Computational Aesthetics 2008

Eurographics Workshop on Computational Aesthetics in Graphics, Visualization and Imaging

Lisbon, Portugal
18 – 20 June, 2008

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Preface

Four years ago, a small group of experts in diverse fields realized that they shared a common interest in the systematic analysis and augmentation of creative, expressive behavior. They decided to create a forum to support and develop this field, bridging aspects of computer science, philosophy, psychology, and the fine & performing arts to create Computational Aesthetics. Since then, interest and contributions to the field have grown considerably, leading to this year’s International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging (CAe’08). The symposium, to be held on June 18-20, 2008 in Lisbon, Portugal, is the fourth event on this topic, following a Workshop in 2005 in Girona, Spain, a Dagstuhl seminar in Germany in 2006, and a symposium in Banff, Alberta, Canada last year.

Computational Aesthetics investigates the creation and usage of tools that can enhance the expressive power of the fine and applied arts. In doing so, Computational Aesthetics seeks, among other things, to further our understanding of aesthetic evaluation, perception and meaning. The field is inherently interdisciplinary, as can be see in this year’s program. The papers span a considerable range from an analysis of the creative process itself to automated analysis of paintings. Furthermore, this year’s event features a greatly expanded arts program, highlighting the most recent artistic or design achievements in applying computer based techniques to solve aesthetic problems.

We wish to thank, all those people and organizations who have helped make CAe’08 possible. This includes our conference chair, J. A. Jorge; our arts program chairs, P. Brown and J. McCormack; our Eurographics contact, S. Behnke; our publicity chair, T. Isenberg; and all of our anonymous reviewers.

We also want to acknowledge the generosity of our supporting institutions: Eurographics Association.

Technical Program Chairs
Douglas W. Cunningham, University of Tuebingen
Victoria Interrante, University of Minnesota
Keynote

The Machine in Front of the Curtain

Turner Whitted

Abstract
Our discussion of aesthetics in graphics is most often centered on content and methods of content generation. Somewhere between these abstractions and a viewer’s eye lie a mass of transistors, wires, metal, and glass. These elements can strongly affect our reaction to graphical displays. This talk is a survey of how displays and display processors can either promote or hinder our appreciation of digital content.

Producers of content have historically adapted to available hardware, tuning material for the range from tiny black and white mobile displays to gigantic IMAX projectors. Producers of hardware, on the other hand, attempt to provide a generic platform but rarely try to bridge the gap between circuitry and aesthetics. The last part of this talk describes an attempt to do just that.

Biographical Note
Turner Whitted has been a researcher and manager at Microsoft Research since 1997. He was an adjunct professor of computer science at the University of North Carolina at Chapel Hill from 1983 until 2001 as well as a cofounder and director of Numerical Design Limited. Prior to that he was a member of the technical staff in Bell Labs’ computer systems research laboratory where he introduced the use of recursive ray tracing to implement global illumination. He earned BSE and MS degrees from Duke University and a Ph.D. from North Carolina State University, all in Electrical Engineering. In the past he has served as an Associate Editor-in-Chief of IEEE Computer Graphics and Applications, and was papers chair for SIGGRAPH 97. He is an ACM Fellow and member of the National Academy of Engineering.
Keynote

The Semiology of Graphics - Take 2

Pat Hanrahan, Stanford University, USA

Biographical Note
Pat Hanrahan is the CANON Professor of Computer Science and Electrical Engineering at Stanford University where he teaches computer graphics. His current research involves visualization, image synthesis, virtual worlds, and graphics systems and architectures. Before joining Stanford he was a faculty member at Princeton. He has also worked at Pixar where he volume rendering software and was the chief architect of the RenderMan(TM) Interface - a protocol that allows modeling programs to describe scenes to high quality rendering programs. Previous to Pixar he directed the 3D computer graphics group in the Computer Graphics Laboratory at New York Institute of Technology. Professor Hanrahan has received three university teaching awards. He has received two Academy Awards for Science and Technology, the Spirit of America Creativity Award, the SIGGRAPH Computer Graphics Achievement Award, the SIGGRAPH Stephen A. Coons Award and the IEEE Visualization Career Award. He was recently elected to the National Academy of Engineering and the American Academy of Arts and Sciences.
The Art of Programming or Programming as Art

Ernest Edmonds, University of Technology, Sydney, Australia

Biographical Note
Ernest Edmonds was born in London and now lives and works in Sydney Australia. His art is in the constructivist tradition and he first used computers in his art practice in 1968. He first showed an interactive work with Stroud Cornock in 1970 at the CG70 exhibition in the UK. Ernest Edmonds first exhibited a generative time-based computer work in London in 1985. He has exhibited throughout the world, from Moscow to LA. His current work is developing from a concern with interaction to an exploration of generative art systems that evolve over long periods of time as they are influenced by the world around them. He also collaborates with Mark Fell on interactive audio/visual works and performances. Most recently they performed at ColorField Remix, Washington DC.

Ernest Edmonds has been an invited presenter in, for example, the UK, France, the USA, Australia, Japan, Taiwan and Malaysia. He has more than 200 publications in the fields of art, creativity and human-computer interaction. In 2005 Artists Bookworks (UK) published his book »On New Constructs in Art.« Since the 1970s he has pioneered the development of practice-based research in art, systems and digital technology. Ernest Edmonds has been a University Head of Department and a Dean. He is currently Professor of Computation and Creative Media at the University of Technology Sydney and Visiting Professor at a number of other Universities including Sussex University, UK.
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