Courses Fact Sheet

Chair: Pedro Sander, Hong Kong University of Science and Technology
Conference: Monday 12 December – Thursday 15 December
Exhibition: Tuesday 13 December – Thursday 15 December

Fast Facts

- The SIGGRAPH Asia 2011 Courses Program received 28 submissions, of which 19 have been accepted.

- The Courses Committee has also invited four curated courses to participate in SIGGRAPH Asia 2011 so as to further enhance the depth and breadth of the Program.

- To date, 39 organizations and 51 presenters will be participating at the Courses Program including prestigious institutions such as *Cornell University, Hebrew University of Jerusalem* and *Tel Aviv University,* as well as distinguished organizations such as *Microsoft Research Asia, Nokia Research Center* and *NVIDIA*.

- Catered to both seasoned professionals and students, this year's Courses Program will cover a wide range of topics from introduction to computer graphics to the latest advancements in shading and rendering techniques.

A Quote from the SIGGRAPH Asia 2011 Courses Chair:

"This year's Courses Program presents a strong lineup of speakers from leading academic institutions and reputable industry players from around the globe. Additionally, we are honored to present several specially curated courses that will be led by pioneers and leading researchers in the field. In selecting the sessions for SIGGRAPH Asia 2011, the Jury members have endeavored to include both introductory topics to encourage budding talents in the industry as well as advanced subjects that discuss the latest developments in digital innovations. "

SIGGRAPH Asia 2011 Courses Program highlights include:

- **How to Write a SIGGRAPH Paper**
  Dr. Baining Guo, Microsoft Research Asia
  Professor Dani Lischinski, Hebrew University of Jerusalem
  Professor Daniel Cohen-Or, Tel Aviv University

  In a first for SIGGRAPH Asia, this course will discuss all aspects of developing a SIGGRAPH research paper, from brainstorming and developing the concept to writing and presenting the topic for discussion. Presenters will share their experiences on writing research papers, providing the audience with useful tips and know-how that will help them realize the potential of their research. Professor Daniel Cohen-Or from Tel Aviv University, Professor Dani Lischinski from the Hebrew University of Jerusalem and Dr. Baining Guo from Microsoft Research Asia will give their personal views on research paper writing. This will be followed by a panel discussion on how to write a SIGGRAPH paper.

- **What's Next? The Fourth Generation of Computer Graphics**
  Prof. Donald Greenberg, Cornell University

  In this specially curated course, participants will be taken on a journey across four periods of history that have played a part in the evolution of Computer Graphics. Dr. Don Greenberg, a reputable leader in computer graphics, will share with participants his insights on how technological evolution has impacted education and research directions in computer graphics and how this will in turn shape the future direction of the industry. This highly enlightening session will graphically illustrate not only the changes of the past, but the similarities between the three previous eras and the new generation.

- **FCam: An Architecture and API for Computational Cameras**
  Alejandro Troccoli and Kari Pulli, NVIDIA
  Timo Ahonen, Nokia Research Center

  This course is designed to demonstrate the use of the FCam, an Application Programming Interface (API) for the Frankencamera architecture first presented at SIGGRAPH 2010. The FCam allows easy and precise control of camera systems for advanced computational photography applications. FCam is also an excellent tool for teaching and research on interactive mobile computational photography.

- **Introduction to OpenCL**
  Derek Gerstmann, University of Western Australia
  Justin Hensley, AMD

  This course will provide an introduction to OpenCL (Open Computing Language), a cross-platform API for programming parallel systems such as GPUs. Through multiple examples of applications, the course will demonstrate how to combine traditional rendering API with advanced parallel computation using OpenCL.

- **Cross-Cultural User-Experience Design**
  Aaron Marcus, AM+A

  A well-received session at SIGGRAPH Asia 2010, this course will discuss the importance of designing user interfaces that are usable and appealing to a wide range of global users. Participants of this course will be shown practical principles and techniques in designing user interfaces for desktop, Web, mobile, and vehicle platforms.

- **Developing Visual Interfaces for Mobile Devices**
  Associate Professor Benjamin Watson, North Carolina State University
  Kari Pulli, NVIDIA
  Vidya Setler, Nokia Research Center

  This hands-on course will undertake a detailed discussion of UI and graphics development for mobile environments. To enhance learning, participants will get a chance to try out in-class exercise on UI and graphics development for mobile devices. The course covers a comprehensive set of topics for developing mobile visual interfaces, including an overview of the mobile market, a comparison of mobile and desktop applications, and a survey of mobile development environments.

- **Modern OpenGL Programming**
  David Shreiner, ARM
  Professor Ed Angel, University of New Mexico

  This course will provide an accelerated introduction to programming OpenGL, the most widely available library for creating interactive computer graphics applications across all major computer operating systems. Participants will be shown the most modern methods to using the library, including the latest shader-based rendering and other new functionalities and features found in OpenGL version 4.1.

- **GPU Shaders for OpenGL 4.0**
  Dr Mike Baily, Oregon State University
  Steve Cunningham

  Participants in this course will be given free software, to demonstrate shader development from the interactive standpoint. The course will review the graphics pipeline, show what features are exposed in shaders and demonstrate how shaders play an indispensable part of pipeline operations.