



Vrije  
Universiteit  
Brussel

## 2008 International Solvay Chair in Physics Inaugural Lecture - Solvay Colloquium

### “The Coming Revolutions in Fundamental Physics”



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### Abstract

I review the present state of knowledge in elementary particle physics and the questions that we are currently addressing. I discuss the experimental revolutions that might occur at the Large Hadron Collider, soon to be finished at CERN. I shall also review the state of string theory. The necessity to go beyond the standard model of particle physics and to understand quantum gravity has led to this ambitious attempt to unify all the forces of nature and all forms of matter as different vibrations of a string-like object. But string theory is still in a pre-revolutionary stage. Although remarkable progress has been achieved in the last decade we still lack a fundamental understanding of the theory. Many string theorists suspect that a profound conceptual change in our concept of space and time will be required for the final formulation of string theory.

Friday 3 October 2008 at 16h00

COFFEE AND TEA WILL BE SERVED AT 15H45 IN FRONT OF THE FORUM A

DRINK AT 17H15 IN FRONT OF THE FORUM A

### FORUM A

UNIVERSITÉ LIBRE DE BRUXELLES

CAMPUS PLAINE

BOULEVARD DU TRIOMPHE - ACCESS 2

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