

Luca Volpe

Motivation letter to become Member of the BIPF Board

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Nationality: Italian

Born: 09/10/1971 Milano (Italy)

Married, one children



Status:

Since 2014 I am leading the CLPU Laser-Plasma chair at the University of Salamanca

I am the responsible of the scientific research line and relation with the user community as well member of the scientific Panel for User access at the VEGA system.

Formation and expertise:

My personal formation is centered in Laser-Plasma physics and laser-driven radiation and particle beams with focus on study extreme state of matter. I started my career studying the physics of Free Electron Lasers, with particular interest in multi body phenomenon (my favourite book is from Prof. Balescu) and I was awarded with the "Francesco Resmini" National Prize by national Institute Of Nuclear physics (INFN) for the best Italian PhD Thesis of 2008 in accelerator physics. Beside my theoretical background I run more than 15 experimental campaigns in laser-plasma physics from 2008, half of them I was PI or Co-Pi. I worked in EU and Extra EU big laser facilities among which RAL, PALS, LULI, LLNL and of course CLPU. The main subject of the experimental campaign focus on studying of laser-driven particle generation and related applications from Inertial confinement fusion and particle beam. Recently I started a experimental activity on Proton Stopping Power measurement and WDM characterization that I am trying to carry out both on large scale (kJ, ps-ns) facilities (LMJ and ORION) as well as in smaller scale (~J, fs) but High repetition rate facilities (CLPU and Gemini).

Actual scientific activity:

In Salamanca I am hardy working to develop a laser-plasma background in order to support the scientific activities at the CLPU facility. In the following the main actions I did and I am doing to reach this goal:

- Formation at PhD level, at the moment I am directing five PhD students that are also involved in the CLPU laboratory
- Together with The team at CLPU we started operating the 200 TW system finalising commissioning experiments for the 200 TW and planning the one for the 1PW system
- I organised the first International call for Users that will start the beginning of 2018
- I organised training at under-degree, MSc and PhD level to promote and spread Laser-plasma physics in the territory of Salamanca and in Spain. With respect to this I am the national responsible of an ERASMUS + project "PowerlabPs" (2017-2019) which aim is to train students in laser-Plasma

Why I want to Join BPIF:

I am willing to join the BPIF board because I think this will keep me closer to the international research on Laser-Plasma Physics. Also I would like to give my contribution as Spanish represented on the topic and in Particular representing an important and unique laser-facility (CLPU) which is now as the centre of the interest of all the Laser-plasma community. Currently (and in all my career) I am involved in many of the activities related to BPIF and I have scientific collaborations with most of the actual members of the Board with which I shared different and interesting scientific investigations. With respect to this CLPU was hosting the 13th Direct drive Fast Ignition Workshop and most of the next accepted experiment in 2018 on the VEGA 2 (200 TW) system are on laser-driven particle beam and laser-plasma fundamentals.

Publications

I am author of about 65 publications with 440 citations and h index 12

It is important to say that my publication rate have to be evaluated considering that i) after my PhD I changed to Laser-plasma physics, ii) the last 4 years I concentrate mainly on CLPU operation and formation of people.