Lectures

March 1964:

>*On the stability of the Lurie equations*, Case-Western Reserve University, Cleveland, OH.

December 1965:

>*On the existence of solutions to linear differential-difference equations*, International Symposium on Differential Equations and Dynamical Systems, Mayaguez, Puerto Rico.

September 1966:

>*The index in 3 and 4 dimensions*, Equadiff II, Bratislava,

Czechoslovakia. July 1968:

>*Generic bifurcation of periodic points*, GlobalAnalysis Conference,

Berkeley, CA. August 1968:

>*Bridges of periodic solutions in the restricted three-body problem*, Conference on the Qualitative Theory of Nonlinear Differentialand Integral Equations, University of Wisconsin.

June 1969:

>*Bridges and natural centers*, Symposium on Differential Equations and Dynamical Systems, University of Warwick, Coventry, England.

July 1969:

>*Bifurcations of periodic points*, Seminar in Differential Equations, University of Maryland.

November 1970:

>*Generic bifurcation of periodic points*, University of Alberta,

Alberta, Canada. February 1971:

>*Generic bifurcation of periodic points*, Notre Dame University.

May 1971:

>*Periodic solutions at the triangular points*, British Mathematics Colloquium, University of Kent, Kent, England.

June 1971:

>*Normal forms for symplectic matrices*, Conference on Ordinary Differential Equations, Washington, DC.

July 1971:

>*Symmetries and integrals in mechanics*, Symposium on Dynamical Systems, University of Bahia, Salvador, Brazil.

June 1974:

>*Adiabatic invariants for linear Hamiltonian systems*, Géométrie Symplectique et Physique Mathématique, Aix-en-Provence, France.

July 1974:

Homoclinic points of area preserving maps, Symposium on Applications of Topology and Dynamical Systems, University of Warwick, Coventry,

England. September 1978:

Entrainment domains, VIII International Conference on Nonlinear Oscillations, Prague.

December 1979:

Computing the averaged equations, New Approaches to Nonlinear Problems in Dynamics, Asilomar Conference Grounds, California.

May 1979:

Symmetric periodic solutions in the N-body problem, Brown

University. June 1979:

Periodic solutions of the N-body problem, Conference on the Global Theory of Dynamical Systems, Northwestern University.

March 1980:

Periodic solutions in celestial mechanics I & II, Autonomous University of Barcelona, Barcelona, Spain.

March 1980:

Generic properties of Hamiltonian systems I & II, University of Barcelona, Barcelona, Spain.

April 1980:

Periodic solutions of the N-body problem, Mathematics Institute, University of Warwick, Coventry, England.

May 1980:

Computing normal forms, Mathematics Institute, University of Warwick, Coventry, England.

August 1981:

Hill's lunar equation and the three body problem, Conference on Celestial Mechanics, Oberwolfach, Germany.

May 1981:

Periodic solutions in the three body problem, Conference on Dynamical Systems in Honor of J. P. LaSalle, Brown University.

August 1982:

Almost closed geodesics, NSF Regional Conference on Closed Geodesics, University of Florida.

September 1983:

Brown's method of computing derivatives, Midwest Dynamical Systems Seminar, University of Minnesota.

May 1983:

A *generalization of Arnold's stability theorem,* Institute for Mathematics and its Applications, University of Minnesota.

October 1984:

Normal forms for general equilibria, Midwest Dynamical Systems Seminar, Northwestern University.

August 1984:

Bifurcation of a central configuration, Multiparameter Bifurcation T heory, Humboldt State University, California.

December 1984:

Bifurcations of a central configuration, Canadian Mathematical Society Winter Meeting, Calgary.

January 1985:

A *generalization of Arnold's stability theorem,* Special Session on Celestial Mechanics, ASM Meeting, Anaheim, California.

January 1985:

Normal forms for general equilibria, Special Session on Differentialequations, ASM Meeting, Anaheim, California.

October 1985:

Bifurcations of a central configuration, Midwest Dynamical Systems Seminar, University of Michigan.

November 1985:

Bifurcations of a relative equilibrium, Boston University.

November 1985:

On Arnold's stability theorem, MIT.

November 1985:

On Arnold's stability theorem, The J. P. LaSalle Memorial Lecture, Brown University.

