

## FOREWORD

The twenty-fifth annual international conference of the Forum for Interdisciplinary Mathematics (FIM2017) and the seventeenth International Symposium of Management Engineering (ISME 2017) were jointly organized at Kitakyushu International **Conference Centre, Kokura Kitakyushu, Japan during 25–28 August 2017. The Forum for Interdisciplinary Mathematics, established in India to promote interdisciplinary studies in mathematics, holds its annual international conference alternately in India and** abroad. In 2013, FIM 2013 was hosted in Kitakyushu International Conference Centre and it proved to be a resounding success. Impressed by the warm hospitality and the meticulous organization by the local organizing committee of FIM 2013 held in Kitakyushu in 2013, the Forum readily agreed to have FIM 2017 again in Kitakyushu, Japan.

Among the hundred and odd papers submitted for FIM 2017 covering topics such as disease modelling, elasticity, fuzzy systems, management engineering, pedagogy, pure mathematics and statistics, about fifty papers were selected for presentation in the conference. Of the three keynote addresses, Prof. Kato's lecture dealt with Geometry of Banach spaces while the lectures by Drs. Wan Fatima and Bo Wang were on teaching methodologies in mathematics and joint application of stochastics and fuzzy set theory for certain optimization problems respectively. The conference registration commenced in the evening of the 25th of August 2017 and the keynote addresses by Drs. Kato and Wan Fatima constituted the morning session on the 26th August. In the afternoon simultaneous paper reading sessions were held. In the morning of the 27th August apart from the keynote address by Dr. Bo Wang, a technical session of talks on fuzzy sets, information theory and Reliability analysis was held. The tour in and around Kokura that afternoon provided the participants some glimpses of the rich Japanese culture and the modern technological advances achieved in Japan. The 28th August, the final day of the conference, witnessed parallel paper reading sessions.

The members of the advisory committee comprised eminent academicians from about twenty countries, while the participants hailed mostly from China, India, Japan, Malaysia and Taiwan. The conference was marked by camaraderie and lively academic discussions. The present volume comprises refereed papers presented as well as invited articles. It is hoped that this publication will promote further research in the respective topics discussed. The conference chairs and the editors of the proceedings are beholden to the members of the local organizing committee, the international advisory committee, the government of Kitakyushu City and its Visitors Association.

P.V. SUBRAHMANYAM  
JUNZO WATADA  
HIROSHI SAKAI  
YOSHIYUKI YABUUCHI  
YOSHIYUKI MATSUMOTO