Real-time Physics Simulation Research Positions Available

Computer Graphics Lab (http://graphics.ewha.ac.kr)
Center for Computer Graphics and Virtual Reality (CCGVR) (http://ccgvr.ewha.ac.kr/)
Ewha Womans University (http://www.ewha.ac.kr)

Contact: Email your resume to Prof. Young J. Kim (kimy@ewha.ac.kr, http://home.ewha.ac.kr/~kimy) with your valid contact point (phone number, postal address).

Available Positions:
Research Professor (1), Post-doctorate Research Associates (2), Ph.D. students **(FEMALE-ONLY)**

Requirement:
Research Professor and Postdoc: Ph.D. degrees in computer graphics or related in computer science, or dynamics simulation in mechanical engineering. For non-computer science Ph.D.'s, they should show sufficient experience in writing softwares. A research professor should have at least more than one year research experience after fulfilling Ph.D. degree (a proven record will be requested). There is no gender restriction for post-Ph.D. level researchers.

Ph.D. students: M.S. in computer science or equivalent, applied mathematics, mechanical engineering. For non-computer science B.S.'s or M.S.'s, they should show sufficient experience in writing softwares; moreover, the computer science dept at Ewha may ask for taking extra, undergrad-level computer science courses depending on the prior majors. **NO MALES ARE ALLOWED FOR PH.D.-SEEKING STUDENTS.**

Starting Period:
Research Professor, Post-doc: immediate (available for two years and possible extension up to four years)
Ph.D. students: Fall, 2009 (http://home.ewha.ac.kr/~eenter/english/index.html)

Research Goal:
The goal of this multi-year, multi-million dollar research project, funded by the Korean government, is to develop next generation, real-time physics simulation engine that can be used for a wide variety of e-Entertainment applications including computer games, virtual reality, and human computer interaction. In particular, we will focus on developing the fundamental technology to enable real-time rigid body dynamics, articulated body dynamics, and fracturing dynamics for many, complex polyhedral models. The underlying technology will include collision detection, penetration depth computation, stable collision response, and simulation level-of-detail (SLOD) techniques. Visit the following web sites to see the prior work that has been studied in

computer graphics lab:

http://graphics.ewha.ac.kr/HDIST/ (SIGGRAPH 2009)
http://graphics.ewha.ac.kr/CATCH/ (SIGGRAPH 2007)
http://graphics.ewha.ac.kr/FAST/ (Pacific Graphics 2006)
http://graphics.ewha.ac.kr/CCD4AD/ (Visual Computer 2008)
http://graphics.ewha.ac.kr/StreamingCD/ (IEEE TVCG 2007)
http://gamma.cs.unc.edu/DEEP/ (IEEE TVCG 2004)

Salary:
Research Professor: 40M KRW/year
Post-doc: 30M KRW/year
Ph.D. student: tuition waiver + living stipend (12M KRW/year)

Responsibilities:
Research Professor, Post-docs: leading individual research projects with students, implementing a research software prototype and writing academic papers, communicating with other research groups (see research collaboration below).
Ph.D. Students: regular course work at Ewha + 40 hrs of research/week (during no school-session) or 20 hrs/week (during regular school-session)

Research Collaboration:
We will closely work with both world-class academics such as Seoul National University, KAIST, KIST (Korea), the University of North Carolina (U.S.), INRIA (France), ETH (Switzerland) and industry-leading companies such as nVIDIA, Sony, FunctionBay. In particular, FunctionBay (http://www.functionbay.co.kr/), the leading dynamics solution provider for computer-aided engineering in the world will play the central part of this research work to commercialize the research prototype.

Attraction:
Korea, in particular the nation's capital Seoul, is one of the world's most dynamic cities in terms of long history, vibrant culture and ever-improving IT technology. Ewha womans university is the nation's leading woman's university in Korea, located at the center of Seoul, that excels at both education and research. The computer graphics group, led by Prof. Young J. Kim, is a world-class research group that specializes in computer graphics, in particular collision detection, physics simulation, CAD, and robot motion planning. This research project will give you a chance to enjoy all of these benefits as well as collaborating with other international research groups.