Advanced Summer School on
“Laser-Driven Sources of High Energy Particles and Radiation”

9-16 July 2017, CNR Conference Centre, Anacapri, Capri, Italy

LECTURERS and TOPICS
Andrew BAYRAMIAN, LLNL, Livermore, CA, US. Intense Lasers: high average power
Carlo BENEDETTI, LBNL, Berkeley, CA, US. Advanced modelling tools for LWFA
Marco BORCHESI, QUB, Belfast, UK. Ion acceleration: TNSA and beyond
Pablo CIRRONE, INFN-LNS, Catania, IT. Simulation of particles through matter
Massimo FERRARIO, INFN-LNF, IT. Electron beam properties and FEL
Dario GIOVE, INFN, Milano, IT. Ion beam diagnostics
Bernhard HIDDING, SCAPA, UK. Hybrid LWFA-PWFA
Matte KALUZA, IQO, Jena, DE. Ultrafast Plasma Imaging
Masaki KANDO, JAEA, Kyoto, JP. LWFA electrons: staged acceleration
Stefan KARSH, MPQ, Munich, DE. Advanced all-optical X-ray sources
Luca LABATE, CNR, Pisa, IT. Ultrafast, intense laser pulse diagnostics
Bruno LE GARREC, CNRS, Paris, FR. Intense Lasers: high peak power
Andrea MACCHI, CNR and Dip. Fisica, Pisa, IT. Basics of laser-plasma interaction
Paul MASON, CLF-RAL, UK. High-energy DPSSL development for laser-driven radiation sources
Zulfikar NAJMUDDIN, IC, London, UK. LWFA: injection and acceleration
Ceferrino OBCGMEA, NCI, Bethesda, MD, USA. Clinical and radiobiological applications of LPA
Riccardo TOMMASINI, LLNL, Livermore, CA,US. Plasma X-ray Imaging and Sources

COMMITTEES
School Directors
Leonida A. GIZZI (CNR, INO) Ralph ASSMANN (DESY)
Course Organizers
Petra KOESTER (CNR, INO) Francesca USALIA (CNR, INO)
Tom MINNIBERGER (DESY)
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REGISTRATION
Applications including full CV should be sent to the Scientific Secretariat. CV should include full name, address, age, nationality, academic qualifications and degree, present position and affiliation, current research activity, list of publications.
Registration fee for participants and accompanying persons is 200€ and includes access to the conference facility, lunches and coffees, training material. Partial financial support will be available for deserving students with limited access to institutional funding. Participants will have to book their own accommodation. A list of hotels will have rooms reserved until March 10th. We strongly encourage participants to book their accommodation as early as possible.
Further information will be available at the School website: http://ill.infn.it/lpaso2017

VENUE
The School will take place at the CNR Conference Facility in Anacapri, on the island of Capri. The conference facility is located at the premises of the Former Solar Observatory of the Swedish Royal Academy, owned by the Italian National Research Council. Capri is a famous destination in the Tyrrhenian Sea on the south side of the Gulf of Naples in the Campania region of Italy. Anacapri is located on the slopes of Mount Solaro at a higher elevation than Capri town. Points of interest include the Blue Grotto, the greatest attraction of the island, Villa San Michele, the Villas of Tiberius and the Chiesetta in Mount Solaro which takes to the highest peak of the island from which you can enjoy the most stunning panoramas. A regular bus running every fifteen minutes takes to the sparkling city of Capri and its famous Piazzetta. The venue can be reached by regular ferry or hydrofoil connections from the Naples and other locations like Sorrento, Amalfi and Salerno. See web site for full info.

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Motivation
New large scale intense laser facilities with unique capabilities will be soon coming on-line, with laser intensity never achieved before. At the same time, a number of dedicated laser installations are being built or upgraded across the world to enter new regimes of laser-plasma interaction for particle acceleration and applications to generation of radiation. In this rapidly evolving context there is a compelling need of advanced training for the community of young researchers involved in the various aspects of this research, requiring theoretical, numerical and experimental skills. The proposed school aims at bringing together distinguished scientists and motivated young researchers and post-graduate students engaged or willing to enter this field to promote advanced training in the key areas of ultraintense lasers, interaction with matter at ultra-high field and laser-plasma acceleration, with a focus on emerging new ground-breaking initiatives based on novel particle acceleration techniques, like the EUPRAXIA project. Also, specialists in generation of advanced radiation will provide latest update on applications to major multidisciplinary fields, including medicine and biology, material science and space industry.

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