CURRICULUM VITA

AVNER FRIEDMAN

Mathematical Biosciences Institute Ohio State University 231 W. 18th Ave. Columbus, OH 43210 Phone: (614) 292-5296 E-mail: afriedman@mbi.osu.edu Fax: (614) 247-6643 Born: November 19, 1932 Birthplace: Israel; Citizenship: USA Marital Status: Married, Four Children

RESEARCH INTERESTS

Partial differential equations, mathematical biology, stochastic differential equations, and control theory.

EDUCATION

M.Sc. (Major in Mathematics, minor in Physics), Hebrew University Ph.D. in Mathematics, Hebrew University	1954 1956
Th.D. In Mathematics, Hebrew Oniversity	1950
WORK EXPERIENCE	
Research Associate, University of Kansas	1956 - 1957
Lecturer, Indiana University	1957 - 1958
Visiting Assistant Professor, University of California, Berkeley	1958 - 1959
Associate Professor, University of Minnesota	1959 - 1961
Visiting Associate Professor Stanford University	1961 - 1962
Professor, Northwestern University	1962 - 1985
(Noyes Professor of Mathematics 198485)	
Visiting Professor, Tel Aviv University	1966 - 1967
Visiting Professor, Tel Aviv University	1970 - 1971
Duncan Distinguished Professor of Mathematics, Purdue University	1985 - 1987
Director, Institute for Mathematics and its Applications and	1987 - 1997
Professor, School of Mathematics, University of Minnesota	1987 - 2001
(Regents Professor 1996 2001)	
Director, Minnesota Center for Industrial Mathematics (MCIM)	1994 – 2001
Distinguished Professor of Mathematical and Physical Science,	
The Ohio State University	2001 - 2007
Director, Mathematical Biosciences Institute,	
The Ohio State University	2002 - 2008
Distinguished University Professor	2007 -
The Ohio State University	

RESEARCH SUPPORT

Research funds (mostly from NSF) have been awarded continuously since 1958 - 2010

NATIONAL BOARDS

Board of Mathematical Sciences	19901996
Chair of Board on Mathematical Sciences	19941997
Board of Trustees of SIAM	19901995
President of SIAM	19931995
NRC Commission on the Physical Sciences, Mathematics and Applications	19921994
President of Society of Mathematical Biology	20072009

SCIENTIFIC ADVISORY COMMITTEES	
NIST	19891996
DIMACS (Chair of the Advisory Committee)	19891999
NISS	19911997
Fields Institute	19972000
Mathematics Across the Curriculum, Indiana University	19961999
Theoretical Physics Institute, University of Minnesota	19951999
Institute for Mathematical Sciences, Singapore	2001
ACADEMIC HONORS/AWARDS/RECOGNITIONS	
Sloan Fellowship	19621965
Guggenheim Fellowship	19661967
Recipient of Stampacchia Prize	1982
National Science Foundation Special Creativity Award	198385,
	199193
American Academy of Arts and Sciences	1987
National Academy of Sciences	1993
Real Academia de Ciencias Exactas, Físicas y Naturales (Spain)	1998
Honorary Professorship, Fudan University, Shangahi	2002
VISITING FELLOW	
1. Oxford University, one month each summer	19821988
EDITORIAL BOARD	
Proceedings of the AMS,	19621965
Journal of Differential Equations	1969
SIAM J. Control	19701986
Royal Society of Edinburgh Proc. Sec. A.	19741983
Mathematics Operations Research	19761982
Comm. in Partial Differential Equations	19761995
J. Nonlinear Analysis, Theor., Meth., Appl.	197683, 1991
Stochastic Analysis & Applications	1983
J. of Mathematical Anal. and its Appl.	1986
European Journal of Applied Mathematics	19892004
Dynamics Systems and Applications	1991
Surveys on Mathematics in Industry	1992
Russian Journal of Mathematical Physics	1993
Nonlinear Differential Equations and Applications	1994
Communications on Applied Nonlinear Analysis	1994
Discrete and Continuous Dynamic Systems	19951997
Journal of Inverse and Ill-Posed Problems	1998
Chinese Annals of Mathematics	1998 -
Interfaces and Free Boundaries	1999-
Journal of Engineering Mathematics	20002001
Chinese Journal of Engineering Mathematics	2002
Mathematical Biosciences and Engineering	2004
Differential Equations and Nonlinear Mechanics	2005 -
Ukrainian Mathematical Bulletin	2007
Journal of Advanced Researches on Differential Equations	2009
Journal of Partial Differential Equations	2010 -
Journal of Royal Academy of Science (Madrid)	2010 -
Journal of Mathematics in Industry	2010 -
Archives of Control Science	2011 -
Tamkan Journal of Mathematics	2014-

