

PARTICLE PHYSICS, ASTROPHYSICS AND QUANTUM FIELD THEORY:  
75 YEARS SINCE SOLVAY

Physics Education Workshop

28 November 2008

Lecture Room 1, Nanyang Executive Centre (NEC)  
Nanyang Technological University

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- 08:00 – 09:00      Registration
- 09:00 – 09:15      Welcome & Introduction
- Session 1: Lectures**  
**Chair: Lim Hock**
- 09:15 – 09:45      *Lessons in Teaching Physics From My Life in Teaching*  
**Martin Perl**  
Stanford University
- 09:45 – 10:15      *Education as a System in the System of Systems of Singapore*  
**Lui Pao Chuen**  
Nanyang Technological University & National University of Singapore
- 10:15 – 10:45      Tea Break
- Session 2: Lectures**  
**Chair: Feng Yuan Ping**
- 10:45 – 11:15      *Education in the Netherlands and the Nobel Prizes*  
**Gerard 't Hooft**  
Utrecht University
- 11:15 – 11:45      *Physics Demonstration Laboratory: Use of Interactive Demonstration in Teaching Physics*  
**Sow Chorng Haur**  
National University of Singapore
- 11:45 – 12:15      *Why Is Physics So Interesting?*  
**Chang Ngee Pong**  
City University of New York
- 12:15 – 13:45      Lunch

**Session 3: Why physics has been steadily losing its appeal to students and ways to reverse the trend**

**Chair: Kwek Leong Chuan**

13:45 – 14:10

**Short presentations**

14:10 – 14:50

**Group discussion**

Topics to be discussed:

- (a) Changing the perception of career opportunity for physics graduates
- (b) The intellectual challenge and attraction of physics to students
- (c) Physics as a foundation for technical disciplines and careers
- (d) Physics education for engineering students in universities and polytechnics

14:50 – 15:20

**Presentations & Discussion**

15:20 – 15:50

Tea Break

**Session 4: Teaching physics in schools and universities – address the issues of shortage of teachers, training of teachers, improve or alternative teaching methods, applications of IT, curriculum development, etc.**

**Chair: Sow Chorng Haur**

15:50 – 16:30

**Group discussion**

Topics to be discussed:

- (a) Do we need more physics teachers?
- (b) Professional development of physics teachers
- (c) Creative and innovative ways to teach physics
- (d) Current curricula of physics

16:30 – 17:00

**Presentations & Discussion**

17:00

Closing