The Education Programme at Eurographics 2009 took place in Munich, Germany, over the course of 2 days: March 31st and April 1st 2009. Educators were invited to present their experience in teaching computer graphics over a wide range of topics: from teaching mathematical foundations of computer graphics to using visual tools; from teaching in a strict computer science curriculum to teaching students of mixed disciplines and on to teaching in other curricula. As a result, we had 12 presentations in four sessions, ranging from a new method of teaching quaternions to teaching computer graphics in the context of theatre. The presence of 20–40 attendees throughout these 2 days made clear that the Education Programme at Eurographics has established itself over the last years.

Session 1. Games in Education. Session chair R. Scateni, University of Cagliari, Italy.

The first paper, Applications of Multitouch & Gaming Technology for the Classroom, was presented by W. Muto (co-authors J. Dobies and P. Diefenbach) from the Antoinette Westphal College of Media Arts and Design, Drexel University, USA. Building on their system ‘Planet Diggum’, they created a novel teaching tool by combining the multitouch interface with 3D simulations and gaming technology. The authors found, among other positive effects, that multitouch technology changed the learning style of students within project groups: all students could equally access the interface, instead of the typical ‘driver and co-pilot’ learning at traditional computer workstations.

On the Provision of a Comprehensive Computer Graphics Education in the Context of Computer Games: An Activity-Led Instruction Approach was next presented by author E. F. Anderson (co-authored by Christopher Peters), both at Coventry University, UK. This user-centred approach gave motivation and flexibility to undergraduate students in a computer games technology curriculum to learn (advanced) topics of computer graphics. The preliminary evaluation appeared very positive; effort on the side of the instructors was reported as significant.

In the next paper, Learning by Fixing and Extending Games by G. Costantini, G. Maggiore and A. Cortesi of the Università Ca’ Foscari (Italy), G. Maggiore reported on the results of motivating undergraduates students in their first programming course by fixing and extending software for games.


Each of the three talks in this session presented an alternative way for teaching computer graphics to undergraduate students. Also in each of the papers, the increase of student motivation was the ultimate reason to develop the specific teaching style.

Using processing.org in an Introductory Computer Graphics Course, presented by J. Linares, from the Department of Information Systems and Computation and co-authored by J. Santonja, P. Micó and D. Cuesta Frau, from the Department of Systems Data Processing and Computers, Polytechnical University of Valencia, Spain, listed the benefits of using the MIT-developed environment and language ‘processing’ in comparison to the OpenGL approach.

The next talk by Ph. Rhodes on Easel: A Java Based Top-Down Approach to 3D Graphics Education (co-authored by B. Yan, both University of Mississippi, USA) presented also an alternative approach to the OpenGL teaching style by having students implement a graphics pipeline themselves.

Applet Competition as an Educational Tool in Creating Novel e-Textbook, presented by S. Czanner, The University of Warwick, UK, and co-authored by A. Ferko and P. Nunukova (Comenius University, Slovakia) and J. Stugel (Engineering Systems, Slovakia), reported on the involvement of hundreds of undergraduate students in developing a virtual computer graphics textbook, consisting of single, applet-based units on major graphics textbook topics.

Session 3: Teaching More than the Standard CG Curriculum. Session chair S. Owen, Georgia State University, USA.

The first paper Introducing Students to Empirical Methods in CG and HCI Courses through User Studies was presented by...
author B. S. Santos, and co-authored by P. Dias, S. Silva, C. Ferreira, all of the University of Aveiro, and J. Madeira, of the University of Lisbon, Portugal. It argues the importance of teaching empirical methods to graphics students. The authors involve students at various academic levels into user studies, either as experiment designers, experimenters or participants, to both get them acquainted with the methods and have them observe the results of the experiments.

J. McDonald (DePaul University, USA) then presented *Teaching Quaternions is not Complex*, where he developed a clear introduction to quaternions useful for computer graphics students enabling them to manipulate and develop quaternions for 3D applications.

In the next contribution *How to Write a Visualization Research Paper: A Starting Point*, the author Robert S. Laramee from Swansea University, UK, focussed on advanced students, and developed a guideline for graduate students doing research in visualization.

**Session 4: Interdisciplinarity. Session Chair G. Domik, University of Paderborn, Germany.**

The last session was dedicated to teaching interdisciplinary students or interdisciplinary concepts.

M. Schweppe from the School of Design and J. Geigel from the Department of Computer Science, both from the Rochester Institute of Technology, USA, summarized their coordinated efforts over the last 5 years in *Teaching Computer Graphics in the Context of Theatre*. The range of activities in respective courses around a virtual theatre was found a great motivation to learn hard facts in design and computer graphics, but also on soft skills, e.g. communication, respect to others, or meeting deadlines.

*Computer Animation Curriculum: An Interdisciplinary Approach* was presented by C. Larboulette of the University Rey Juan Carlos, Spain. This curriculum is intended for graduate students seeking a degree in Computer Graphics, Video Games and Virtual Reality, and has an interdisciplinary aspect in both its content and selection of students.

Last, but not least, Colleen Case and Steve Cunningham, co-chairs of the Computer Graphics Education Workshop (CGE09) *Teaching computer graphics in Context* presented the results from the workshop which explored, among other issues, the meaning of ‘context’ for teaching computer graphics.

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G. Domik and R. Scateni
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