From the Editor

CG&A—Past and Future Themes

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When I was invited to take on the role of associate editor in chief for special issues, I knew that my predecessors, Maureen Stone and Holly Rushmeier, were going to be tough acts to follow. CG&A’s themed issues have always been an integral part of what makes the magazine unique. I recently browsed through all the special issues from the past 10 years, and they do indeed present a potted history of the field during that time. Some of the best researchers and industry practitioners in graphics, visualization, and related fields have been guest editors. They’ve brought together inspiring, cutting-edge, and informative articles that have given a snapshot of the innovative research being carried out over the past decade. Indeed, the special issues themselves have, in many cases, been catalysts for new initiatives, workshops, and journals.

A case in point was the September/October 2001 special issue on applied perception (see Figure 1). The seven articles in that issue directed readers’ attention to “the other half of computer graphics—the part of the machine-to-mind information transfer that begins as light reaches your eye and ends at the edge of conscious understanding.” That issue was a significant step forward in the development of this area, which has since seen the creation of the successful annual Symposium on Applied Perception in Graphics and Visualization and ACM Transactions on Applied Perception.

In the subsequent four years, the diverse set of topics included image-based modeling, rendering, and lighting (March/April 2002); virtual worlds, real sounds (July/August 2002); nonphotorealistic rendering (July/August 2003); haptic rendering (March/April 2004); point-based graphics (July/August 2004); and smart depiction for visual communication (May/June 2005).

Over the past five years, CG&A’s special issues have continued to feature articles by some of the best people internationally to address a focused, well-defined hot topic. We design each issue to give a snapshot of the state of an emerging field or of new developments in more established areas.

Continuing my browsing, I see issues on interactive narrative (May/June 2006), sketch-based interaction (January/February 2007), computational photography (March/April 2007), computational aesthetics (March/April 2008), and mobile graphics (July/August 2008; see Figure 2). For July/August 2009, Norm Badler and I coedited a special issue on virtual populace, which was my first introduction to editing a CG&A special issue—a most enjoyable and rewarding experience. Last year, knowledge-assisted visualization (January/February) and digital human faces (July/August) were just two of the areas we covered.

Figure 1. Images from the September/October 2001 special issue on applied perception. Using a perception-based color space, researchers applied the atmosphere of a Vincent van Gogh painting (Cafe Terrace on the Place du Forum, Arles, at Night) to (a) a photograph of Lednice Castle near Brno in the Czech Republic, to produce (b) an image with the same mood and coloring as the original painting.
In this issue, you can read a collection of articles about physics-based characters. Future issues in 2011 and 2012 include digital-content authoring, visualization applications and design studies, modeling and rendering material appearance, and extreme-scale visual analytics. Be sure to check out our Calls for Papers page regularly (www.computer.org/portal/web/computingnow/cfps/cg). If you have any great ideas for exciting and inspirational special-issue topics, send them to me at cgaeic@computer.org.

References

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Figure 2. An image from the July/August 2008 special issue on mobile graphics. In AR Tennis, the camera tracks markers on the table and the other player’s camera. The players attempt to bounce the ball back and forth in a virtual tennis court.1 (Source: Anders Henrysson; used with permission.)