



**Irfu**

Institut de recherche  
sur les lois fondamentales  
de l'Univers

**Séminaire  
DPhP**

**Lundi 22/01/2019, 11h00**

CEA-Saclay Bât. 141, salle André Berthelot

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**Connecting Quarks with the Cosmos  
Eleven Science Questions for the New  
Century**

**PISIN CHEN**

National Taiwan University

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As the 2nd Blaise Pascal Chair Lecture, we will review eleven science questions for the new century. One immediate consequence of Big Bang is that the cosmos and the quarks, or the macro-universe and the micro-universe, are deeply connected. In 2003, the US National Research Council Turner Committee published a whitepaper entitled "Connecting Quarks with the Cosmos - Eleven Science Questions for the New Century". These include : What is the nature of dark energy ?, What is dark matter ?, etc. 15 years have passed and none of these 11 important questions have been answered. In this lecture we will review the current state of our understanding of these questions and suggest possible approaches to address them.

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Le café sera servi 10 minutes avant.

NB : La présentation d'une pièce d'identité est exigée à l'entrée du centre. Tous les auditeurs extérieurs sont priés de prévenir à l'avance Martine Oger, tél. 01 69 08 23 50, e-mail : [martine.oger@cea.fr](mailto:martine.oger@cea.fr). (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).