SERVICES AS ADVISOR

SERVICES AS ADVISOR	
Shin-Sheng Tai, Ph.D., Northwestern U., Evanston, IL	1967
Kuang-Ho Chen, Ph.D., Northwestern U., Evanston, IL	1970
Zeev Schuss, Ph.D., Northwestern U., Evanston, IL	1970
William Vesely, Ph.D., Northwestern U., Evanston, IL	1970
Ronald Jay Stern, Ph.D., Northwestern U., Evanston, IL	1972
Richard Carmen Scalzo, Ph.D., Northwestern U., Evanston, IL	1973
Leon Carl Stecher, Ph.D., Northwestern U., Evanston, IL	1973
Emmanual Nicholas Barron, Ph.D., Northwestern U., Evanston, IL	1973
Robert Ronald Jensen, Ph.D., Northwestern U., Evanston, IL	1975
Pauline Marie Melanson Ippolito, Ph.D., Northwestern U., Evanston, IL	1976
Barry Franklin Knerr, Ph.D., Northwestern U., Evanston, IL	1976
Randal Stephen Beck, Ph.D., Northwestern U., Evanston, IL	1979
Daniel Yaniro, Ph.D., Northwestern U., Evanston, IL	1984
Sara Cohen, Ph.D., Northwestern U., Evanston, IL	1985
Srdjan Stojanovic, Ph.D., Northwestern U., Evanston, IL	1986
Hamid Bellout, Ph.D., Purdue U., West Lafayette, IN	1986
Arthur Guetter, Ph.D., Northwestern U., Evanston, IL	1987
Jong-Shenq Guo, Ph.D., University of Minnesota	1989
Bei Hu, Ph.D., University of Minnesota	1990
Xinfu Chen, Ph.D., University of Minnesota	1991
Fernando Reitich, Ph.D., University of Minnesota	1991
Wenxiong Liu, Ph.D., University of Minnesota	1992
Chaocheng Huang, Ph.D., University of Minnesota	1995
Yong Liu, Ph.D., University of Minnesota	1995
Jianhua Zhang, Ph.D., University of Minnesota	1995
Scott Shald, Ph.D. University of Minnesota	1999
-	

BOOKS

1. Generalized Functions and Partial Differential Equations. Prentice-Hall (1963).

2. Partial Differential Equations of Parabolic Type. Prentice-Hall (1964).

- 3. Partial Differential Equations. Holt, Rinehart, and Winston, New York (1969).
- 4. Foundations of Modern Analysis. Holt, Rinehart, and Winston, New York (1970).
- 5. Advanced Calculus. Holt, Rinehart, and Winston, New York (1971).
- 6. Differential Games. John Wiley, Interscience Publishers (1971).
- 7. Stochastic Differential Equations and Applications. Vol. 1, Academic Press (1975).
- 8. Stochastic Differential Equations and Applications. Vol. 2, Academic Press (1976).
- 9. Variational Principles and Free Boundary Problems, Wiley & Sons (1983).
- 10. Mathematics in Industrial Problems, IMA Volume 16, Springer-Verlag (1988).
- 11. Mathematics in Industrial Problems, Part 2, IMA Volume 24, Springer-Verlag (1989).
- 12. Mathematics in Industrial Problems, Part 3, IMA Volume 31, Springer-Verlag (1990).
- 13. Mathematics in Industrial Problems, Part 4, IMA Volume 38, Springer-Verlag (1991).
- 14. Mathematics in Industrial Problems, Part 5, IMA Volume 49, Springer-Verlag (1992).
- 15. Mathematics in Industrial Problems, Part 6, IMA Volume 57, Springer-Verlag (1993).
- 16. (with W. Littman) Problems in Industrial Mathematics, SIAM, Philadelphia (1994).
- 17. Mathematics in Industrial Problems, Part 7, IMA Volume 67, Springer-Verlag (1994).
- 18. Mathematics in Industrial Problems, Part 8, IMA Volume 83, Springer-Verlag (1996).
- 19. Mathematics in Industrial Problems, Part 9, IMA Volume 88, Springer-Verlag (1997).
- 20. Mathematics in Industrial Problems, Part 10, IMA Volume 100, Springer-Verlag (1998).
- 21. (with D. Ross) Mathematical Models in Photographic Science, Springer-Verlag (2002).
- 22. (with B. Aguda) Models of Cellular Regulation, Oxford, 2008.
- 23. (with C. Y. Kao) Mathematical Modeling of Biological Processes, Springer (2014).
- 24. (with C. S. Chou) Introduction to Mathematical Biology, Springer (2016).

