



UNIVERSITY OF CRETE  
DEPARTMENT OF PHYSICS



CCN

CRETE CENTER FOR  
QUANTUM COMPLEXITY  
AND NANOTECHNOLOGY

**ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ**

## **PHYSICS COLLOQUIUM**

**Thursday, 23 October 2014**

**17:00 -18:00**

**3<sup>rd</sup> Floor Seminar Room**

**“Particle Physics in the Multiverse”**

**Dr. Bert Schellekens**

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### **Abstract**

Is our universe a single entity or part of a multiverse? Can the Standard Model of Particle Physics be derived uniquely from a fundamental theory, or is it just one of many possibilities? Insights from inflation and string theory in the past three decades suggests that it is not unique, and that the number of alternatives may be enormous. This would have important implications for our attempts at understanding the Standard Model and the expectations for “new physics”. It also implies that we cannot ignore an important bias in observations: the existence of observers. This leads inevitably to a controversial issue: the “anthropic principle”.