



Elettra Sincrotrone Trieste

Elettra User Buddy

An AI Chatbot To Support The Elettra User Office 😊

Some terminology

Generative AI: does not simply order data but creates new and original contents tapping into specific knowledge

LLM: **Large Language Models:** understand human language and generates text (i.e. ChatGPT)

GPT: Generative Pre-trained
Transformer



Pre-trained: learns from an enormous quantity of documents

User front Office issues

Info requests are too generic ...

.... more information is needed...

.... more emails to/from users...

.... Time consuming!



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Customer service development

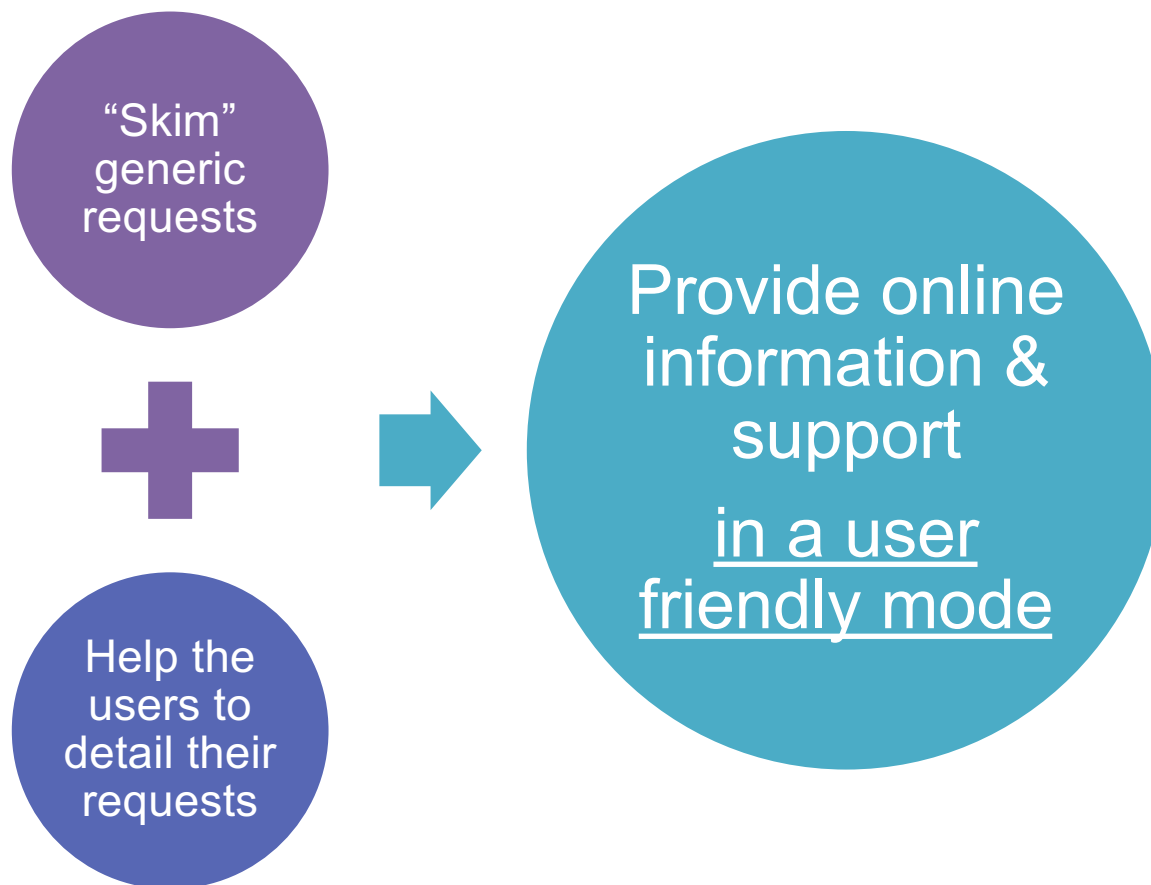
F.A.Q. → Text of frequently asked questions: answers have to be written by UO

ChatBot → basically F.A.Q.s with a more interactive interface

Generative ChatBot → gets information directly from specific documents published on the User Area website and generates appropriate answers



Objectives for Elettra User Buddy



Elettra User Buddy

User Area

Elettra: Call for Proposals

Deadline postponed for proposals submission: to be announced

[Read more](#)

Elettra: Protein Crystallography

Monthly submission is open!

