

**Colloque de l'IPhT 2018**

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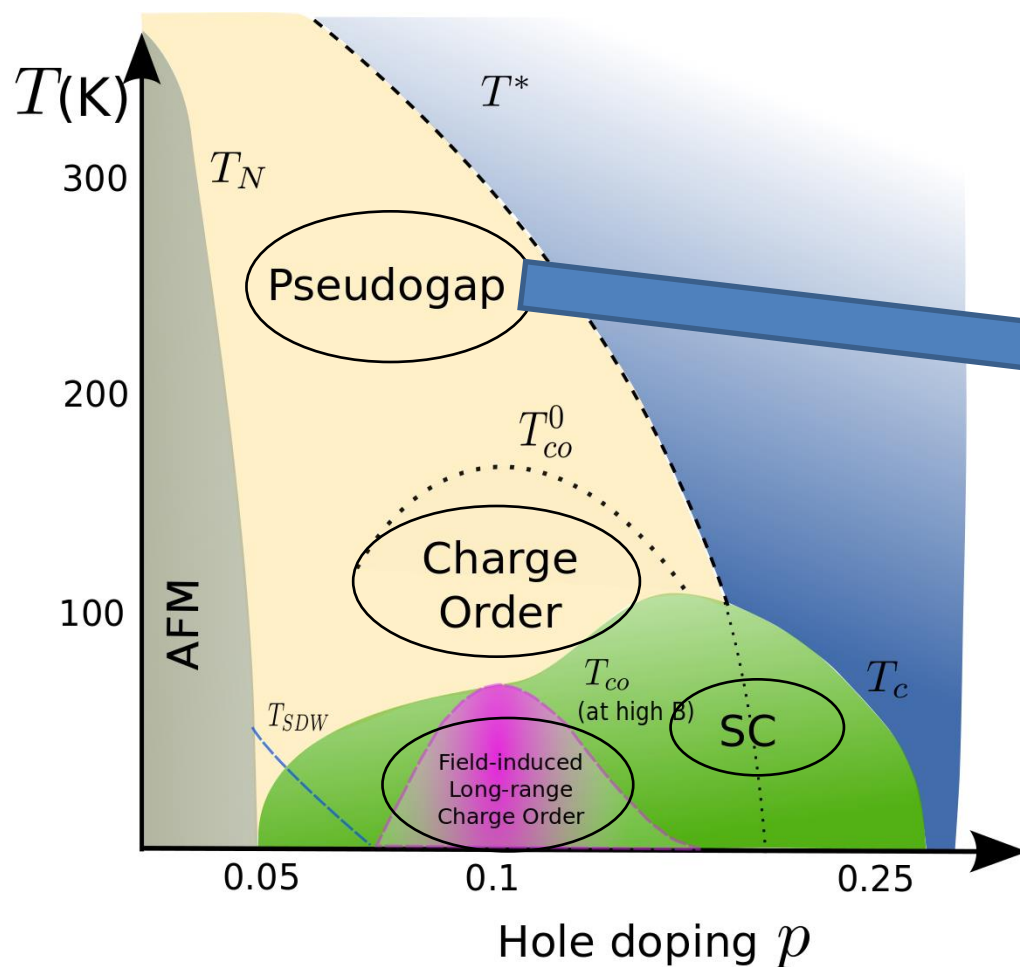
**Postdoc at IPhT from March 2017**

