

# Drafting a successful proposal for state-of-the-art experiments at large-scale and medium-range research infrastructures

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The job of researchers often requires the employment of advanced techniques and instrumentation beyond the capabilities of everyday laboratory equipment. Large-scale infrastructures – such as synchrotrons, free-electron lasers (FELs), neutron sources – as well as medium-range infrastructures at research centres, can offer unparalleled resolution, flux, and other experimental conditions that are simply not achievable in a typical laboratory setting.

These experiments can prove essential for solving complex structural problems, studying fast dynamic processes, or probing materials under extreme conditions of temperature and pressure. For young researchers, accessing these facilities is a gateway to high-impact science and funding, but competition for beamtime can appear daunting, with typical success rates ranging from 20% to 50%.

In this intervention to the conference, I will present the essential do's and don'ts for drafting a compelling proposal, along with the most common mistakes made by proposers when designing their experiments.

