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About MI Lecture Note Series

The Math-for-Industry (MI) Lecture Note Series is the successor to the COE Lecture Notes, which were published for the 21st COE Program "Development of Dynamic Mathematics with High Functionality," sponsored by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) from 2003 to 2007. The MI Lecture Note Series has published the notes of lectures organized under the following two programs: "Training Program for Ph.D. and New Master's Degree in Mathematics as Required by Industry," adopted as a Support Program for Improving Graduate School Education by MEXT from 2007 to 2009; and "Education-and-Research Hub for Mathematics-for-Industry," adopted as a Global COE Program by MEXT from 2008 to 2012.

In accordance with the establishment of the Institute of Mathematics for Industry (IMI) in April 2011 and the authorization of IMI's Joint Research Center for Advanced and Fundamental Mathematics-for-Industry as a MEXT Joint Usage / Research Center in April 2013, hereafter the MI Lecture Notes Series will publish lecture notes and proceedings by worldwide researchers of MI to contribute to the development of MI.

October 2014 Yasuhide Fukumoto Director Institute of Mathematics for Industry

Symposium MEIS2015:

Mathematical Progress in Expressive Image Synthesis

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Preface

Welcome to MEIS2015, the international symposium "Mathematical Progress in Expressive Image Synthesis", held in Fukuoka, Japan, September 25-27, 2015. The international symposium MEIS2015 aims at giving a unique venue where various issues in CG application fields are discussed by mathematicians, CG researchers and practitioners. Through the previous conferences, MEIS2013 and MEIS2014, mathematicians as well as CG researchers have recognized that CG is a specific and practical activity derived from mathematical theories. Issues found in CG broaden the field of mathematics (and vice versa), and CG visualizes mathematical theories in an aesthetic way.

The present volume is the proceedings of MEIS2015. Several invited talks will attract and inspire prospective attendees who work in academia or industries having strong interests on digital media creations, scientific visualization and visual engineering. From the graphics community we have three outstanding invited speakers: Robert Bridson (Autodesk), Florence Bertails-Decoubes (INRIA), and Daniele Panozzo (ETH Zurich). In this year, we try to provoke interdisciplinary research projects through the peer-reviewed paper/poster presentations at the symposium. The topics includes geometry, curves and surfaces, fabrication, fluid, interpolation, illusion, texture, visualization, and rendering.

We are very much grateful to the Institute of Mathematics for Industry (IMI), Kyushu University for sponsoring this symposium. We would like to thank the Japan Science and Technology Agency (JST), Mathematics Program: Alliance for Breakthrough between Mathematics and Sciences (ABMS) on our five-year project "Mathematics for Computer Graphics" for continuous support. We also extend our thanks to Ayumi Kimura for her hard work on the conference arrangement and the production of the proceedings. Last but not least, we appreciate the hard work of the international program committee and the external reviewers in the tight schedule. Finally we wish to thank all contributing authors and attendees for their involvement. We hope all the participants enjoy this exciting event in Fukuoka.

Program Co-Chairs: Yoshinori Dobashi Hiroyuki Ochiai