October 1986:

Computer Aided Analysis of Dynamical Systems, ACMP Conference, Boston University:

November 1986:

Homoclinic Orbits in Almost Periodic Systems, Midwest Dynamical Systems Seminar.

January 1987:

Homoclinic Orbits in Almost Periodic Systems, Dynamics Days,

San Diego. June 1987:

Almost periodic Hamiltonian systems, Conference on Hamiltonian Dynamical Systems, Boulder.

October 1987:

Computer Aided Analysis of Dynamical Systems, ACMP Conference, Washington, D.C.

October 1987:

A retrospective on Hamiltonian systems (6 lectures), Ecole Polytechnique, Palaiseau, France.

October 1987:

The determination of the derivatives in Brown's lunar theory. Bureau de Longitudes, Paris.

October 1987:

Homoclinic orbits in almost periodic systems, Universitaires de Namur, Namur, Belgium.

March 1988:

A new proof of the Poincaré's center theorem, International Conference on the Theory and Application of Differentialequations, Columbus, Ohio.

April 1988:

Some normalization theorems for Hamiltonian systems. Conference on Control Theory and Dynamical Systems (Aconference in honor of Larry Markus' 65th birthday), University of Minnesota.

July 1988:

Stability and bifurcations in Hamiltonian systems, SIAM Mini-symposium on Computer Aided Proofs in Analysis.

July 1988:

Bifurcations of central configurations in the N-body problem, Division of Dynamical Astronomy Conference, Washington, D.C.

August 1988:

Stability and bifurcations in almost periodic systems, New Directions in Dynamical System (Aconference in honor of Jack Hale's 60th birthday), Brown University,

October 1988:

On chapter nine, Northwestern University.

November 1988:

Chaos in almost periodic systems, Auburn University.

January 1989:

Bifurcation analysis, Special Session on Nonlinear Science, Annual Meeting of the AMS, Phoenix.

March 1989:

Bifurcation and Stability by Lie Transforms, Computer Aided Proofs in Analysis, University of Cincinnati.

June 1989:

> *Bifurcation theory using computers*, Workshop on Symbolic Computation in Differentialequations, Institute for Mathematics and its Applications

September 1989:

> *Introduction to Hamiltonian dynamical systems (3 lectures)*, Opening Workshop on Dynamical Systems, Institute for Mathematics and its Applications, University of Minnesota.

October 1989:

> *Stability and bifurcations in Almost Periodic Systems.* Invited Lecture AMS Regional Meeting, Muncie, IN.

November 1989:

> *Lectures on Hamiltonian Systems (3 lectures),* Cleveland Geometry-Topology
> Seminar, John Carroll U., Case-Western Reserve, Cleveland State.

April 1990:

> *Apollonus coordinates, the N-body problem, and continuation of periodic solutions,* Institute for Mathematics and its Applications.

June 1990:

> *Apollonus coordinates, the N-body problem, and continuation of periodic solutions,* Mécanique céleste et systèmes hamiltoniens, Luminy, France.

July 1990:

> *Apollonus coordinates, the N-body problem, and continuation of periodic solutions,* Differential Geometry and Hamiltonian Systems, University of Toledo, Toledo, Ohio.

March 1991:

> *Global phase structure of the restricted isosceles three-body problem with positive energy*, International Dynamical Systems Conference, Northwestern University, Evanston, Illinois.

May 1991:

> *The analysis of Hamiltonian systems using an algebraic processor*, The University College of Wales, Aberystwyth, Wales.

May 1991:

> *Horseshoes in almost periodic systems,* University of Warwick,

Coventry, England. May 1991:

> *Apollonius coordinates, the N-body problem, and continuation of periodic solutions,* Mathematics Research Centre, Coventry, England.

October 1992:

> *Comet like periodic orbits for the N-body problem*, International Symposium on Hamiltonian Systems and Celestial Mechanics, CIMAT, Quanajuto, Mexico.

November 1992:

   Comet like periodic orbits for the N-body problem, Ohio State
   University, Columbus, Ohio

February 1992:

   Relative equilibria and periodic solutions in the N-body problem,
   University of Maryland, College Park, Maryland

May 1992:

   An introduction to normal forms, Computer Algebra and Differential
   Equations, Luminy, France.

