Preface

In February of 2011, over 130 mathematicians gathered at the beautiful Banff Centre in the Canadian Rockies for a week of discussing holomorphic dynamics in one and several variables and other topics related to the work of John Milnor.

John Milnor is undoubtedly one of the most significant mathematicians of the second half of the twentieth century. He has made fundamental discoveries in many areas of modern mathematics, including topology, geometry, K-theory, and dynamical systems. Since in recent years his main interest has been in complex dynamics, it was only fitting that the conference had this as a primary focus.

The conference in Banff was a great success. In addition to all of the wonderful mathematics, the beautiful setting and friendly atmosphere at the Banff Centre inspired us all, both professionally and personally. All but one of the talks were videotaped and can be viewed or downloaded from the conference website, at `http://www.math.sunysb.edu/jackfest` (unfortunately, there was a camera malfunction at the start of Arnaud Chéritat's presentation, so only his slides are available).

This collection is an outgrowth of that conference, which was also organized by the editors of this book. Almost all of the authors whose papers appear here attended the conference. Both this collection and the conference were designed to honor John Milnor. But this volume is not merely a record of that conference; rather, it extends and complements that event. For example, some of the speakers gave primarily expository lectures but chose to contribute research papers to this volume; others went the other route. There is very little skiing in the book, and you'll have to bring your own food. But, it should last longer. We hope this volume will be valuable to any mathematician working in complex dynamics or related fields, whether or not they attended the Banff conference.

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This volume is organized in five main parts: *I. One Complex Variable*, *II. One Real Variable*, *III. Several Complex Variables*, *IV. Laminations and Foliations*, and *V. Geometry and Algebra*. The first part is further subdivided into the areas of *arithmetic dynamics*, *polynomial dynamics*, *rational dynamics*, and *Thurston theory*, and the third part first covers *local dynamics in several complex variables* and then turns to *global dynamics*. In addition, there is a section containing color versions of those images for which color is essential; such images have references within the body of the main text, where a greyscale version appears for the reader's convenience.

The photograph of Jack Milnor at Lake Louise (Plate 1) was taken by Thomas Milnor. The images in Figure 1.2 on page 75 (which appears in modified form as Plate 4) are reprinted from John Milnor's article "Remarks on Iterated Cubic

Maps" in *Experimental Mathematics* 1, no. 1 (1992) by permission of Taylor & Francis (`http://www.tandfonline.com`). The image in Plate 15 (which also appears in modified form as Figure 3.11 on page 151) was produced by Hiroyuki Inou. The images in Plate 23 and Figure 1.1 on page 465 were produced by Vincent Pit. The group photo of conference participants (Plates 29 and 30) was taken by Photographic Services, The Banff Centre. The conference poster on page C-24 used elements from photographs taken by Marco Martens and by Tom Arban Photography (`http://www.tomarban.com`). All images are used by permission.

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