



ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 19 November 2009
17:00-18:00

3rd Floor Seminar Room

*“Toward a theoretical physics of living matter:
problems and prospects”*

Curtis G. Callan, Jr.
Physics Department, Princeton University, USA

Abstract

How biology is constrained by physical principles has always been a legitimate subject of study for theoretical physics. The recent explosion of quantitative data from whole genome sequencing, expression profiling, etc. has placed this question in a qualitatively new context -- one in which the making of quantitative models, and even theories, will be essential for making sense of the masses of data that experiment can now produce. In this talk, I will present some case studies of problems in cellular biology as examples of 'theoretical biological physics', and attempt to explain why I believe that this activity will be important to the future of both disciplines.