DURING the week of 2-6 June 2008, the State University of New York at Stony Brook (Stony Brook University) hosted and cosponsored a five day Stony Brook Modeling Week 2008. Stony Brook Modeling Week 2008 featured: 1) the ACM Solid and Physical Modeling Symposium (2-4 June 2008) and 2) the IEEE International Conference on Shape Modeling and Applications (4-6 June 2008).

The first conference, ACM Solid and Physical Modeling Symposium 2008 (SPM '08), was cosponsored by ACM SIGGRAPH. Since 1991, this highly successful conference series has been a primary venue for disseminating research results and exchanging new ideas in geometric and solid modeling, physical modeling, geometric design, analysis, simulation and processing, rapid prototyping, manufacturing, shape computing and visualization, and various applications such as emerging biomedical, geophysical, digital entertainment, and other relevant areas. The SPM '08 program cochairs were Bruno Levy, Dinesh Manocha, and Hiromasa Suzuki. Among 79 submitted papers, 25 full papers and 18 short papers were selected for the SPM '08 conference proceedings after a thorough review process by members of the SPM '08 international program committee and external reviewers.

The second conference, the International Conference on Shape Modeling and Applications 2008 (SMI '08) was cosponsored by the IEEE Visualization and Graphics Technical Committee (IEEE VGTC). Started in 1997, SMI provides an international forum for the dissemination of new mathematical theories and novel computational techniques for modeling, simulating, and processing digital representations of shapes and their properties to a diverse community of researchers, developers, practitioners, and students in academia and industry across a wide range of fields. The SMI '08 program cochairs were Michela Spagnuolo, Daniel Cohen-Or, and Xianfeng David Gu. Among 52 submitted papers, 24 full papers and 10 short papers were selected for the SMI '08 conference proceedings after a thorough review process by members of the SMI '08 international program committee and external reviewers.

This special section on Shape, Solid, and Physical Modeling features improved and extended versions of six selected papers (three from SPM '08 and three from SMI '08) that were recommended by the SPM '08 and SMI '08 program cochairs, respectively. Each paper included in this special section has at least 30 percent new content beyond the other papers presented at SPM '08 and SMI '08. Finally, my thanks go to members of international program committees and external reviewers throughout the world and colleagues and friends at Stony Brook University who have had contributed in various ways to the success of Stony Brook Modeling Week 2008.

I would like to take this opportunity to express my gratitude to Bruno Levy, Dinesh Manocha, Hiromasa Suzuki, Michela Spagnuolo, Daniel Cohen-Or, and Xianfeng David Gu, Thomas Ertl, Ming C. Lin, and all the reviewers of the revised paper contributions. On behalf of the SPM '08 and SMI '08 program cochairs, I hope that TVCG readers will enjoy this special section and generate more interest in the other papers presented at SPM '08 and SMI '08. Finally, I would like to take this opportunity to express my gratitude to Bruno Levy, Dinesh Manocha, Hiromasa Suzuki, Michela Spagnuolo, Daniel Cohen-Or, and Xianfeng David Gu, Thomas Ertl, Ming C. Lin, and all the reviewers of the revised paper contributions. On behalf of the SPM '08 and SMI '08 program cochairs, I hope that TVCG readers will enjoy this special section and generate more interest in the other papers presented at SPM '08 and SMI '08. Finally, my thanks go to members of international program committees and external reviewers throughout the world and colleagues and friends at Stony Brook University who have had contributed in various ways to the success of Stony Brook Modeling Week 2008.

Hong Qin

Guest Editor