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J. Coates and
S. Helgason

Ergodic Theory and Dynamical Systems II

Proceedings

Special Year, Maryland 1979-80

A. Katok, editor

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PARTICIPANTS OF THE SPECIAL YEAR IN ERGODIC
THEORY AND DYNAMICAL SYSTEMS

(Other than permanent faculty of University of Maryland)

University of Maryland
College Park
1979-80

- J. Aaronson - IHES, Bures-sur-Yvette - August 1979
R. Adler - IBM - November-December 1979
S. Alpern - London School of Economics - January 1980
M. Brin - University of Maryland - the whole year
C. Conley - University of Wisconsin - Madison, March 1980
E. Coven - Wesleyan University - April 1980
R. Devaney - Tufts University - Spring semester 1980
J. Feldman - University of California, Berkeley - Fall semester 1979
S. Foguel - Hebrew University - September 1979
J. Ford - Georgia Institute of Technology - March 1980
J. Franks - Northwestern University - November 1979
H. Furstenberg - Hebrew University, Jerusalem - November 1979,
January-February 1980
M. Gerber - NSF Postdoctoral Fellow - the whole year
A. del Junco - Ohio State University - October 1979
S. Kakutani - Yale University - November 1979
Y. Katznelson - Hebrew University, Jerusalem - August-September 1979
M. Keane - University of Rennes - April 1980
A. Lasota - Silesian University, Poland - April-May 1980
D. Lind - University of Washington, Seattle - Fall semester 1979
B. Marcus - University of North Carolina - Fall semester 1979
H. Masur - University of Illinois, Chicago Circle - April 1980
J. Mather - Princeton University - January 1980
J. Moser - Courant Institute, NYU - February 1980
S. Newhouse - University of North Carolina - November 1979
Z. Nitecki - Tufts University - April 1980
D. Ornstein - Stanford University - November 1979
J. Palmore - University of Illinois, Urbana - May 1980

- K. Peterson - University of North Carolina - November 1979
- P. Rabinowitz - University of Wisconsin, Madison - March 1980
- M. Ratner - University of California, Berkeley - September 1979
- C. Robinson - Northwestern University - February 1980
- D. Rudolph - Stanford University - Fall semester 1979, March 1980
- D. Ruelle - IHES, Bures-sur-Yvette - December 1979
- J.-M. Strelcyn - University of Paris - North - January - February 1980
- M. Stuart - Northeastern University - March 1980
- L. Swanson - Texas A & M University - Fall semester 1979
- W. Szlenk - University of Warsaw - September 1979
- W. Veech - Rice University - March-May, 1980
- R. Williams - Northwestern University - January 1980
- P. Winternitz - University of Montreal, April 1980

Graduate Students

- A. Fisher - University of Washington, Seattle - Fall semester 1979
- B. Kitchens - University of North Carolina - Fall semester 1979
- S. Williams - Yale University - November 1979

PROGRAM OF THE SPECIAL YEAR IN ERGODIC THEORY
AND DYNAMICAL SYSTEMS

A. SPECIAL COURSES AND SEMINARS

Fall semester 1979

- J. Feldman* - Orbit structure in Ergodic Theory.
- A. Katok* - Constructions in Ergodic Theory.
- D. Lind* - *D. Rudolph* - Finitary Isomorphism of Measure-preserving transformations.
- B. Marcus* - Horocycle Flows.

Spring semester 1980

- R. Devaney* - Non-integrable Classical Dynamical Systems.
- W. Veech* - Interval Exchange Transformations.

B. SERIES OF LECTURES

- H. Furstenberg* - Mildly Mixing Transformations.
- M. Gerber, A. Katok* - Smooth Models for Thurston's Pseudo-Anosov maps.
- D. Ruelle* - Characteristic Exponents and Invariant Manifolds in Hilbert space.

C. TALKS

- J. Aaronson* - Infinite Measure Preserving Transformations.
- R. Adler* - Cross Section for Geodesic Flows and Continuous Fractions.
- S. Alpern* - Ergodic Properties of Measure-preserving Homeomorphisms.
- M. Brin* - Topology and Spectrum of Anosov Diffeomorphisms. Topology and Ergodicity of Frame Flows.
- C. Conley* - On Limiting for Directal Families of Flows with no Limit Flow and a New Way of Codifying Algebraic Properties of Flows. (2 talks)
- J. Feldman* - Amenable and Anti-Amenable Group Actions.
- S. Foguel* - Asymptotic Behaviour of Iterates of a Harris Operator.
- J. Ford* - Computer Models of Dynamical Systems. (2 Talks)
- J. Franks* - Symbolic Dynamics and Knot Theory. Anomalous Anosov Flows.

- H. Furstenberg* - Some Dynamical Systems Connected with Number Theory.
- M. Gerber* - A Zero-entropy Mixing Transformation Whose Cartesian Products are Loosely Bernoulli.
- A. del Junco* - Finitary Coding for \mathbb{Z}^n -actions.
- S. Kakutani* - Proof of Maximal Ergodic Theorem.
- Y. Katznelson* - An Ergodic Approach to the Szemerédi Theorem and its Generalizations.
- M. Keane* - Continuous Homomorphisms of Bernoulli Shifts.
- A. Lasota* - Exactness for One-dimensional Maps.
An Application of a Fixed Point Theorem to Ergodic Theory.
- H. Masur* - Strict Ergodicity of Measured Foliations.
- J. Mather* - Caratheodory Theory of Prime Ends.
Invariant Subsets for Area-preserving Homeomorphisms.
- J. Moser* - Isospectral Deformations and Separation of Variables.
- S. Newhouse* - Modern Bifurcation Theory for Smooth Dynamical Systems.
- Z. Nitecki* - Non-wandering Points for Maps of the Interval.
- D. Ornstein* - Automorphism Non-equivalent to the Direct Product of Bernoulli and Zero Entropy.
Orbit Equivalence with Additional Structures.
- J. Palmore* - New Stable Configurations and Relative Equilibria of Interacting Vortices by a Topological Method.
- P. Rabinowitz* - Periodic Solutions of Hamiltonian Systems.
Critical Points of Indefinite Functionals.
- M. Ratner* - Horocycle Flows and the Loose Bernoulli Property.
- C. Robinson* - Non Absolutely Continuous Invariant Foliations.
- D. Rudolph* - Measure-preserving Maps with Minimal Self-joinings and Some Applications.
Non-isomorphic Flows with Isomorphic Automorphisms. (2 talks)
- J.-M. Strelcyn* - Dynamical Systems with Singularities and Billiard Systems. (2 talks)
- L. Swanson* - Minimal Self-joinings and an Example of Chacon.

- W. Szlenk* - Dynamics of One-dimensional Maps.
- R. Williams* - Lorentz Attractors and Knotted Periodic Orbits. (2 talks)
- P. Winternitz* - Quadratic Hamiltonians in Phase Space and Their Eigenfunctions.