Foreword

The days of "traditional" computing have long past; we are no longer bound to programs that only process spreadsheet data, business operations, or calculations alone. Computer technology has changed everything around us, including our daily routines and the society in which we live. Computers now can do so much more and contain far greater computational power compared to many years ago. We now have the ability to assemble rich interactive multimedia content, create and play digital music, art, design, Web pages and other highly expressive content. Many times in the computer sciences, the creative side and potential of technology is ignored. Many times in areas of art and design, heavily technical information is left out of the details where the focus is on implementation and the design itself. This book aims to include both sides where technology and creativity come together on equal terms. In a creative array of discussions, projects and examples, combined with the range of experience and expertise of many areas of discourse, the *Handbook of Research on Computational Arts and Creative Informatics* presents a unique research focus. This book aims to give readers a unique experience by showing both the creative spirit of technology while looking at new and interesting uses of computers, software and our digital society.

Section I of this book focuses on the intersection of Art and Technology. Many discussions in this area arise throughout the book, but here we deal with many of these issues head-on. Examples of projects that can be found at the intersection of Art and Technology as well as how both scientific and artistic methods can be used in the design process are just a few topics. This section explores how computer technology can be used as an artistic tool to unlock the creative potential of these mediums.

The next section titled "Creativity Unleashed" presents a wide variety of unique examples, projects and discussions. The creative array of ideas presented in this section is difficult to describe. Readers will have a vast snapshot of some of the concepts being explored in this research area. Many of the authors have very diverse backgrounds bringing it all together to explore what technology and art research has to offer. The chapters span over several granularities of technical expertise, design related to the arts, trends and issues, creating an eclectic creative thread. One simply cannot read through this section without getting some new ideas for their own future projects.

Section III is concentrated around the idea of how Art, Culture and Technology have undoubtedly influenced each other ultimately impacting society. We can ask ourselves how computer interaction and software processes have shaped our view of understanding certain concepts of realty. How have culture and self concept become reinvented with changes in our ability to express ourselves and communicate through our new inventions and technical artifacts? The "culture" within Art and Science also is an interesting phenomenon where we can see how our perception and abilities to understand these issues can lead us to a better understanding of the need to strive for creativity. Many interesting ideas and topics are discussed in this section.

   In the final section of the book, we see how computer generated realties can spark our creative potential. These spaces create new ways in which we can interact and express ideas and concepts. Here we are no longer bound by physical limitations of time, space or physics, freeing us from normal constraints. This section presents film, theater and other forms of creativity that exist and reach their full potential in the virtual realm. We also get a closer look at how the virtual world can impact real life interaction and vice versa.

   The Handbook of Research on Computational Arts and Creative Informatics is a unique collection of creative and innovative ideas and projects. This book will be sure to leave a lasting impression on those interested in art or computer science (or both!) and serve to demystify some of the boundaries between the disciplines.

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