ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

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SEMINAR OF NUMERICAL ANALYSIS

➢ **TUESDAY 13 MARCH 2018 - ROOM MA A3 31 - 16:15**

Prof. Martin BENISTON (Institute for Environmental Sciences, The University of Geneva) will present a seminar entitled:

«Climate models: their functioning, projections, and uncertainties »

Abstract:
Climate models have been the focus of much attention in the past three decades; indeed, they have been instrumental in highlighting the causes and consequences of anthropogenic climate change, and their results have largely contributed to climate policy and, in particular, the 2015 Paris Climate Accord. In this talk, we shall briefly outline the underlying concepts of climate models, in particular the representation of fluid mechanics, thermodynamics and atmospheric radiation in atmospheric models, as well as the coupling of sub-models that are designed to link the interacting components of the climate system (the atmosphere, oceans, cryosphere, and biosphere). Examples will be given of parametric schemes (i.e., physically based simplifications of various processes that help speed up computational resources), and some results will be provided for possible future climate scenarios. The talk will conclude with an overview of the successes and limits of these highly complex modeling systems.

Lausanne, 8 February 2018/MP/ac