

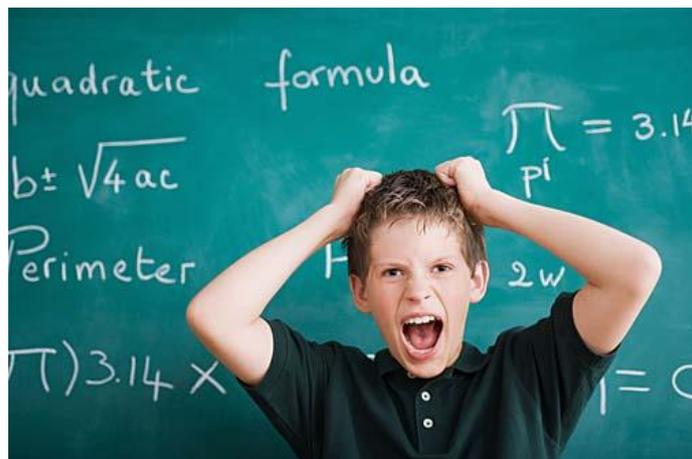
**Asia-Pacific International Workshop on Physics Education
(AIPE2011)**

"New Approaches to Physics Teaching in College and Secondary School"

December 2-3, 2011

Education Building B

Ewha Womans University, Seoul, Korea



hosted by

GISE, WCU of Ewha Womans U

supported by

APCTP

Physics Education Division of KPS

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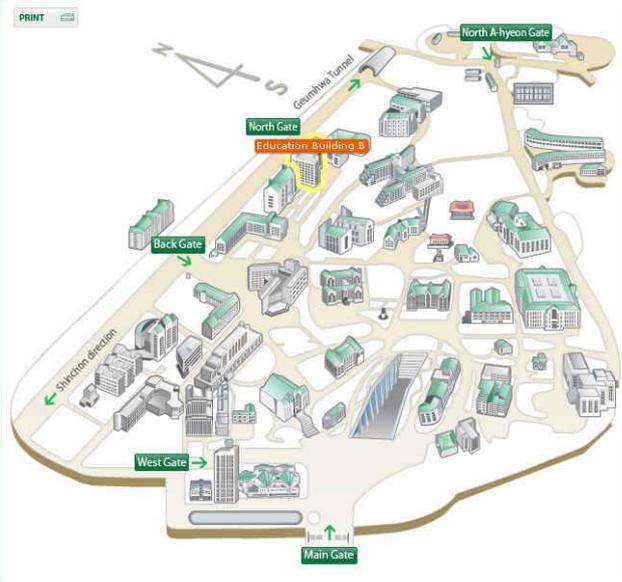
For campus map, please visit the website:

http://www.ewha.ac.kr/english/html/campusmap_eng/Map.html#

Education Building B: 13

 **EWHA WOMANS UNIVERSITY**

PRINT



North A-hyeon Gate
North Gate
Education Building B
Back Gate
Shincheon Direction
West Gate
Main Gate

Buildings Organizations Research Institutes Facilities

01 Admission Hall	02 Arts & Design Build...
03 Arts & Design Build...	04 Arts & Design Build...
05 Aryeong-dang(Hou...	06 Asan Engineering ...
07 Back Gate	08 Case Hall/GraduaL...
09 Centennial Museum	10 Clara Hall/GraduaL...
11 Community Welfare...	12 Education Building ...
13 Education Building B	14 Emerson Chapel
15 Ewha Archives	16 Ewha Athletics Tra...
17 Ewha Campus Com...	18 Ewha Centennial LL...
19 Ewha Elementary S...	20 Ewha Hakdang(The...

Education Building B



Education Building B, built in February 2006, is a building with 2 under-ground and 6 ground levels and 10,305.75㎡ wide. It has seminar rooms, large lecture rooms, experiment labs, and research rooms for professors.

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PROGRAM

December 2 (Fri.)

