



## Foreword

Mathematical Morphology (MM) was created in the mid-sixties by a group led by Georges Matheron and Jean Serra of the Paris School of Mines in Fontainebleau, France. By the end of the seventies, its usefulness for image analysis had been recognized in Europe, in particular within the area of microscopic imaging. Starting in the eighties, with the publication in English of Serra's books on Image Analysis and Mathematical Morphology, MM spread worldwide. In 1993, the MM community organized the first International Symposium on Mathematical Morphology (ISMM), an event that has been held approximately biennially ever since.

In Brazil, MM began to be studied at the National Institute for Space Research (INPE), in the mid-eighties, through a technical cooperation program with France. From the beginning, MM was considered a useful alternative to the linear approach to image processing. In 1987, the first master's thesis devoted to MM and its applications to Remote Sensing was presented at the INPE graduate program. Early in the nineties, MM spread over Brazil, in particular at University of São Paulo (USP), University of Campinas (Unicamp), Federal University of Minas Gerais (UFMG) and the Federal Center of Technological Education of Paraná (CEFET-PR). At that time, the first two books on MM "Bases da morfologia matemática para a análise de imagens binárias" by G. Banon and J. Barrera, and "Morfologia matemática: Teoria e exemplos" by J. Facon, were published in Brazil, in Portuguese. Since then, MM has been a very active area of research in Brazil.

In July 2005, the ISMM steering committee chose Rio de Janeiro, Brazil, among 4 four other candidates, as the site for the next ISMM edition, to be held in October 10-13, 2007. The 38 articles in Volume 1 of these Proceedings were selected among a total of 53 submitted to the this 8<sup>th</sup> edition of ISMM. Each submitted article was reviewed by at least 2 out of 45 reviewers. The first authors of theses articles are from 11 different countries: Brazil (8), Bulgaria (1), France (15), Greece (3), Israel (1), Mexico (1), Netherlands (2), Spain (3), Switzerland (1), Sweden (2), and USA (1).

Brazil is proud to receive the MM community at ISMM'2007. The event will surely be very important in order to strengthen research in signal and image processing in Brazil and Latin America.

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