:

- Coherent scattering of relativistic charged particles in matter;
- Radiation of relativistic charged particles in periodic structures (coherent bremsstrahlung, channeling radiation, resonant transition radiation, diffraction radiation, parametric x-ray radiation, LPM effect);
- Crystal channeling, volume capture and crystal reflection of positive ions: theory and experiments; crystal assisted collimation in hadron colliders;
- Channeling of radiations in capillary systems (micro- and nano-channeling, nanotubes, nanoporous);
- Novel types of sources for electromagnetic radiation (FEL, Thomson scattering, laser plasma acceleration);
- Applications of channeling phenomena (bending of the beams, positron sources, powerful radiation sources, x-ray waveguides, capillary/polycapillary optics, novel x-ray table-top instruments)

International Advisory Committee

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* Recently, passed away.



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Technical Program, Abstracts and Proceedings

The scientific program of the conference will include invited presentations by the experts in the field of the “Channeling 2010” topics, selected oral presentations, and poster sessions.

Each author is requested to submit a camera-ready copy of an abstract of his contribution in English **by July 10, 2010** via e-mail channeling2010@Inf.infn.it

Authors are kindly required to follow *the guidelines for Abstracts of Oral or Poster Contributions* (in [doc](#), [LaTeX](#), or [pdf](#) formats – templates are available via the link <http://www.lnf.infn.it/conference/channeling2010/program.html>). Please, save and submit the abstract under your family name typed in small letters, e.g. **abstract_smith.***** submitted by Dr. Smith.

Abstracts of all accepted papers (both oral and poster) will be published in the Advanced Program and distributed to all participants at registration. Post deadline abstracts will not be published.

All the papers will be published as a special issue. The deadline for the manuscript will be announced during the meeting. For further information or questions do not hesitate contacting the Organizing Committee by channeling2010@Inf.infn.it.

Registration & Fee & Accommodation

Conference fee:

- 350 € for regular participant,
- 100 € for the accompanying person -

includes the attendance of all conference sessions, conference bag, contents and abstract book, welcome reception, coffee break, lunch, conference excursion, events included in the social program. The Organizing Committee will consider granting 10 students or young researchers with a free-of-charge lodging. The interested persons should specify their requests compiling the field “*Any other information or special requirements*”.

A registration fee is to be paid only in cash at the Registration Desk (no advance payment, no checks, no credit cards) for regular participants and students.

Participants are invited to register to the conference by filling in the online Registration Form (please, visit the official conference web site: <http://www.lnf.infn.it/conference/channeling2010/reg.html>). All details of your participation must be reported on the registration form.

Participants should arrange their own accommodation contacting the hotels directly quoting “**Channeling 2010**”. The list of the hotels is available via the conference web site; all necessary information is online published, please, follow the link: <http://www.lnf.infn.it/conference/channeling2010/accommodation.html>.

Important dates

Abstract submission
Manuscript submission
Hotel reservation

by **10 July 2010**
by **8 October 2010**
the earliest possible (pay attention to the deadlines specified by the hotels visiting the official conference web site; due to an international cultural event in parallel with our conference, participants are requested to secure a room as soon as possible.)
by **3 October 2010**

Registration



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How to get to the conference

By train

Ferrara is on the Bologna to Venice (Venezia) train line. Trains starting from Bologna pass through Ferrara. Ferrara is an hour and a half distance by train from Venice (Venezia); web site: » <http://www.trenitalia.com>

By car

By car from the direction of Bologna, take A13 north. From Venice (Venezia), take A4 SouthWest to Padua (Padova) and continue on A13 South to Ferrara; web site: » <http://www.autostrade.it>

By bus

Bus information for Ferrara and the surrounding area is available at telephone (+39) 0532-599492. The bus from Modena takes one and a half hour; web site: » <http://www.acft.it>

By plain

"G. Marconi" in Bologna, km. 45 - <http://www.bologna-airport.it/it/>

"M. Polo" in Venice, km. 110 - <http://www.veniceairport.it/>

"Catullo" in Verona, km. 100 - http://www.aeroporto.verona.it/index_en.asp

"L. Ridolfi" in Forlì, km. 120 - http://www.forliairport.com/main/index.php?id_pag=56

"F. Fellini" in Rimini, km. 200 - <http://www.riminiairport.com/>

From the *Main Railway Station* the *University* can be easily reached by public transport. Directly in front of the station there is a *bus stop* for the *number 9 service* (tickets can be bought at the railway station or from slot-machines inside the station). After about 10 min ride you get off at the stop in front of the "*Casa dello Studente*". From there, you have to take the first street on your right (*Via Ugo Bassi*) and then turn right at the first crossroads (*Via Savonarola*). For any details please use the map via <http://www.lnf.infn.it/conference/2010/channeling2010/images/Ferrara.jpg>.

Contact information

“Channeling 2010”

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Instructions to Authors of Abstracts for Oral or Poster Contributions:

The Title is Written in Bold, Times New Roman 12, Centered

Authors are cited in Times New Roman 12, centered: Author xxx, Author yyy*
Institute or laboratory: Times New Roman 10, centred: xxx, *yyy

There must be one blank line between the title, the authors' names and their affiliation and two blank lines between the affiliation and the beginning of the body text without any punctuation mark at the end of these lines. Authors and affiliation must not exceed one line each. The name of the corresponding author is underlined.

All abstracts must be written in English and occupy a maximum of 1 page A4 written in Times New Roman 12, alignment in mode “justify”. Please make sure to respect the following margins: top, bottom, right: 25 mm; left: 30 mm.

Reference citations [1] are shown in the text by a number in brackets and follow one double space below the body text under the heading “References”.

No figures, images or photos have to be included in the abstract.

In order to ensure a smooth abstract booklet preparation, please do not insert text or references in “footnote” mode or other encoding.

References

[1] The heading “References” follows one double space below the body text in Times New Roman 10 bold. Reference citations are shown in the text by a numeral in brackets and cited under the heading “References”.

[2] L.J. Marshal, and G. Talleni, Phys. Rev. A **43** (2001) 5897.