BB153

8:30 - 9:20 Registration

Opening Session

Chair: Sung-Won Kim (Ewha Womans U)

9:20 - 9:50 Opening Address
Welcome Address
Encouraging Address

Morning Session

Chair: Jinwoong Song (SNU)

9:50 - 10:50 Randall Knight (California Polytechnic State U, USA)
Moving Physics Education Research into the Classroom

10:50 - 10:10 Coffee break

11:10 - 11:50 Jongwon Park (Chonnam Natl U)
Two Approaches for Finding Forces Acting on Object Based on
Deductive Reasoning and the Nature of Force

11:50 - 12:30 Nam-Hwa Kang (Oregon State U, USA)
Second Generation Introductory Physics Course Reform: Multi-
institutional Reform Efforts

12:30 - 13:50 Lunch: Jin-Gwan

Afternoon Session I

Chair: Jongwon Park (Chonnam Natl U)

13:50 - 14:10 Sungmin Im (Daegu U)
The Alternative Approach to Teach Physics for the Students with
Limited Language Proficiency: A Case for the Hard-of-hearing
Students' Literacy And Inquiry Skill

14:10 - 14:30 Gyoungho Lee (SNU)
Addressing Student Difficulty by Identifying its Structure: An
Example from Gravitational Potential Energy, mgh vs. $-GMm/r$

14:30 - 14:50 Kwang Hee Jo (Chosun U)
Pre-service Teachers' Conceptions of the Electric Field

14:50 - 15:10 Jin Young Kim (Yonsei U)
Exploring the Scientific Thinking Processes of Gifted High School
Students in the Science Project Class

15:10 - 15:30 Yong Wook Cheong (SNU)
Analogy in the University Students' Understanding of Wave-
Particle Duality

15:30 - 15:50 Coffee break

Afternoon Session II

Chair: Sungmin Im (Daegu U)

- 15:50 - 16:10 Jungbok Kim (Korea Natl U of Education)
Teacher Training Model Using Micro-teaching And Peer Instruction
- 16:10 - 16:30 Sung-Won Kim (Ewha Womans U)
Korean High-School Students' Perception for Physics Formulae
- 16:30 - 16:50 Juhyeon Lee (SNU)
Science High School Students' Problem Solving About Irreversible Adiabatic Processes with A Focus on the Use of " $pV^\gamma = \text{constant}$ "
- 16:50 - 17:10 Kongju Mun (Ewha Womans U)
Korean College Students' Motivation to Learn Science
- 17:30 - Banquet: Emma Hall BB152

December 3 (Sat.)

BB151

8:30 - 9:20 Registration

Morning Session II

Chair: Hyunju Lee (Ewha Womans U)

- 9:20 - 10:00 Kazuo Kitahara (Tokyo U of Science, Japan)
Science Literacy Projects in Japan from Primary to Higher Education.
- 10:00 - 10:40 Youngmin Kim (Pusan Natl U)
Patterns of Scientific Problem Finding of Well-known Physicists
- 10:40 - 11:00 Coffee break
- 11:00 - 11:40 Hong Jung (Sookmyung Women's U)
Teaching Time-Energy Uncertainty Relations in Quantum Mechanics
- 11:40 - 12:20 Ramanathan Subramaniam (NIE, Singapore)
Creative and Innovative Approaches in Teaching Physics

12:20 - 13:50 Lunch: Emma Hall BB152

13:50 - 15:00 Poster session (P01 - P28): Emma Hall BB152

15:00 - 15:20 Coffee break

Afternoon Session III

Chair: Youngmin Kim (Pusan Natl U)

15:20 - 15:40 Insik Hahn (Ewha Womans U)

- Comparison Between Students' Problem Solving Abilities and Conceptual Understandings in Introductory Physics
- 15:40 - 16:00 Hyunju Lee (Ewha Womans U)
Exploration of Pre-service Science Teachers' Decision-making Trajectory on the Nuclear Power Generation Issue
- 16:00 - 16:20 Hye-Eun Chu (NIE, Singapore)
How Stable Are Students' Understanding of Light Propagation And Visibility of Objects in Different Contexts?
- 16:20 - 16:40 Hyunsook Chang (Kuksabong Middle School)
Exploration of science Teachers' Informal Mentoring Experience: Implication on Their Professional Development
- 16:40 - 17:00 Jung-Sook Lee (SNU)
Peer Instruction Works for Teachers?: An Evaluation of the Effectiveness of Short Physics Workshops for In-service Teachers
- 17:00 - 17:20 Eugene Kang (Pusan Natl U)
Characteristics of Contemporary Scientists' Activities of Finding Problems
- 17:20 - 17:30 Closing
- 17:30 - Students' Time: Myong-Ga-Bo-SSam

