

COMPUTATIONAL MATHEMATICS SEMINAR**TUESDAY 30 APRIL 2019 - ROOM: MA A1 10 at 4.15 pm****Dr Yves REVAZ**
Laboratory of Astrophysics, EPFL

will present a seminar entitled:

« How your friends the astrophysicists play with particle-based numerical methods to understand the Universe »

Abstract:

The standard cosmological model (LCDM) is successful at reproducing the large scale structures of the Universe. However, at smaller scale, at the scale of galaxies, it faces strong astrophysical challenges. In this talk, I will first review some of the state of the art numerical methods used by astrophysicists to simulate the formation and evolution of galaxies. In a second part, I will show how dwarf galaxies, the smallest and faintest galaxies known, can naturally emerge from a simulated LCDM Universe. In addition to reproducing scaling relations, those models also explain the observed properties of dwarf galaxies at a level never achieved before. Those new accurate models help in relaxing small scale tensions like the long standing "Missing Satellite" problem.

Lausanne, April 2, 2019
FN/rb