September 1992:

   Relative equilibria and periodic solutions in the N-body problem, Fields
   Institute for Research in Mathematical Sciences, Waterloo.

January 1994:

   Periodic orbits in the N-body problem, College of William and Mary.

July 1994:

   Integral manifolds of the spatial three-body problem, SIAM Minisymposium on
   Hamiltonian Systems, San Diego.

September 1994:

   Comet like periodic solutions of the n-body problem, International
   Meeting on Ordinary Differential Equations and their Applications,
   Florence, Italy.

January 1994:

   Computing normal forms for Poisson systems, Special session on
   Scientific Computing at AMS meeting, Cincinnati.

September 1994:

   Integral manifolds of the spatial three-body problem,, Hamiltonian
   Systems and Celestial Mechanics, Cocoyoc, Mexico.

September 1995:

   Limit periodic functions, adding machines, and solenoids, Dynamics
   Seminar, Northwestern University.

October 1995:

   Comet-like periodic solutions of the N-body problem, Celestial
   Mechanics Seminar, Northwestern University.

November 1994:

   Integral manifolds of the spatial three-body problem, Midwest
   Dynamical Systems Seminar, Northwestern University.

February 1995:

   Lectures on periodic solutions of the N-body problem, (a short course)
   Universidade Federal de Pernambuco, Recife, Brazil.

May 1995:

> *Periodic solutions of the N-body problem,* SIAM Minisymposium on the N-body problem, Snowbird, Utah.

May 1995:

> *Integral manifolds of the spatial three-body problem,* SIAM Minisymposium on Applied Hamiltonian Systems, Snowbird, Utah.

June 1995:

> *Reduction, Scaling and Normalization,* AMS Summer Conference on the N-Body Problem, University of Washington.

October 1995

> *Limit periodic functions, adding machines and solenoids*, Midwest Dynamical Systems Seminar, University of Cincinnati.

February 1996

> *Integral manifolds of the three-body problem*, Georgia Institute of Technicalogy, Atlanta, Georgia.

April 1996

> *Integral manifolds of the three-body problem*, University of Indiana, Bloomington, Indiana.

April 1997

> *KAM theory for the restricted and full 3-body problem*, Dynamical Systems Seminar, Centre de Recerca Matemàtica, Spain.

April 1997

> *Ω-Stability of skew dynamical systems*, Dynamical Systems Seminar, Universitat de Barcelona, Spain.

May 1997

> *Solenoids, and other limit sets in dynamical systems*, the Fundació Banco Bilbao Vizcaya Scholar Lecture, Centre de Recerca Matemàtica, Spain.

May 1997

> *Continuation of Periodic Solutions and KAM Tori*, Grupo de Mecánica Espacial, Universidad de Zaragozo, Spain.

May 1997

> *Adding machines, and solenoids in dynamical systems*, Grupo de Mecánica Espacial, Universidad de Zaragozo, Spain.

March 1998:

> *Cross sections in the planar and spatial three-body problem*, GlobalAnalysis: Thirty Years Later, University of Cincinnati.

July 1998:

> *Cross sections in the three-body problem*, InternationalAstronomical Union: 172 Colloquium, Namur, Belgium.

September 1998:

> *Two conjectures of Birkhoff*, Third Americas Conference on Differential Equations and Nonlinear Dynamics, Georgia Institute of Technology

October 1998:

> *Two conjectures of Birkhoff*, Queen's University, Kingston, Ontario.

December 1998:

> *Evolution of stable and unstable manifolds*, Third International Symposium on Hamiltonian Systems and Celestial Mechanics, Patzcuaro, Mexico.

December 1998:

> *Cross sections in the three-body problem* and *Doubly symmetric periodic solutions in the restricted three-body problem*, Universidad Autonoma Metropolitana, Mexico.

January 1999:

> *Two conjectures of Birkhoff*, Special Session on Hamiltonian Mechanics: Applications to Celestial Mechanics and Chemistry, Annual Meeting of the American Mathematical Society, San Antonio, Texas

April 1999:

> *Integral manifolds in the regularized restricted three-body problem*, Midwest Dynamical Systems Seminar, University of Michigan.

September 1999:

> *Integral manifolds in the regularized restricted three-body problem*, Georgia Institute of Technology.

