



Contents lists available at ScienceDirect

Journal of Computational and Applied Mathematics

journal homepage: www.elsevier.com/locate/cam

Preface

The Third International Workshop on Analysis and Numerical Approximation of Singular Problems [IWANASP08] was held at Ericeira, Portugal, on Sept 8th–12th 2008; it focussed (as indicated by its title) on singular problems. This special issue is based on the workshop. In standard English, the description 'singular' (from the Latin *singularis*) is applied to anything that is, for example, *unusual*, *exceptional*, or *unexpected*. In our context, the singular behaviour may appear in integrals, differential equations (ordinary, partial, fractional, or with deviating arguments), integral and integro-differential equations, or other types of functional equations, and it may assume the form of unboundedness, lack of smoothness, bifurcation, etc.

The workshop was organised by Teresa Diogo (CEMAT/IST, Lisbon) with Pedro Lima (CEMAT/IST, Lisbon), Magda Rebelo (FCT, Universidade Nova de Lisboa), and Filomena Teodoro (EST, Instituto Politécnico de Setúbal, Lisbon). Teresa Pelarigo (Instituto Superior Técnico – IST, Lisbon) kindly acted as workshop secretary. The organisers wish to take this opportunity to thank all who helped in the running of the workshop, and the workshop sponsors – Centro de Matemática e Aplicações (CEMAT), Fundação para a Ciência e a Tecnologia (FCT), Redes Energéticas Nacionais (REN), Caixa Geral de Depósitos, and Câmara Municipal de Mafra – whose generous contributions made the workshop a success.

The main goal of the workshop was to bring together active researchers working in the area, to give them the opportunities to present recent advances in their research. This enabled a stimulating exchange of ideas, and in some cases gave rise to new approaches to the problems discussed. The presentations were in the areas of difference or summation equations, ordinary differential equations, integral and integro-differential equations, differential equations with deviating arguments, neutral equations, fractional differential equations, partial differential equations, etc. The best of the workshop papers that were submitted for publication and satisfied the high refereeing standards of JCAM are gathered into the Special Issue. A number of the papers were influenced by input from fellow participants. The Guest Editors are indebted to referees and authors of the papers for their care and hard work in meeting the suggested timetable. Thanks go to Joanne Morgan, of the Research Office at the University of Chester, who kept track of the editing and refereeing process.

The Guest Editors and contributors thank Professor Luc Wuytack, Principal Editor of the Journal of Computational and Applied Mathematics, for his support and encouragement and for accepting the papers as a special issue of JCAM. It is hoped that the publication of this JCAM issue will stimulate additional interest in the issues and the mathematical and numerical treatments that arise.

The Guest Editors

Christopher T.H. Baker

Department of Mathematics, University of Chester, UK

School of Mathematics, University of Manchester, UK

E-mail addresses: c.baker@chester.ac.uk, cthbaker@na-net.ornl.gov, Christopher.Baker@manchester.ac.uk.

Neville J. Ford

Department of Mathematics, University of Chester, UK

E-mail address: njford@chester.ac.uk.

Teresa Diogo

Pedro Lima

Adélia Sequeira

CEMAT Research Centre, Department of Mathematics, Instituto Superior Técnico, Lisbon, Portugal

E-mail addresses: tdiogo@math.ist.utl.pt (T. Diogo), plima@math.ist.utl.pt (P. Lima), adelia.sequeira@math.ist.utl.pt

(A. Sequeira).