Posters (poster size: 119cm X 91cm)

P01

Yoonsook Chung (Ewha Womans U)
Characteristics of task commitment of physics gifted students

P02

Lei Gao (Ewha Womans U)
Understanding Scientific Literacy through Middle School Science Textbooks for 21 Century in South Korea

P03

Jiyoung Jang (Ewha Womans U)
Analysis of Science content on "Carbon cycle & Climate change" in Science 10 textbook

P04

Seongsoo Jeon (Korea Natl U of Education)
The Effects of Science Concept Tests types and Academic Ability Level on Student Conceptual Understanding

P05

Seongoh Jeong (Pusan Natl U)

New Teaching Method of the Internal Magnetic Field of a magnet Utilizing the Faraday's idea developing process

P06

Gwangsoo Kim (Korea Natl U of Education)

University Students' Wave Conceptual Changes by ABP Tutotial

P07

Hong-jeong Kim (Daegu U)

The Relation between freshman' understanding of force concept about leaning physics and scientific reasoning in science college

P08

In Sik Kim (Korea Natl U of Education)

Development of Tutorial Based on PhET Simulation and Peer Instruction for Teaching and Learning the Photoelectric Effect

P09

Jeong-Hee Kim (Korea Natl U of Education)

The effect of learning about concepts of evidence on the pre-service teachers' self-efficacy in introductory physics laboratory

P10

Jinhee Kim (Ewha Womans U)

Perception of participants in professional development training program on the role of science museum

P11

Kyuhwan Kim (Korea Natl U of Education)

Understanding vs Acceptance in a science class

P12

Semi Kim (Ewha Womans U)

Changes on reflective argumentational thinking of pre-service physics teachers

P13

Wanseon Kim (Ewha Womans U)

Fundamental Physical Constant Perception Level for Gifted Student in Physics

P14

Wonsook Kim (Pusan Natl U)

Analysis of students' hypothesis formulation ability in application of creative scientist's hypothesis formulation process: Thomas Young's principle of interference

P15

Sangwoon Kwon (Seoul Natl U)

Analyzing Korean General Physics Textbooks via Interest of Science: Focusing on the Structure of the Atom

P16

Eun mi Lee (Korea Natl U of Education)

Secondary School Students' Perceptions of Measurement

P17

Hyun Ok Lee (Ewha Womans U)

A review of Korean research on argumentation

P18

Ja-Hee Lee (Ewha Womans U)

The status of science education for science education of alternative schools in Korea

P19

Jiyeon Sophia Lee (Keio U, Japan)

Development Assistance System by Modularized Structure For Education Movement of Rigid-body in Dynamics

P20

Shin Young Lee (Ewha Womans U)

Effect of a peer tutoring program on the physics achievement and attitude toward science among introductory physics students

P21

Myeong Jin Lim (Seoul Natl U of Education)

Analysis of the logical development of newspaper editorials related to nuclear

P22

Jiyeong Mun (Ewha Womans U)

Art-based inquiry activities in science textbooks

P23

Hyundeok Park (Korea Natl U of Education)

Response characteristics on each step of Peer Instruction (PI) to students in introductory physics course

P24

Jiyeon Park (Seoul Natl U)

Is the brain type a good predictor of students' conceptions of and approaches to learning science?

P25

Joonhyeong Park (Seoul Natl U of Education)

Does water evaporate under an oil-layer?

P26

Seok Ju Park (Korea Natl U of Education)

Comparison of the components and characteristics of titles appeared in research papers of the province of physics and free-inquiry reports of middle school students

P27

Ho Sim Shin (Korea Natl U of Education)

Diagraming of argumentation with Toulmin's Argument Pattern (TAP)

P28

Jung Sook Yoo (Ewha Womans U)

Analysis of pre-service science teachers' tutoring experiences on introductory physics