

# Eurizon 2020+ Workshop on Free-Electron Laser driver/top-up injector investigations

Tuesday January 23<sup>rd</sup> 2024 - European XFEL Schenefeld, Germany

Introduction

Gianluca Geloni European XFEL

**This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 871072 (EURIZON)**

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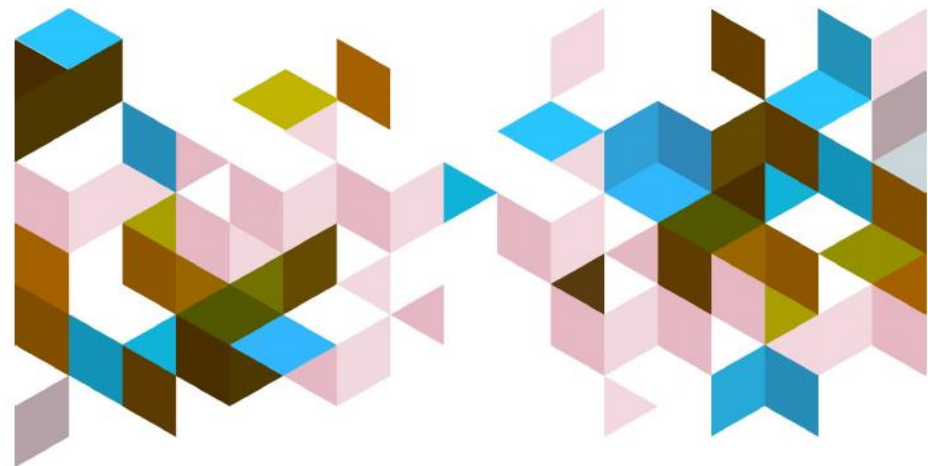
European network  
for developing new horizons for RIs

The EU funded project EURIZON is about European scientific and technical collaboration in the field of research infrastructures (RIs), and it includes in addition a special focus on coordination and support measures dedicated to support Ukrainian scientists and Ukrainian RIs as well as strengthening the RI landscape in Europe.

## Eurizon work packages

- Management and Dissemination
- Heavy ions
- Neutrons
- **Synchrotrons → WP4 Collaboration with X-ray light sources in Europe**
- Lepton Colliders
- High-power Lasers
- Detectors
- Transnational access (TNA) to non-European RIs





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## WP4 Task 4.4

C. Vaccarezza

on behalf of the Task 4.4 Team:

D. Alesini, G. Geloni, A. Giribono,  
S. Molodtsov, M. Zobov, S. Tocci,  
C. Vaccarezza



## Task 4.4. Linac development [INFN, EuXFEL, DESY]

- Common study on a 6GeV Linac based on S-C band technology to serve as an FEL driver and, potentially, as top-up injector for synchrotron X-ray storage rings.
- **Eurizon 2020+ Workshop on Free-Electron Laser driver/top-up injector investigations:**
  - Same week as the joint DESY and European XFEL Users' Meeting and satellite workshops
    - ▶ **Introduction to linear electron accelerators and X-ray Free-Electron Lasers**
    - ▶ **Results from the Eurizon 2020+ project: linac and FEL driver investigations**
    - ▶ **Scientific Applications of X-Ray FELs: the European XFEL instruments**
- Ukrainian scientists from institutions that can profit from the project (especially young individuals) are particularly welcome

<b>Session 1</b>	<b>Introduction</b>		
<b>09:00-09:15</b>	Welcome and Workshop Presentation,	Gianluca Geloni	European XFEL
<b>09:15-10:00</b>	Introduction to Linear Particle Accelerators	Anna Giribono	INFN-LNF
<b>10:00-10:30</b>	<i>Coffee Break</i>		
<b>10:30-11:15</b>	Introduction to X-ray FELs and the European XFEL	Fabian Pannek	European XFEL
<b>Session 2</b>	<b>Results from the Eurizon 2020+ investigations</b>		
<b>11:15-12:00</b>	6 GeV Linac as FEL driver and storage ring injector	Anna Giribono	INFN-LNF
<b>12:00-12:30</b>	X-ray FEL pulse characteristics from the 6 GeV driver	Fabian Pannek	European XFEL
<b>12:30-13:30</b>	<i>Lunch</i>		
<b>Session 3</b>	<b>Applications of X-Ray FELs – The European XFEL instruments</b>		
<b>13:30-14:10</b>	Science at the SPB/SFX instrument	Chan Kim	European XFEL
<b>14:10-14:50</b>	Science at the FXE instrument	Mykola Biednov	European XFEL
<b>14:50-15:30</b>	Science at the MID instrument	Ulrike Boesenberg	European XFEL
<b>15:30-16:10</b>	Science at the HED instrument	Ulf Zastra	European XFEL
<b>16:10-16:40</b>	<i>Coffee Break</i>		
<b>16:40-17:20</b>	Science at the SQS instrument	Tommaso Mazza	European XFEL
<b>17:20-18:00</b>	Science at the SCS instrument	Andreas Scherz	European XFEL
<b>18:00-18:40</b>	Science at the SXP instrument	Manuel Izquierdo	European XFEL
<b>18:40-18:50</b>	<b>Wrap-up</b>		

...and dinner in the Cantine!