**Theoretical condensed matter physics**

in the group of **Catherine Pépin**

# Copper-oxide based high temperature superconductors (commonly known as **Cuprates**)

Jungle of phases

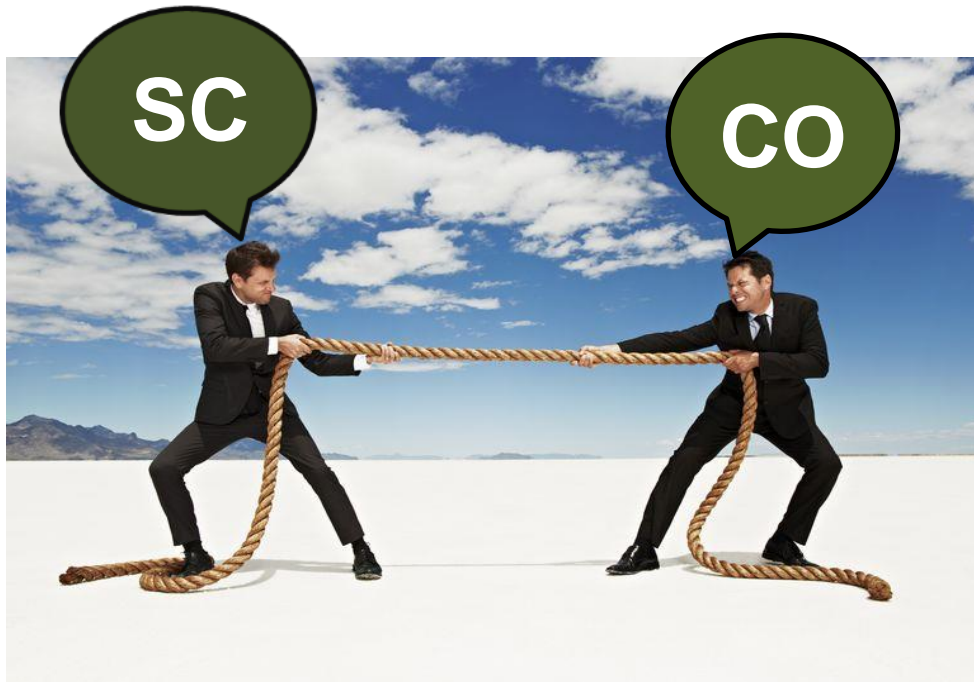


Still a mystery



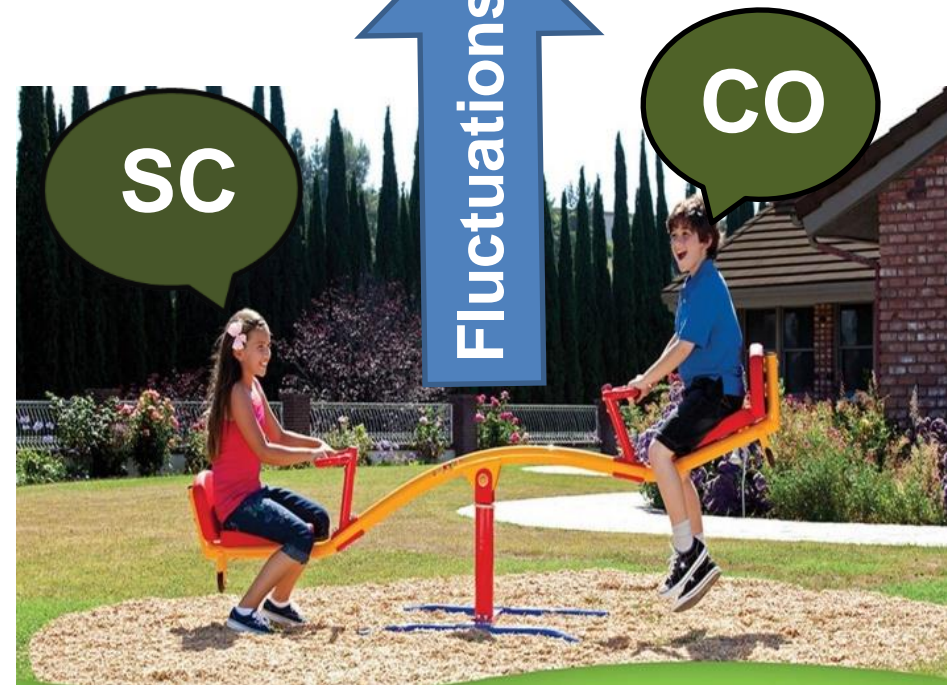
even three decades after  
their discovery

# Emergent $SU(2)$ symmetry between Superconductivity and Charge density waves



Competition

&



Intimate connection