Dynamical Search

Applications of Dynamical Systems in Search and Optimisation

Luc Pronzato Henry P. Wynn
Anatoly A. Zhigljavsky

To our parents,
to Jan,
and our friends.

Preface

If a two-author, two-nationality book is a complex operation, the reader may perhaps imagine the difficulties of completing this three-author work and the level of gratitude which is due to families, friends, funding bodies and our publisher for their support and patience. It had to compete with all the usual events of modern life such as emigration, marriage and job change, to name the more pleasant, and was also completed during a period of upheaval in Eastern Europe which affected personal contact at certain times. Five centres were involved: the CNRS laboratory in Sophia-Antipolis, for Luc, City University and then the University of Warwick, for Henry and the University of St. Petersburg and then the University of Cardiff, for Anatoly. To all our colleagues we are very grateful for their help and encouragement.

A remarkable level of support and hospitality was given to us by friends and families. Carole Lassalle and her now not-so-young daughters Salomé and Morgane, Isabelle Penod, Harald Keller and others made life in Antibes an ideal mixture of work and play. Henry's wife Jan, sons Hamish and Robin and the extended Wynn-Baldwin clan, including Fionna Dunlop, broke away from otherwise lively times in London to give us patient encouragement. Anatoly's family and St. Petersburg friends were very supportive on visits to the city and the hospitality continues in Cardiff.

Academic friends, some of whom are also co-workers on other projects, should get a special mention for the sort of osmotic support which they would probably be too modest to admit to, particulary Eric Walter, Giovanni Pistone, Dan Naiman, Peter Caines, Pavel Kargaev, and also Rainer Schwabe, Anthony Atkinson, Werner Muller, Peter Hackl, Valery Fedorov and all the other MODA Conference colleagues.

Certain people gave specific help and advice: Max Chekmasov did some early programming work; Brigitte Vallée, Caroline Series, Martin Huxley and Glyn Harman gave advice on Farey sequences, continued fractions and aspects of dynamical systems.

We are very grateful for support from several grants. A UK Engineering and Physical Sciences (EPSRC) Visiting Fellowship supported Anatoly for an early visit to City University and the work has also been covered by other EPSRC grants under both mathematics and engineering headings. Luc and Henry shared a British Council Alliance grant and Anatoly was partly supported by CNRS itself and partly by a "PAST" grant from the French Ministry of Education during important visits to France.

Finally, many thanks to Chapman and Hall-CRC for staying with us till the end on what at times may have seemed a somewhat speculative venture and one which certainly saw many deadlines come and go.

L.P., H.P.W., A.A.Z.

Contents