We enhance our communication skills by applying visual modes of imparting information. We may say that we do judge a book by its cover, no matter what they say about it. The communication success often depends on the visual aesthetical quality of display, so we should be aware of the role of visual language and digital aesthetics in the effectiveness, and even usability, of data and information representation. One may discuss the aesthetics of visualization as related to the visual competence in the art, design, and technological solutions in visualization. In a growing number of publications the aesthetics concept refers to design effectiveness, efficiency, and easiness to understand (a low cognitive cost) of visual presentation, not exclusively the beauty of an image. Aesthetics is a branch of philosophy dealing with the creation and appreciation of natural and human-made matter. For this reason some papers in this special issue may be seen as more philosophical and even personal in nature than the articles used to be, especially when the authors describe the innovative approach that yielded their contributions.

This special issue on Visualization Aesthetics, Criticism, and Design focuses on themes that support creativity, productivity, expression, and visual explanations. The issue presents a spectrum of articles on visual communication contributed by Hans Dehlinger (University of Kassel, Germany), Brian Evans (Digital Media, The University of Alabama, USA), Gavin Perrin and Linda Matthews (University of Technology, Sydney, Australia), Ioanna Armiano (EON Reality, Inc. Sweden), Gabriele Peters (Fern Universität in Hagen, Germany), and James Faure Walker (University of the Arts, London, UK).

Hans Dehlinger discusses in his article “Line Drawings that Appear Unsharp” generative line drawings, which appear to be wholly or in part unsharp when viewed, and explores some strategies based on systematic experiments with geometric transformations to achieve them. The topic is approached from an artist’s point of view with a focus on the generative and algorithmic issues involved, and the results are demonstrated by some examples.

Brian Evans is exploring in his article “Materials of the Data Map” the process of communication and our involvement with the processes of communication and data mapping involving visualizations and sonifications of information. He examines the materials and mechanisms of receiving messages and fol-
allows the process of data mapping that starts with signals in the world and moves through our experience and engagement with the world through those signals. The process of data mapping a portrayal of the complexity is a point of leverage and the basis of visualization and sonification in information design and in digital art. Recognizing these leverage points can help in activities of art making, information design, and in simply living.

Gavin Perin and Linda Matthews describe design-oriented research. In a paper “Digital Images: Interaction and Production” they discuss how open-source digital software typified by CCTV webcam systems can process and interpret raw virtual qualitative data to generate a formal response to civic space. The use of these networks by controlling authorities is a strategic projection of their personal social and political interests. However, the webcams conversion of the real into the virtual provides the viewer with a facility to convert the surveillant role of these systems into a qualitative and experiential intervention within both virtual and urban space. More importantly, this digital conversion is able to offer the designer new ways to materialize three-dimensional form.

Ioana Armianno, in her article titled “Creative Interfaces: Development of New Integrated and Visual Solutions” examines new 3D interactive technologies incorporated into training applications and learning environments, which are rapidly changing the landscape for education. She describes creative interfaces aimed to provide effective visual communication and knowledge transfer solutions for cooperation, prototyping new models, and cultivating open and collaborative approaches to several major areas: learning and training, medical and pharmaceutical industries, design studios and architectural or urban planning, virtual product development, information and R&D visualization, as well as energy and petrochemical companies.

The article by Gabriele Peters titled “Criteria for the Creation of Aesthetic Images for Human-Computer Interfaces: A Survey for Computer Scientists” provides a system of criteria for the aesthetic design of images, motivated by principles of visual information processing by the human brain as well as inspired by considerations of the visual arts. Images are often the key components of an interface. However, too frequently interfaces are still designed by computer scientist with no explicit education or training in the aesthetic design of interfaces and especially of images. This article is a theoretic disquisition aimed at establishing a framework for the evaluation of images in terms of aesthetics. It also serves as a guideline for interface designers with a collection of criteria how to deal with images in terms of aesthetics for the purpose of developing better user interfaces.

James Faure Walker contributes with an essay about digital drawing titled “On Not Being Able to Draw a Mousetrap” illustrated by his own works and personal comments on his own venture into these waters. He delves into the queries often discussed: why it was that fine art drawing has been so little affected where new tech replaces old technology; are we a de-skilled society when it comes to handicrafts compared with a hundred years ago; and he recounts the story of the connections and disconnections between traditional and digital drawing.

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Anna Ursyn
Guest Editor
IJCICG