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INVITED SPEAKERS 特邀嘉宾



Prof. Nobuhiko Mukai
Tokyo City University, Japan

Nobuhiko Mukai is a professor of Graduate School of Integrative Science and Engineering, Tokyo City University. He received his B.E., M.E., and Ph.D degrees from Osaka University in 1983, 1985, and 2001 respectively. He started to work at Mitsubishi Electric Corporation and changed to work as an associate professor at Musashi Institute of Technology in 2002. He is currently a professor of Tokyo City University from 2007. His research interests are computer graphics and image processing. He is a member of ACM, SAS, VRSJ, IEICE, ITE, IPSJ, IIEEJ, and JSUM.

Speech Title: Computer Graphics Applications with Particle Methods

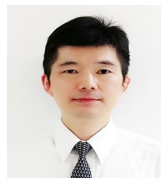
Abstract: In order to visualize natural phenomena such as aurora, rainbow, lightning, and avalanche, physics based simulation is necessary. There are some methods to simulate the behavior of continuous body. One of them is particle method, which is robust for topological change such as separation and destruction. In this speech, three applications using particle methods are introduced: viscoelastic fluid, waterfall, and blood. Viscoelastic body has two characteristics of viscosity and elasticity, and there is no formulated constitutive equation. Then, we have used a new constitutive equation to simulate the behavior. The next talk is about waterfall, which has large scale from the lip to the basin. We have divided the model into three parts: water stream, splashing spray, and spray cloud, and applied three different equations to simulate each behavior. Finally, blood flow simulation in the heart is presented. In the heart, there is a valve called aortic valve. If it falls into malfunction, surgeries are operated, and computer simulation is necessary before the surgery. In this talk, blood flow simulation from the left ventricle to the aorta is visualized with particles and the pressure change in the simulation is compared to the real data.



Assoc. Prof. Hongjun Li
Beijing Forestry University, China

Hongjun Li received the MS degree in Mathematics from the University of Science and Technology, Beijing (USTB), in 2003 and the PhD degree in

Computer Application from the Institute of Automation, Chinese Academy of Sciences (CASIA), in 2012. He is currently Dean of the Department of Mathematics and an associate professor in Beijing Forestry University (BJFU). His research interests include geometry modeling, computer graphics, virtual reality and image processing. He is (co-)author of over 40 papers published in journals and conference proceedings. He holds a U.S. patent and eight Chinese patents. He is a member of China Computer Federation and a member of the Council of Beijing Mathematics Association.



Prof. Qiu Chen
Kogakuin University, Japan

Qiu Chen received Ph.D. degree in electronic engineering from Tohoku University, Japan, in 2004. Since then, he has been an assistant professor and an associate professor at Tohoku University. He is currently a professor at Kogakuin University. His research interests include pattern recognition, computer vision, information retrieval and their applications. Prof. Chen serves on the editorial boards of several journals, as well as committees for a number of international conferences.

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