

Complex Dynamics and Related Topics

Yunping Jiang and Yuefei Wang

PREFACE

Complex dynamical systems concerns the iteration theory of complex functions. It has become an active research area in mathematics worldwide, and the mathematicians in China who study complex dynamical systems are scattered among different provinces in China. The establishment of the Morningside Center of Mathematics in Academia Sinica in 1996 has provided a critical chance for these mathematicians to work together. Some of these mathematicians have gathered together twice at the Morningside Center of Mathematics since 1998.

The first event was a half-year workshop in complex dynamical systems in 1998. It was organized by Professors Lo Yang, Li Zhong, Yuefei Wang, Guizhen Cui and Yunping Jiang.. Many participants reported on their research in complex dynamical systems. Professors John Smillie, Tan Lei, Mitsuhiro Shishikura, and Yunping Jiang each gave a two-week long lecture in his or her respective area of expertise.

Following up on the successful 1998 workshop, Professors Guizhen Cui, Yuefei Wang, and Yunping Jiang organized another half-year workshop in 2002 with the support of Professors Lo Yang and Zhong Li. Since the study of complex dynamical systems has a close relationship with many other areas in dynamical systems, this second workshop sought to extend and combine our study of complex dynamical systems with other areas by also inviting experts in ergodic theory, quasi-conformal maps and Teichmüller theory, and probability theory. These participants and visitors made it possible to form strong connections between their areas of expertise and the field of complex dynamical systems. All the participants and visitors are listed on the next page.

The current book is the result of our 2002 workshop at the Morningside Center of Mathematics. We would like very much to express our sincere thanks to all the participants and visitors, and also to those involved with the first workshop in 1998. Without their participation, we would not have been able to complete two successful events. Each participant's contribution toward the establishment of a strong research group in complex dynamical systems in China will be remembered. In addition, we would like to express our sincere thanks to Professor Shing Tung Yau, the funding director of the Morningside Center of Mathematics, for his support of our workshops.

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Yunping Jiang and Yuefei Wang

PARTICIPANTS AND VISITORS OF THE WORKSHOP

Chunlei Cao (China)	Qing Lü (China)
Guizhen Cui (China)	Weiyuan Qiu (China)
Clifford J. Earle (USA)	Jörg Schmeling (Sweden)
Alexandre Eremenko (USA)	Weixiao Shen (England)
Aihua Fan (France)	Yeshun Sun (China)
Liping Fang (China)	Tan Lei (France)
Frederick Gardiner (USA)	Mariusz Urbański (USA)
Nicolai Haydn (USA)	Lanyu Wang (China)
Zheng-xu 'John' He (USA)	Xiantao Wang
Huyi Hu (USA)	Yuefei Wang (China)
Jun Hu (USA)	Zhiying Wen (China)
Zhiyong Huang (China)	Shengjian Wu (China)
Yunping Jiang (USA)	Guowu Yao (China)
Linda Keen (USA)	Zhuan Ye (USA)
Ka-Sing Lau (Hong Kong)	Qi Yi (China)
Yuhua Li (China)	Yongcheng Yin (China)
Jingsong Liu (China)	Guangyuan Zhang (China)
Jianyong Qiao (China)	Wei Zhuang (China)

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