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Title: Current Trends in Dynamical Systems and the Mathematical Legacy of Rufus Bowen

Event Type: Conference-Workshop

Location:

UBC

Dates:

July 30 - Aug 4, 2017

Topic:

Dynamical Systems and Ergodic Theory

Methodology:

Lectures, Problem Sessions, Poster Sessions, Focus on Rufus Bowen's Notebook of Open Problems

Objectives Achieved:

Articulation of Rufus Bowen's Mathematical Legacy

Scientific Highlights:

Several lectures directly linking to Bowen's Legacy, highlighting the importance of his work in research today.

Substantive discussions on problems in Bowen's Notebook and others related to Bowen's work.

Extensive one-on-one discussions with young mathematicians presenting posters.

Organizers:

John Franks, Northwestern University

Kostya Khanin, University of Toronto

François Ledrappier, University of Notre Dame and Université Paris 6

Douglas Lind, University of Washington

Brian Marcus, University of British Columbia

Speakers:

Alex Blumenthal, university of Maryland

Lewis Bowen, University of Texas

JÃ©rÃ©me Buzzi, UniversitÃ© Paris-Sud, Orsay

Jean-RenÃ© Chazottes, CPHT, Ã©cole Polytechnique

Vaughn Climenhaga, University of Houston

Ursula HamenstÃ©dt, UniversitÃ©t Bonn

Mike Hochman, Hebrew University of Jerusalem

Anatole Katok, Pennsylvania State University

Ronnie Pavlov, University of Denver

Yakov Pesin, Pennsylvania State University

Mark Pollicott, University of Warwick

Ian Putnam, University of Victoria

David Ruelle, IHES

Omri Sarig, Weizmann Institute

Caroline Series, University of Warwick

Steve Smale, University of California at Berkeley

Masato Tsujii, Kyushu University

Benjamin Weiss, Hebrew University of Jerusalem

Lai-sang Young, Courant Institute, NYU

Links:

Comments / Miscellaneous:

General Summary:

Rufus Bowen (1947-1978), Professor of Mathematics at UC Berkeley, was a rising star in dynamical systems. Over a period of only ten years, he made an enormous number of profound, deep, and lasting contributions to areas of the subject that are very active today. This conference, attended by almost 200 mathematicians from all over the world, young and old, articulated and celebrated Bowen's mathematical legacy. Lectures were given by nineteen of the world's leading experts in dynamics, including one Fields medalist, several ICM speakers and Fellows of various societies. Most lectures connected directly to Bowen's work and demonstrated the vitality of his results and ideas in today's research. There was also a great deal of positive

energy and sharing of mathematical ideas in less-structured activities, including two poster sessions, with posters presented by thirty-two young dynamicists, and three parallel problem sessions, each focusing on a subarea of dynamics, on each of two days.

A unique feature of the conference was a focus on Bowen's private notebook of 157 open problems. The Notebook was referenced briefly in a footnote to Bowen's last paper, posthumously published in 1979, but the Notebook was never published or distributed widely. In November, 2016, with the help of PIMS' IT staff, the Notebook was published online in an interactive interface where users can input comments on progress and discuss new directions: <https://bowen.pims.math.ca> The conference served as an impetus for the community to contribute to the Notebook. Most of the problems have now received comments, and the Notebook will serve as a long-lasting living legacy of Bowen's mathematics. In addition to one conference plenary session on the Notebook, a large number of problems from the Notebook were discussed in the problem sessions.

Finally, the conference included a remembrance lunch which celebrated, through anecdotes and a photo slide show, Rufus Bowen as a very kind person with a warm sense of humour and an inspiring figure to so many young mathematicians of the 1970's.
