

Curriculum Vitae

Gilles Jacopo Silvi

Current Occupation

- **November 2021- Present**: Accelerator physics PhD student at University “La Sapienza” of Rome (Italy).

Professional Memberships

- **November 2021- Present**: Member of “*National Nuclear Physics Institute (INFN)*”, subdivision Roma 1 (Italy) and collaborations with “*Frascati National Laboratories (INFN-LNF)*” for SPARC_LAB laboratory.

Research activities

- **November 2021- Present**: Beam dynamics simulation for high brightness electron beams with ASTRA (A Space Charge Tracking Algorithm) simulation tool for SPARC_LAB linac; low charge electron beam optimization for characterization of the permanent-magnet quadrupoles, PMQ, before the plasma chamber to achieve the optimum transverse matching at the plasma entrance. PWFA (Plasma wake field acceleration) beam dynamics studies with the comb configuration connected with the EUPRAXIA@SPARC_LAB project.

Didactical activities

- **2022**: Informatic engineering course’s physics tutor at “La Sapienza” University of Rome (Italy), exercises and exams support.
- **2022**: Master’s thesis support using ASTRA for machine learning.

Certifications

- **2022**: “*Joint University of accelerator school (JUAS)*” course 1 certificate, released by “*European Scientific Institute (esi)*”.

Education

- **2021**: Master’s degree in “*Energy and Nuclear Engineering*” at University “La Sapienza” of Rome (Italy). Thesis title: “*Energy measurements in a gun photo-injector*”.
- **2018**: Bachelor’s degree in “*Energy Engineering*” at University “La Sapienza” of Rome (Italy). Thesis title: “*Profitability analysis of a nuclear power plant compared to a natural gas power plant*”.

Languages

- Italian (mother tongue).
- English.

Used software

- Office, MATLAB, ASTRA (A Space Charge Tracking Algorithm).