

## PHD IN TECHNOLOGIES FOR FUNDAMENTAL RESEARCH IN PHYSICS AND ASTROPHYSICS

**Curriculum: ELECTROTECHNICS** 

- Collective effects in circular accelerators
- Physics, Technology and Applications of Linear Accelerators
- Physics of High Brightness Accelerators
- Applied Superconductivity: Quantum Phenomena and Quantum Systems
- Advanced scientific programming in Matlab
- Programmable System on Chip (SoC) for data acquisition and processing
- Coupled electrical-thermal-structural Finite Element Analyses
- Metal Additive Manufacturing
- Fundamentals of system engineering and project management for large scientific projects