

## Curriculum Vitae

### Dr. Gabriele Maria Grittani

Leader of the electron acceleration group in the Department “Radiation Physics and Electron acceleration”, ELI-Beamlines research facility, Dolni Brezany (Czech Republic)

### Publications

Excerpted from WOS: 26 publications, 584 citations, h-index 8



### Personal Information

Birth 21 November 1989, Bari (Italy)  
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### Positions held

Since 2021 Deputy Head of the Research Program “Radiation Physics and Electron acceleration”, ELI-Beamlines, Dolni Brezany, Czech Republic  
Since 2019 Leader of the electron acceleration group in the Research Program “Radiation Physics and Electron acceleration”, ELI-Beamlines, Dolni Brezany, Czech Republic  
2018-2019 Post-doc in the Research Program “Particle Acceleration by laser”  
ELI-Beamlines, Dolni Brezany, Czech Republic  
2013-2018 Ph.D. student in the Research Program “Particle Acceleration by laser”  
ELI-Beamlines, Dolni Brezany, Czech Republic

### Education

2018 Ph.D., Faculty of Nuclear Sciences and Physical Engineering  
Czech Technical University in Prague, Czech Republic  
Thesis title: “*Experimental study of laser wakefield acceleration and applications of laser-accelerated electron beams in the ELI-Beamlines project*”  
2013 Master’s Degree in Medical Physics  
University of Pisa, Italy  
Thesis title: “*A study of GeV electrons by laser-plasma acceleration for secondary radiation sources*”  
2011 Bachelor’s Degree in Physics  
University of Pisa, Italy  
Thesis title: “*Studio del decadimento  $B^0 \rightarrow J/\psi K^*(892)^0$  a CDF*”  
2008 Maturita’ scientifica (High-school leaving exam)  
Italian Navy Military High-School “Francesco Morosini”, Venice, Italy

### Research Interests

Laser wakefield acceleration; electron beam diagnostics; high-power lasers; kHz lasers; radiotherapy; medical imaging.

## Grants, Awards and Fellowships

2023	ELI-Beamlines Coordinator of DARPA MuS2 project (1.0 M\$ in 1 year)
2022	Principal Investigator of NSF-GACR Grant (300 k€ in 3 years)
2021	Visiting Researcher at Universita di Bari
2019	Falling Walls Lab National winner and world finalist (Falling Walls Berlin, Germany)
2017	Best Student Contribution (SPIE Optics+Optoelectronics Conference, Prague, Czech Republic)
2015	Best Student Contribution (RAD 2015 Conference, Budva, Montenegro)
2011-2012	ERASMUS Scholarship for studying 2 semesters at the LMU university in Munich, Germany
2007-2008	Badge of honor for study and military performances, Italian Navy Military High-School

## Languages

Italian	Native Speaker
English	Fluent
Czech	Fluent (spoken) – Intermediate (written)

## Scientific Projects

### Intense and Compact Muon Sources for Science and Security (ELI-Beamlines coordinator, 2023-2024)

DARPA grant, ELI-Beamlines funding 1.0 M\$ in 1 year

### Strong Field QED plasma physics at and beyond PW-class (Principal Investigator, started in 2022)

NSF-GACR Lead Agency grant, total funding 300k Euro, 3 years project.

### ELBA All-Optical Laser Electron Collider (Coordinator, started in 2019)

ELBA is an all-optical laser electron collider based on PW high repetition rate laser pulses, which are wavefront split and used to generate and collide GeV electron beams with high intensity ( $>10^{21}$  Wcm<sup>2</sup>) laser pulses. ELBA will enable experiments with unprecedented collision parameters.

Achievements to date: Beamline designed, installed and commissioned at low power.

### ALFA kHz electron accelerator (Coordinator, started in 2020)

ALFA is a high repetition rate laser wakefield accelerator producing 10s MeV electron beams for multi-purpose applications including VHEE radiotherapy, inverse Compton scattering and radiation testing.

Achievements to date: Beamline designed, installed and commissioned. Record-high energy kHz electron beams demonstrated experimentally.

## Other

- Chair of the ELI Summer School 2021
- Organizer of the ELI User Conference 2020,2021,2022 and LEAK international workshop 2018
- 5 Invited talks at international conferences and 6 invited Seminars
- Since 2019 Lecturer at the ELI Summer School on the topic Laser Electron Acceleration
- 40+ oral presentations in international conferences and workshops
- Supervisor of 3 PhD thesis, 3 Master's thesis and 2 Bachelor's thesis
- 5 seminars about high power lasers application for the general public