

[072]MI Lecture Note Series

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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

Mathematical quantum field theory and related topics

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Preface

The international conference “Mathematical Quantum Field Theory and Related Topics” was held in the Institute of Mathematics for Industry (IMI) of Kyushu University from June 6, 2016 through June 8, 2016. The conference was organized to discuss recent progresses and problems in mathematical physics, experiment physics, theoretical physics, operator algebra, operator theory and related topics. We also introduced in this conference a *lecture recording system* but unfortunately speakers who accepted to record his lecture were few.

The conference itself was very hot like as the temperature of the summer season of Fukuoka and we had 14 talks and more than 40 participants who were very keen to join the discussions. Participants came from France, Italy, Germany, Denmark and Japan, and their affiliations were from universities and industries. The contents of the talks were mainly focused on quantum theory and quantum experiments but were widely spread as mentioned above. We believe that these talks will help readers to discover interesting problems and find ideas to solve his/her problems to be considered.

We are very much grateful to IMI of Kyushu university for sponsoring this conference, and we also thank Grant-in-Aid for Science Research (B) 16H03942, JSPS for financial support. Finally we would like to thank not only speakers but also all attendees. We hope all participants enjoy this exciting event in Fukuoka and wish that Nobel laureates will appear from participants in this conference.

Program Co-Chairs:

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