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## Free Electron Coherent Sources and Conventional Laser devices

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Coherent sources of radiation, from “free” electrons, are playing a prominent role in Physics and applied science.

Even though they are described as “non-conventional” lasers, they share a noticeable amount of physics with atomic or molecular lasers.

In this lecture we describe the possibility of developing a unified point of view to their treatment, by introducing an appropriate set of physical quantities constituting the common threads for their analytical study.

We will not establish mere formal analogies and make an accurate analysis of the relevant physical origins.

**Author:** DATTOLI, Giuseppe (ENEA Frascati)

**Presenter:** DATTOLI, Giuseppe (ENEA Frascati)

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