September 1999:

> *The evolution of invariant manifolds*, Dynamical Systems Seminar, Georgia Institute of Technology.

September 2000:

> *Short course on bifurcation and stability*, Massess Summer School, Peyresq, France.

May 2001:

> *The evolution of invariant manifolds*, SIAM Minisymposium,

Snowbird, UT. October 2001:

> *Are Hamiltonian flows geodesic flows?*, Midwest Dynamical Systems Seminar, University of Colorado.

March 2002:

> *Are Hamiltonian flows geodesic flows?*, Conference on Mechanics and Symmetry, University of Warwick.

May 2002:

> *The evolution of invariant manifolds*, University of Southampton, Southampton, UK.

May 2002:

> *The evolution of invariant manifolds*, Imperial College, London.

July 2002

> *Comet like periodic solutions of the N-body problem*, Americas Five Conference, University of Alberta

November 2002:

> *Solenoids and adding machines*, Markus at 80, University of

Minnesota. June 2003:

> *Comet like periodic solutions of the N-body problem*, Variational Methods in Celestial Mechanics, American Institue of Mathematics, Palo Alto, CA.

April 2004:

> *Elliptic relative equilibrium*, Hamiltonian Dynamics and Celestial Mechanics, PIM, Banff.

May 2004:

> *Integral manifolds of the three-body problem*, Workshop on Hamiltonian Dynamical Systems, Le Centre de Recherches Math�matiques, Montr�al.

June 2005:

> *Integral manifolds of the three-body problem*, Universidad Pública de Navarra, Pamplona, Spain.

June 2005:

> *Elliptic relative equilibrium in the N-body problem*, VII-th Spanish Workshop on Celestial Mechanics, Universidade de Santiago de Compostela, Rianxo, Spain.

September 2005:

> *Elliptic relative equilibrium in the N-body problem* CELMEC III in

Viterbo, Italy. May 2006:

> *Elliptic Relative Equilibria in the N-Body Problem*, Dynamical Systems Weekend,
> *Elliptic Relative Equilibria in the N-Body Problem*, Dynamical Systems Weekend, University of Missouri-Columbia.

September 2007:

> *Adding Machines and Solenoids in Hamiltonian Systems*, Queen's University, Kingston, Ontario.

October 2007:

> *Adding Machines and Solenoids in Hamiltonian Systems*, AMS Sectional Meeting, Chicago, IL.

April 2008:

> *The evolution and bifurcation of invariant manifolds*, Dynamical
> Systems and Topology (Bobfest), Tossa de Mar, Catalunya, Spain.

April 2008:

> *The evolution and bifurcation of invariant manifolds*, Dynamical Systems
> Seminar, Universitat de Girona, Girona, Catalunya, Spain.

May 2009:

> *Periodic Solutions in Hamiltonian Systems, Averaging, and the Lunar
> Problem*, Division of DynamicalAstronomy, Virginian Beach.

December 2010:

> *Periodic Solutions in Hamiltonian Systems, Averaging, and the Lunar
> Problem*, HamSys 2010: Symposium on Hamiltonian Systems and
> Celestial Mechanics, Mexico City.

May 2011:

> *Normally Stable Hamiltonian Systems*, Hamiltonian Dynamics
> and Celestial Mechanics, Castro Urdiales, Spain.

November 2011:

> *A Trilogy on a Point*, Wilfrid Laurier University, Waterloo, Canada.

September 2012:

> *Stability of Hamiltonian System in a Limiting Case*, University of

Toledo. February 2013:

> *Stability of Hamiltonian System in a Limiting Case*, Conference on
> Hamiltonian Systems and Celestial Mechanics, Centre de Recerca
> Matemàtica, Montreal, Canada.

June 2014:

> *Normally stable Hamiltonian systems*, Conference on Hamiltonian
> Systems and Celestial Mechanics (HAMSYS2014), Centre de Recerca
> Mathemàtica, Bellaterra, Spain.

September 2015:

> *Bifurcation and stability in a limiting case*, Conference on Hamiltonian
> Systems and Celestial Mechanics, BIRS, Oaxaco, Mexico.

July 2017:

> *Asymptotic Stability Estimates near an Equilibrium Point*, Conference on
> Geometry of Differential Equations, Realand Complex, Montreal,, Canada.