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PREFACE

The workshop "Future Directions in Difference Equations" was held in Vigo (Spain), June 13–17, 2011, hosted by the University of Vigo. The present volume contains the proceedings of the Workshop and consists of 18 contributions by the invited speakers.

The construction of sequences of numbers using recurrence relations, what we now call difference equations, can be traced back to the very early stages of the mathematical corpus, and nowadays this topic has experienced a strong revitalization. This is partly due to the recent profusion of discrete models in fields like biology, economics, social sciences or physics, and partly due to the ubiquity in science of computational methods, which have discrete nature.

There are many international conferences devoted to the topic of this workshop; for this reason, our target was organizing a small sized meeting, with few talks and participants, but trying to get together a selection of first–level specialists. Our purpose was to maximize the proximity between all the speakers and participants, and to facilitate the possibility of a fruitful discussion in a friendly atmosphere. We think that we have achieved this objective: for a week, we all enjoyed the pleasure of sharing and learning. It was a honor for us to host all participants in Vigo.

As mentioned above, difference equations appear in a wide range of theoretical frameworks and applications. It is not possible, and perhaps it is not desirable, to cover this spectrum in a workshop like the present one. However, taking a look to the papers in these proceedings, one can see that the speakers introduced a long range of methods (from algebraic geometry to numerical computation), scopes (from mathematical analysis to classical mechanics), and motivations and applications, like mathematical biology or physics.

Vigo, November 2011.

The Editors:
Eduardo Liz
Víctor Mañosa.

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ACKNOWLEDGEMENTS

The Workshop was held in the College of Industrial Technical Engineering of the University of Vigo. We want to acknowledge the support received from the University of Vigo and, in particular, from the Department of Applied Mathematics II.

We give special thanks to the members of the Scientific Committee, for their support to the workshop and their collaboration in the preparation of these Proceedings.

The conference was supported in part by the Spanish Ministry of Science and Innovation and FEDER, under grants MTM2010-14837 and MTM2010-11874-E.

Financial support from Xunta de Galicia, under INCITE Program (IN845B-2010/046), is gratefully acknowledged, as well as a grant of the program "Ajuts per a l'organització de congressos de la UPC 2010", and of the Department of Applied Mathematics III (UPC).

Vigo, November 2011.

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