

COLLOQUE DE PHYSIQUE EPFL

EPFL PHYSICS COLLOQUIUM

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Room CE3

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Scientific Opportunities with SwissFEL



In the last years, X-ray free electron lasers (FEL) have become available for researchers worldwide – a dream that finally came true 50 years after the invention of the optical laser and 40 years after the first theoretical work on FELs. These research facilities are bold examples of disruptive technologies: revolutionary instruments that expand the scope of what can be achieved in a field of science. The high potential of the new X-ray FEL sources for science and innovation released funding for the development and construction of a number of facilities in the US, Europe and Asia.

In the talk, I will explain in a concise way the underlying principles of FELs, present the status of the SwissFEL facility and discuss scientific opportunities in selected fields as well as technical developments, e. g. detectors, sample environment and timing tools.

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