TITRE : ???

Part I : High-level magmatic systems

1. Shallow intrusive magmatism on terrestrial planets
   * Magma transport within the crust
     + Mechanism of magma ascent
     + Eruption version intrusion
     + Shallow magmatic system
   * Shallow magmatic intrusion on the Earth
     + Crust of the Earth
     + Laccolith from Corry et al
     + Laccolith at Elba Island
   * Shallow magmatic intrusion on the Moon
     + Crust of the Moon
     + Low-slopes domes
     + Floor-fractured craters
2. Previous model for shallow magmatic intrusion
   * Original theoretical framework
     + Static model
     + Experimental works
   * Elastic-plated gravity current
     + Theoretical model
     + Regimes of propagations
     + Application to shallow magmatic intrusion on Earth and the Moon
     + Discussions
   * More realistic model for shallow magma emplacement
     + Cooling of the magma body
     + Influence of the topography
     + Thesis route map

Part II: Theoretical model of the cooling of elastic-plated gravity current and applications to laccolith on Earth and the Moon

* 1) Model for a cooling elastic-plated gravity current
  + Theoretical model
  + Numerical approach
* 2) First order modeling- Isothermal boundary conditions
* 3) Second order modeling- More realistic conditions

Part III: Theoretical model of elastic-plated gravity current under non-constant constrain: Application to floor-fractured craters on the Moon

1. A model for the dynamics of crater-centered intrusion: Application to the lunar floor-fractured craters
2. Gravitational signatures of lunar floor-fractured craters
3. Magma transport within the crust
   * Mechanism of magma ascent
   * Eruption version intrusion
   * Shallow magmatic system