[Submit Proposal](#)

FERMI: Call for proposals

Next deadline for proposals has been extended to Fri, 31 March

[Read more](#)

Proposal Information

- [Proposal types](#)
- [How to write a proposal](#)
- [How to submit a proposal](#)
- [Proposal Evaluation](#)
- [Proposal Rating](#)
- [Proposal Review Panel](#)
- [Support programs](#)
- [Beamtime report and feedback](#)


User Guide


- [Energy crisis: impact on user activities at Elettra Sincrotrone Trieste](#)
- [what to do](#) in case of Covid symptoms
- How to [ship your sample](#)
- How to submit the [Access request](#)
- Instructions on [how to reach us](#)
- [Before your arrival](#)
- [During your stay](#) and info
- [Beamtime report and feedback](#)

Useroffice contacts

Office hours: Monday - Friday, 9:00 - 17:00
About us: [Contact us](#)
Telephone: 39 040 370300
Fax: 39 040 370301
e-mail: [useroffice@elettra-trieste.it](#)
Office Location: Building 165A & B



 Elettra User Buddy
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Elettra User Buddy
 A virtual assistant based on generative AI for Elettra User Office

Hi there, this is a sample message for your assistant.

How can I help you today?

[Get Started](#) [Book a Demo](#)

[Read Documentation](#)

[Sample reply](#)

Message...



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Buddy in Action

When is the next deadline for proposals submission

Proposals can be submitted twice a year according to the Elettra/FERMI Call for Proposals. Please refer to the Call for Proposals for the exact deadline.



Is there anything I can do for you? If not have a nice day.

When can I find the page with call for proposals for Elettra



You can find the page with the call for proposals for Elettra on the following website: [Call for proposals](#)





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Buddy in Action



Hello! How can I assist you today?



I want to submit a proposal to Elettra what should I do

To submit a proposal to Elettra, you need to follow these steps:

1. Visit the Elettra/FERMI Call for Proposals page at <https://www.elettra.eu/userarea/apbt.html> to check the submission dates.
2. Prepare your proposal according to the guidelines provided on the website.
3. Submit your proposal through the Virtual Unified Office (VUO) system. If your institute is not in the VUO database, please send the complete address of your institute to useroffice@elettra.eu.
4. Once your proposal is submitted, it will be evaluated by the review panel.



Please note that proposals for Small molecules and macromolecular crystallography beamlines can be submitted anytime, as there is no deadline for submission and evaluation is done monthly.



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Elettra User Buddy in Action



Hello! How can I assist you today?



How can I resubmit my proposal

To resubmit your proposal, you need to follow these steps:

1. Login to the Virtual Unified Office (VUO) using your credentials.
2. Select the 'Submit' button in the 'Your proposals' functions group.
3. Find the proposal you want to resubmit and click on it.
4. Make the necessary edits or updates to your proposal.
5. Once you have made the changes, select the 'Check and definitely submit this proposal' link.
6. Your proposal will be resubmitted.



Please note that if you want to save your proposal without submitting it, you can choose 'Save in editing status' to submit it later.



Is there anything I can do for you? If not have a nice day.



Buddy in Action



Hello! How can I assist you today?



I cannot submit a proposal, the VUO does not respond what can I do

If you are unable to submit a proposal through VUO because it is not responding, please try the following steps:

1. Check your internet connection to ensure it is stable.
2. Clear your browser cache and cookies, then try accessing VUO again.
3. Try using a different browser or device to access VUO.
4. If the issue persists, contact the Elettra User Office at useroffice@elettra.eu and explain the problem you are facing. They will assist you in resolving the issue.



