GUEST EDITORS’ PREFACE

Joint AMS–SIAM Conference

Mt. Holyoke, Summer 2000

In July 2000 a joint AMS–SIAM Research Conference on Algorithms, Computational Complexity, and Models of Computation for Nonlinear and Multivariate Problems was held at Mt. Holyoke College. The aim of the conference was to bring together leading researchers currently working on algorithms for solving nonlinear systems and multivariate problems. The speakers discussed optimal or nearly optimal algorithms for these problems as well as the fastest known methods for computing their approximate solutions. Bringing these topics together into one meeting resulted in many fruitful discussions between researchers in numerical mathematics, computational complexity, and applied mathematics. The conference was organized by Eugene Allgower, Department of Mathematics, Colorado State University, Kurt Georg, Department of Mathematics, Colorado State University, and Christopher Sikorski, Computer Science Department, University of Utah. In addition to the organizers, the following made presentations at the conference:

M. ABAALI (Sultan Qaboos University, Oman); D. Calvetti (Case Western Reserve University); J. Calvin (New Jersey Institute of Technology); R. Cools (Catholic University of Leuven, Belgium); J. Demmel (University of California, Berkeley); S. Heinrich (University of Kaiserslautern, Germany); B. Kearfott (University of Louisiana, Lafayette); H. Keller (California Institute of Technology); A. Khinuk (United Technologies); M. Kowalski (Cardinal Stefan Wyszyński University, Warsaw, Poland); P. Mathe (Weierstrass Institute, Berlin, Germany); H. Mittelmann (Arizona State University); H. Niederreiter (National University of Singapore, Singapore); L. Plaskota (University of Warsaw, Poland); P. Paradalos (University of Florida); L. Reichel (Kent State University); K. Ritter (University of Darmstadt, Germany); H. Schwetlick (University of Dresden, Germany); S. Shellman (University of Utah); I. Sloan (University of New South Wales, Australia); A. Sommese (Notre Dame University); J. Verschelde (Michigan State University); M. Vrahatis (University of Patras, Greece); A. Verschulz (Fordham and Columbia Universities,
New York); H. Woźniakowski (Columbia University, New York and University of Warsaw, Poland); and A. Zilinskas (Vyutatus Magnus University, Vilnius, Lithuania).

The seven articles in this issue correspond to some of the talks presented there and they provide a good snapshot of topics discussed in the seminar. All of them were subjected to the standard and thorough refereeing process.

Eugene Allgower
Kurt Georg
Christopher Sikorski
Guest Editors