



# From the Editor

## Back to the Future

**L. Miguel Encarnação**

*ACT, Inc.*

**T**he *IEEE Computer Graphics and Applications* editorial board has often discussed how helpful it would be if the former leaders of CG&A continued serving the magazine and the community by providing guidance based on their seniority, experience, and networks.

Having recently been appointed editor in chief—and supported by our associate editors in chief—I've started making this lingering idea a reality by forming an advisory council to complement the editorial board.

It was very reconfirming how many of our colleagues and pioneers answered the call and agreed to help ensure the magazine's health and sustainability by

- identifying trendsetting special-issue topics along with appropriate, reliable guest editor candidates—and then helping to twist their arms;
- supporting succession planning by identifying up-and-comers to invite to the board—future leaders who are still hungry enough to serve and not yet too busy to do so reliably;
- serving as globally dispersed sensors for trends and influences that might affect CG&A as a magazine, or as mentors from which CG&A leadership can learn;
- helping out occasionally when we have an influx of manuscripts in a topic area in which the associate editors are lacking reviewers; and
- granting final approval for manuscripts submitted by editorial board members themselves to prevent the perception of preferential treatment of those submissions.

The list of advisory council members reads like a who's who in computer graphics and visualization (see the sidebar). While informing the present with the experience of the past, we're also looking at our community's future and thus emphasizing applications of computer graphics, interaction,

and visualization in K-12 education in our Education department.

We're all well aware that not enough students are entering university science, technology, engineering, and mathematics (STEM) programs. However, educators can draw K-12 students into STEM programs by using virtual worlds, games, and animation. CG&A's Education department is paying tribute to this trend by discussing successful K-12 workshops that impassion students through fun with video games and animation in combination with STEM:

- “Helping High Schoolers Move the (Virtual) World” (Jan./Feb. 2013) presented a workshop to connect high school math to building virtual worlds.
- “Animatronics Workshop: A Theater + Engineering Collaboration at a High School” (Nov./Dec. 2013) discussed how middle-school students are learning the art of physical animation with puppets, a self-developed plot, and a lot of electronics.
- “A Summer Blender Camp: Modeling, Rendering, and Animation for High School Students” (in this issue) reports on high school students who were able to develop very creative and complex computer graphics in just a few days, while getting a glimpse at the deeper issues of math and science lying ahead for them in university courses.

Each workshop is well documented to allow high schools throughout the world to repeat it. Helping to spread these programs will do more than just help the economy by increasing the number of STEM graduates. These enthused students could likely end up in your college or university graphics courses. ■

**L. Miguel Encarnação** is the chief innovation officer at ACT, a nonprofit organization that provides assessment, research, and program management solutions in education and workforce development. Contact him at [lme@computer.org](mailto:lme@computer.org).

## Meet the Advisory Council



**John Dill** is professor emeritus in the School of Engineering Science at Simon Fraser University (SFU) and is with SFU's School of Interactive Arts and Technology. He's also the director of SFU's Visual Analytics Research Lab. He previously worked at Cornell University

and the General Motors Research Laboratories. His research interests include visual analytics and information visualization. Dill received a PhD in engineering science from the California Institute of Technology. A recent member of the IEEE InfoVis and VAST Steering Committees, he was cochair of VAST 2007, and he has served as the editor in chief of *IEEE Computer Graphics and Applications*. Dill also served on the US National Visualization and Analytics Center's National Research Agenda Panel. Contact him at [dill@cs.sfu.ca](mailto:dill@cs.sfu.ca).



**José Luis Encarnação** is a senior technology and innovation advisor to governments, multinational companies, research institutions, and foundations. He was a full professor of computer science at Technische Universität Darmstadt and head of its Interactive

Graphics Research Group from 1975 to 2009, when he was named professor emeritus. Encarnação was a founder of the European Association for Computer Graphics and the founding director of the Fraunhofer Institute for Computer Graphics Research. His research interests include the development of research agendas and innovation strategies for socioeconomic development in emerging economies. Encarnação received the 1989 Karl Heinz Beckurts Prize, ACM Siggraph's 1995 Steven A. Coons Award, and the German Computer Society's 1997 Konrad Zuse Medal. Contact him at [jl\\_encarnacao@t-online.de](mailto:jl_encarnacao@t-online.de).



**Jim Foley** is a professor in the School of Interactive Computing in Georgia Tech's College of Computing, where he holds the Fleming Chair in Telecommunications. He was the founding director of Georgia Tech's Gvu Center. He spent four years directing US research labs for

Mitsubishi Electric. Foley is a coauthor of several computer graphics books, along with Andy van Dam, Steve Feiner, and John Hughes. He has received ACM Siggraph's Steven A. Coons Award and ACM SIGCHI's Lifetime Achievement Award. He's a member of the US National Academy of Engineering and a fellow of the American Association for the Advancement of Science, ACM, and IEEE. Contact him at [foley@cc.gatech.edu](mailto:foley@cc.gatech.edu).



