In the Tradition of Ahlfors–Bers, VII

6th Ahlfors–Bers Colloquium
October 23–26, 2014
Yale University, New Haven, CT

Ara S. Basmajian
Yair N. Minsky
Alan W. Reid
Editors
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Preface

The Ahlfors–Bers Colloquia commemorate the mathematical legacy of Lars Ahlfors and Lipman Bers. The core of this legacy lies in the fields of geometric function theory, Teichmüller theory, hyperbolic geometry, and partial differential equations. Today we see the influence of Ahlfors and Bers on algebraic geometry, mathematical physics, dynamics, probability, geometric group theory, number theory and topology. Recent years have seen a flowering of this legacy with an increased interest in their work.

The sixth Ahlfors–Bers Colloquium took place at Yale University in October 2014. There were ten plenary speakers, 39 contributed talks, and 124 registered participants. The organizing committee members were Kari Astala, Ara Basmajian, Mario Bonk, William Goldman, Ursula Hamenstadt, Michael Kapovich, Steve Kerckhoff, Irwin Kra, Vlad Markovic, Yair Minsky, Alan Reid, Rubi Rodriguez, Steffen Rohde, and Anna Wienhard.

The conference website

https://sites.google.com/site/ahlforsberscolloquium/

contains the full schedule and videos of all the plenary talks.

This current volume contains articles on a wide variety of subjects that are central to this legacy. These include papers in Kleinian groups, classical Riemann surface theory, Teichmüller theory, mapping class groups, geometric group theory and statistical mechanics. The majority of the papers present new research, but there are survey articles as well.

There have been six volumes of these colloquia previously published by the AMS in the Contemporary Mathematics Series: volumes 211, 256, 355, 432, 510, and 590.

As this volume was going to press we were informed of the death of Clifford Earle on June 12, 2017. Cliff Earle was a treasured member of the mathematics community in general and of the Ahlfors–Bers family in particular. His contributions and his company will be missed.

Ara Basmajian
Yair N. Minsky
Alan W. Reid
List of Plenary Lectures

Stergios Antonakoudis (Cambridge University): The complex geometry of Teichmüller space and symmetric domains

Mladen Bestvina (University of Utah): Teichmüller theory in outer space

Jon Chaika (University of Utah): On isomorphism and disjointness of interval exchanges and flows on flat surfaces.

David Dumas (UIC): Computing the image of Thurston’s skinning map

Peter Haïssinsky (Toulouse): Quasi-isometric rigidity of the class of convex-cocompact Kleinian groups

Jeremy Kahn (CUNY Graduate Center): Surface subgroups, cube complexes, and the virtual Haken theorem

Sarah Koch (University of Michigan): Roots of polynomials and parameter spaces

Nick Makarov (Caltech): The circle and the cardioid

Kasra Rafi (University of Toronto): Rigidity of Teichmüller space

Wendelin Werner (ETH Zürich): Conformal invariance and critical behavior within critical fractal carpets
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