

# Non invasive electromagnetic-based sensor for biological detection



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Keywords: **sensor, electromagnetic, biological, label free, MEMS**

**Context** In the few past decades, the biological and medical fields have been strongly modified, notably with the rise of biosensors for the characterization and quantification of biomolecules. Classical detection sensors [1] are very effective, but suffer from limitations such as the use of markers, that may modify the studied biological substance, high cost and volumic equipments especially with fluorescence, as well as low sensitivity.

**Objectives** This project aims to demonstrate that electromagnetic detection can provide highly sensitive, non-invasive and very compact solution for biochemicals sensing.

**Methods** The developed biosensor will take benefit from MEMS technologies, which easily allies high frequency devices for the electromagnetic detection and fluidic channels for biological substances routing.

## References and Publications

[1] R. Bashir, *Advanced Drug Delivery Reviews*, 56, issue 11, p.1565, 2004