**Markus Gross** is a professor of computer science at the Swiss Federal Institute of Technology Zürich (ETH), head of the Computer Graphics Laboratory, and the director of Disney Research, Zürich. Before joining Disney, he was director of the Institute of Computational

Sciences at ETH and cofounded Cyfex AG, Novodex AG, LiberoVision AG, and Dybuster AG. His research interests include physically based modeling, computer animation, immersive displays, and video technology. Gross received a master of science in electrical and computer engineering and a PhD in computer graphics and image analysis from Saarland University. He received the Technical Achievement Award from Eurographics in 2010 and the Swiss ICT Champions Award in 2011. He's a fellow of the Eurographics Association and a member of the German Academy of Sciences Leopoldina. Contact him at [grossm@inf.ethz.ch](mailto:grossm@inf.ethz.ch).



**Dave Kasik** is Boeing's senior technical fellow in visualization and interactive techniques. His research interests include pursuing new ways of using visualization for huge amounts of geometric and nongeometric data. Kasik has worked to make 3D geometry available to the entire

Boeing user community. Examples of his work include the IVT/Superviewer, which lets users see an entire virtual Boeing aerospace product without using special hardware, and low-end visualization that lets users access 3D engineering drawings, parts lists, training material, and so on, with much of the content delivered via the Web. Kasik is pioneering the use of visual analytics (VA) to help extract more information from complex nongeometric data. His VA research supplements more traditional analytic techniques (such as statistics and data mining) with a human's ability to use vision to find anomalies and detect trends. Kasik received an MS in computer science from the University of Colorado, Boulder. Contact him at [david.j.kasik@boeing.com](mailto:david.j.kasik@boeing.com).



**Carol O'Sullivan** is a professor of visual computing at Trinity College Dublin, where she has served on the faculty since 1997, and a senior research scientist at Disney Research. She was a visiting professor at Seoul National University from 2012 to 2013. Her research interests

include perception, animation, virtual humans, and crowds. She's the co-editor in chief of the *ACM Transactions on Applied Perception* and was an associate editor in chief of *CG&A*. O'Sullivan has served on many editorial boards  
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## Meet the Advisory Council (cont.)

and program committees, including the Siggraph and Eurographics papers committees, and has been a program or general chair for several conferences, including Eurographics, the ACM Symposium on Computer Animation, and the ACM Symposium on Applied Perception. Contact her at [carol.osullivan@cs.tcd.ie](mailto:carol.osullivan@cs.tcd.ie).



**Lawrence J. Rosenblum** has been the program director for graphics and visualization at the US National Science Foundation since 2004. From 1994 to 2004, he was director of VR systems and research at the US Naval Research Laboratory and program officer for visualization and computer graphics at the Office of Naval Research (ONR). From 1992 to 1994, Rosenblum was a liaison scientist for computer science at the ONR European Office in London. He received his PhD in mathematics from the Ohio State University. He's on the editorial board of the *International Journal of Virtual Reality* and has served on the editorial boards of *CG&A*, *IEEE Transactions on Visualization and Computer Graphics*, and several other journals. Rosenblum was the chair of the IEEE Visualization and Graphics Technical Committee (TCVG) from 1994 to 1996 and is a VGTC director. He's a senior member of the IEEE and a member of the IEEE Computer Society, ACM, and Siggraph. Contact him at [ljrosen@verizon.net](mailto:ljrosen@verizon.net).



**Holly Rushmeier** is a professor in, and the chair of, Yale University's Department of Computer Science. Her research interests include shape and appearance capture, applications of perception in computer graphics, modeling material appearance, and developing computational tools for cultural heritage. She received a BS, an MS, and a PhD in mechanical engineering from Cornell University. Rushmeier has served on the editorial boards of

numerous computer graphics and visualization publications, including *CG&A*, and on numerous conference program committees. She is an ACM Distinguished Engineer and a Eurographics Fellow and received the 2013 ACM Siggraph Computer Graphics Achievement Award. Contact her at [holly.rushmeier@yale.edu](mailto:holly.rushmeier@yale.edu).



**Maureen Stone** is a member of Tableau Software's recently formed research group, where she's exploring ways to increase the effectiveness of visual encodings in data analysis, especially color. She previously worked at Xerox PARC, then as an independent consultant (StoneSoup Consulting). Her areas of expertise include color, perception, and design. She served on the *CG&A* editorial board from 1998 to 2010 and was an associate editor in chief (1999–2006) and the editor in chief (2007–2009). She's a longtime member of ACM, IEEE, and the Society for Imaging Science and Technology. Her book, *A Field Guide to Digital Color*, was published by A K Peters in 2003. Contact her at [mstone@tableausoftware.com](mailto:mstone@tableausoftware.com).



**Gabriel Taubin** is associate professor of engineering and computer science in the School of Engineering at Brown University. His research interests include applied computational geometry, computer graphics, geometric modeling, 3D photography, and computer vision. Taubin has a PhD in electrical engineering from Brown University. He served as editor in chief of *CG&A* from 2010–2013, he serves as a member of the editorial board of *Geometric Models*, and has served as associate editor of *IEEE Transactions of Visualization and Computer Graphics*. He's an IEEE Fellow. Contact him at [gabriel\\_taubin@brown.edu](mailto:gabriel_taubin@brown.edu).

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