



## Italy Chapter of the IEEE Sensors Council Lecturer

# **SOFA: an open-source solution for collaborations, prototyping and innovation in simulation**

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**[www.sofa-framework.org](http://www.sofa-framework.org)**

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### **ABSTRACT**

As in many engineering sectors, numerical simulation has become invaluable, namely for medical education, therapy planning and implant design. However, simulation softwares remain expensive and require a high level of expertise to be used correctly and effectively. SOFA (Software Open Framework Architecture) is an open-source framework primarily targeted at real-time simulation, with an emphasis on medical simulation. This innovative and collaborative tool is developed by a worldwide community of experts in physics simulations and gathers about 12 years of scientific research. Both academic and industrial developers create their own proprietary simulations based on SOFA, benefiting from its LGPL license. Many research centers actively work and publish using SOFA while five startups have been created for the last five years. This talk will present you SOFA, how to use it and the various fields of applications.



## BIOGRAPHY



Dr. Hugo Talbot originally studied mechanical engineering and graduated in 2010 from both Karlsruhe Institute of Technology (Germany) and INSA Lyon (France). He defended his PhD in medical simulation at Inria (France) in July 2014. His work focused on the real-time simulation of the electrical activity of the human heart. From 2014 until late 2015, Hugo worked on the simulation of cryoablation and cardiac electrophysiology as research engineer.

Since January 2016, Hugo Talbot is the coordinator of the open-source project SOFA. SOFA is an open-source framework for multi-physics simulation and is being developed for more than 12 years. Today, SOFA benefits from a large international community made up of research centers and companies. The objectives of Hugo are to develop the community, to ensure the technical evolution of the software, to foster research collaborations and technology transfers.