Please note that the Elettra User Office will be able to provide more specific guidance and support in troubleshooting the VUO submission issue.



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Hello! How can I assist you today?



I have to ship a sample for an experiment, what should I do

You can send samples for beamtime by following these steps:

1. Log in to the Virtual Unified Office (VUO).
2. Under "Already submitted proposals" in the "Your Proposals" section, select the proposal related to the samples you want to send.
3. Find the "Shipments" section and select "ADD shipment".
4. Fill in the requested data and click the "Save" button.
5. Fill out the shipment form with the information provided by your express courier, including the courier name and tracking number.
6. When you click the "Save" button, the system will send an automatic message to the destination warehouse.



For more detailed information, you can visit the Shipping webpage on the Elettra website:

<https://www.elettra.eu/userarea/shipping.html>





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I need a visa to come to Elettra how can i do

Please check directly on the website of the Italian Embassy in your country to determine if you need a visa to come to Elettra. If you do need a visa, you can go to the VUO page (https://vuo.elettra.trieste.it/pls/vuo/invitation_letter.show_letters) and fill in the form to request an invitation letter. This letter will help us prepare your invitation for the visa application process. If you need further information, you can write to useroffice@elettra.eu.



Buddy has hallucinations...

How can i have support for my experiment

If you need support for your experiment, you can apply for the support program called POC (Proof of Concept). This program provides financial and technical support to users who have innovative ideas and need assistance in conducting their experiments at Elettra. You can find more information about the POC program on our website: [link to POC program information].





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Buddy is fine again...

How can I have support for my experiment

Please check our Support Program web page to check the eligibility and rules:
<https://www.elettra.eu/userarea/user-categories.html>. If you still have doubts, please address any specific questions to useroffice@elettra.eu.

11:35 pm

Twinmic Beamline Assistant

Hi, I'm the TwinMic Beamline Assistant! I have been designed to support researchers and technical staff with information and guidance on operating procedures, scheduling, and equipment use within the facility.

Great! Which techniques I can use in this beamline?

The TwinMic beamline at Elettra offers versatile contrast mechanisms such as brightfield, phase-sensitive, and chemical contrast modes in both transmission and emission microscopy. It allows for simultaneous multi-detector acquisition and chemical sensitivity, as well as fast one-shot data acquisition optimized for morphological studies and dynamics. Additionally, the beamline implements techniques such as X-ray transmission microscopy (TXM) and scanning transmission X-ray microscopy (STXM).

For what type of applications this beamline is suitable for?

The TwinMic beamline is suitable for a wide range of applications, including biology, biochemistry, medicine, geochemistry, environmental science, food science, cultural heritage, and research, technology, and development (RT&D).

Thank you :) Can I do Ptychography?

Yes, you can do Ptychography. Ptychography is a form of scanning diffractive imaging that can retrieve the modulus and phase of both the sample transmission function and the illuminating probe. It is a computational technique that requires reconstruction similar to that of a computed tomography workflow. The TwinMic beamline has developed specialized data acquisition and ptychographic reconstruction software called SciComPty, which allows for state-of-the-art reconstruction and optimization of various experimental parameters. This software enables non-computational researchers to employ Ptychography for absorption and phase imaging data analysis.

What is the operating energy range?

The operating energy range of the TwinMic beamline is 400-2200 eV.

Thank you! You have been most useful!

You're welcome! I'm glad I could be of help. If you have any more questions or need further assistance, feel free to ask.

Who I should contact?

The contact person for the TwinMic beamline is Alessandra Gianoncelli. You can reach her at alessandra.gianoncelli@elettra.eu.

Future work

- Proposal rating model (under development) to support Review Panelist:
 - Proposal similarity ... is this new or similar to other?
 - Proposal rating: starting from the proposal and related publication data we are developing a model that can estimate the proposal rate:
 - Model input:
 - Proposal text, Proposal meta data (beamline, team, ...)
 - Model output:
 - Proposal potential in terms of publications
 - Proposal rating



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