A Short Course on

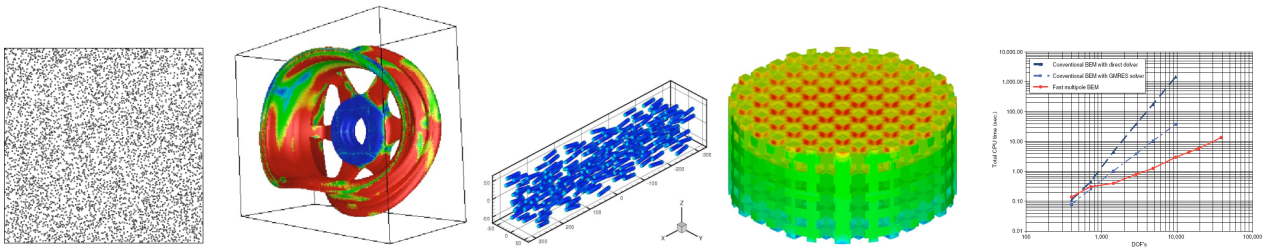
Fast Multipole Boundary Element Method

7 December, 2007

In Conjunction with the Minisymposium on ***BEM/Fast BEM*** at the

APCOM'07/EPMESC XI

Kyoto, Japan, 3-6 December, 2007



In recent years, the research and development on the boundary element method (BEM) have been re-energized due to the introduction of the fast multipole method (FMM) in the solutions of the BEM equations. The solution time and memory storage requirement for the BEM have been reduced significantly to a level such that it is now practical to solve many large-scale BEM models with millions of equations using desktop PCs. This has also opened up a wide range of applications for the BEM, for example, in large-scale modeling of composites, MEMS, bio-materials, and acoustic, electromagnetic and elastic wave problems. To help students and researchers in applied mechanics learn the basic theory, formulations, algorithms and implementation of the fast multipole BEM, a post-congress short course will be given in conjunction with APCOM'07/EPMESC XI (Third Asian-Pacific Congress on Computational Mechanics / Eleventh International Conference on Enhancement and Promotion of Computational Methods in Engineering and Science) which will be held in Kyoto, 3-6 December, 2007.

The tentative list of the topics to be covered in this one-day short course is as follows:

(1) An introduction to the BEM;
(2) An overview of the fast multipole BEM;
(3) Fast multipole BEM for 2-D potential problems;
(4) Programming for the fast multipole BEM;
(5) Applications of the fast multipole BEM for 3-D potential, elasticity, acoustics and elastodynamics.

Copies of the lecture notes and source code of the sample program will be provided to participants of this short course.

To attend this short course, please fill out the attached ***Registration Form***, and send the form to Dr. Naoshi Nishimura by **1 Nov, 2007**. A limited number of fellowship is available to PhD students and PDs (We have closed applications for the fellowship since we have to make decisions earlier than expected).

To participate in the BEM minisymposium and the Congress, please check the Congress website at http://www.apacm.org/apcom07-epmescXI/.

Short Course Lecturers:

Prof. Naoshi Nishimura
Department of Applied Analysis and Complex Dynamical Systems
Kyoto University, Kyoto 606-8501, Japan
E-mail: nchml@i.kyoto-u.ac.jp

Prof. Yijun Liu
Department of Mechanical Engineering
University of Cincinnati
Cincinnati, OH 45221-0072, U.S.A.
E-mail: Yijun.Liu@uc.edu

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Form A. Registration for the Short Course

(To be used by those who want to register for the short course only)

Name			***Title***	
Institution/Company				
Department				
Address				
	City		***State/Province***	
	Zip Code		***Country***	
Telephone			***Fax***	
E-mail				

Registration Fee: ¥10,000 (Japanese Yen). To be paid on site in cash only.

*Please mail, by **1 Nov., 2007**, the completed form to*:

Dr. Naoshi Nishimura, Department of Applied Analysis and Complex Dynamical Systems,
Graduate School of Informatics, Kyoto University
Kyoto, 606-8501, JAPAN