

## **Basic of nonlinear optics II**

Abstract: In this one hour talk, we will describe the impact of dispersive and nonlinear effects on the propagation of an ultra-brief pulse in an optical waveguide where Kerr processes are dominant. We will qualitatively discuss how the spectro-temporal properties of the pulses are modified and we will describe the influence of the dispersion regime on the resulting dynamics. The presentation will be illustrated with several recent applications of these different concepts.



Lecturer : Christophe FINOT is Professor at the University of Burgundy (France). Born in France in 1978, he graduated from the Institut d'Optique Graduate School (Paris-Saclay University in 2002), and received a PhD in Physics from the University of Burgundy in 2005 before spending a year at the Optoelectronics Research Center, in Southampton (UK). Appointed Associate Professor in 2006, he was promoted to Professor in 2010. He was elected Junior Member of the Institut Universitaire de France in 2017. His main research areas concern nonlinear optical shaping, all-optical information processing, extreme events, analogies between diffractive and dispersive optics, fiber lasers. He has coauthored more than 150 publications in international journals.