B. Buffoni – B. Dacorogna - H.M Nguyên - Section Mathématiques

SEMINAIRE D'ANALYSE

➢ **VENDREDI 25 Octobre 2013 à 15h15 - salle MA A331**

*Monsieur **LOÏC LE TREUST** (*Université de Rennes, France) donnera une conférence sur le thème:

« A variational study of some hadron bag models»

Quantum chromodynamics (QCD) is the theory of strong interaction and accounts for the internal structure of hadrons. Physicists introduced phenomenological models such as the M.I.T. bag model, the bag approximation and the soliton bag model to study the hadronic properties.

We are interested in existence results of excited state solutions in the symmetric case and of a ground state solution in the non-symmetric case for the soliton bag and the bag approximation models thanks to the concentration compactness principle.

We show moreover that the energy functionals of the bag approximation model are Γ-limits of sequences of soliton bag model energy functionals for the ground and excited state problems. The pre-compactness, up to translation, of the sequence of ground state solutions associated with the soliton bag energy functionals in the non-symmetric case is obtained combining the Γ-convergence theory and the concentration-compactness method.

Lausanne, le 7 octobre 2013
BD/BB/VL

Les séminaires qui ont lieu à la Section de Mathématiques sont annoncés sur Internet
http://memento.epfl.ch/maths/