

We are seeking highly motivated, prospective MS and Ph.D. candidates with strong backgrounds in applied mathematics, mechanical engineering, aerospace engineering, or other closely-related fields.

**Specific research areas include:**

1. Direct numerical simulation/Large eddy simulation of particle-laden turbulence physics
2. Direct numerical simulation of flow around finite-sized particles (or droplets) emphasizing cloud formation; immersed boundary methods, and level-set methods
3. Simulations of complex flows:
  - 1) Large eddy simulation of pollutant dispersion in urban street canyons
  - 2) Hybrid incompressible/compressible simulation of cloud dispersion after a nuclear explosion
  - 3) Contaminant transport in indoor environments due to transient events (human walking, door motion)
  - 4) Large eddy simulation of atmospheric wind-turbine array boundary layers
4. Simulations of micro or nano-fluid phenomena using the Lattice Boltzmann Method

**Requirements**

1. BS or MS degree in engineering, applied mathematics, or applied physics
2. Good knowledge of fluid mechanics, CFD, or scientific computation
3. Good programming skills: Fortran, C++
4. Good command of written and spoken English.

**Scholarships**

We look for students with excellent academic trackrecords who are highly accomplished and self-motivated. Excellent applicants will receive support for tuition and living expenses.

Full scholarships include tuition, stipend, and health insurance. The amount of the annual stipend depends on prior academic experience and the length of your program (up to 4 years for Ph.D. students).

**Important dates**

1. Deadline for internal review: March, 24, 2012
2. Graduate school application: April 19, 2012 ~ April 24, 2012

To apply, please send 1) curriculum vitae, 2) BS or MS grade transcripts, 3) cover letter and 4) contact information of three references via e-mail to Haeun Han (csedept@yonsei.ac.kr)

Please visit <http://graduate.yonsei.ac.kr/en/> for more details about application requirements and procedures.

We encourage you to visit the homepage of CSE (<http://csegrad.yonsei.ac.kr/>) and Turbulence & Environmental Flow Physics Lab (<http://euler.yonsei.ac.kr/>) for further information.

**Yonsei University**  
**Graduate admissions**  
**Fall 2012**

**Degree programs**

Ph.D / MS in CSE – Mathematics

Ph.D / MS in CSE – Mechanical/Electrical Engineering

• Admissions Schedule

2012.04.19-24  
Online Application Submission

2012.04.19-27  
Documents Submission  
(Office closed on Saturday and Sunday).

2012.06.08  
Announcement of Admitted Students

**01 About CSE**

Computational Science and Engineering (CSE) is a new graduate department at Yonsei University funded by World Class University-project of Korean government. CSE is a scientific computing based multidisciplinary graduate training program and focuses on mathematical modeling-computer simulation-visualization in solving various problems of engineering, science and biomedical engineering.

**02 Applicants**

- from Mathematics who have passed Advanced calculus, Linear algebra, and Real analysis
- from Mechanical/ Electrical Engineering who have passed Engineering mathematics or its equivalent (Linear algebra, Differential equation and Calculus)
- from other areas who have passed Advanced calculus or its equivalent (Linear algebra, Differential equation and Calculus)

**03 Funding**

Tuition and basic living expenses

▪ For further information

Graduate School homepage <http://graduate.yonsei.ac.kr/en>

CSE homepage <http://cse.yonsei.ac.kr/>