25. Mathematical Biology: Modeling and Analysis, CBMS #127, American Mathematical Society, (2018).

PUBLISHED REPORTS

- Chair of the report "Applications of the Mathematical Sciences to Materials Science," National Research Council, 1991.
- Chair of the report "Mathematical Foundations of High-Performance Computing and Communications," National Research Council, 1991.
- Member of the committee of the report "Doctoral Study and the Postdoctoral Experience in the United States," National Research Council, 1992.
- Friedman, J. Glimm and J. Lavery, "The Mathematical and Computational Sciences in Emerging Manufacturing Technologies and Management Practices," SIAM Reports on Issues in the Mathematical Sciences, Philadelphia 1992.
- Chair of the report "Mathematical Research in Materials Sciences," National Research Council, 1993.
- Friedman and J. Lavery, "How to Start an Industrial Mathematics Program in the University," SIAM, Philadelphia 1993.
- Chair of the report "Preserving Strength while meeting Challenge," National Research Council, 1998.
- Member of the committee for the report: "Mathematical Institutes," National Research Council, 1999

LECTURES IN CONFERENCES

LECTURES: 1985

Invitation for a one week visit at the Institute for Applied Mathematics in Minneapolis, Minnesota, March 1985.

Invitation to conference on "Nonlinear Parabolic Equations," Rome, Italy, April 1-6, 1985. Invitation to "Stochastic Differential Systems," Bad Honnef, West Germany, June 4-7, 1985. Invitation to be one of the organizers of "International Symposium on Mathematical Theory of Networks and Systems," Stockholm, Sweden, June 10-14, 1985.

Invitation to be a main lecturer in "Fifth Czechoslovak Conference on Differential equations and Their Applications," August 26-30, 1985.

Workshop in Partial Differential Equations and Applications, Tsinguha University, Peking, May 3-7, 1985.

Invitation to Symposium on Nonlinear Partial Differential Equations, MRC, Madison, Wisconsin, October 28-30, 1985.

LECTURES: 1986

Invitation for a Lecture Series at the University of Madrid, Madrid, Spain, May 1986. Invitation to International Conference on Calculus of Variations and Optimal Control, Pisa, Italy, March 24-26, 1986.

Invitation to "Control of partial differential equations," Gainsville, Florida, February 2-6, 1986. Conference on free boundary problems in Pavia (3 talk series), June 7-14, 1986.

LECTURES: 1987

Invited talk in a 3-day conference or nonlinear problem in evolution model, Los Alamos, February, 19, 1987.

A talk in "geometric design" conference, Wayne University, May, 1987.

Invited talk in a conference at Irsee, Germany, on free boundary problems, June 10-20, 1987.

LECTURES: 1988

Invited talk in a symposium on Inverse Problems, University of Maryland, March 1988. RPI workshop on Mathematical Problems in Industry, June, 1988. Invited talk in Conference on Nonlinear Evolution Equations, Nancy, France, March 1988. Smith Associates lecture at Oxford University, November 1988.

LECTURES: 1989

Invited talks to workshop on Blow up of Solution of Evolution Equations, Edinburgh, May 1989.

LECTURES: 1990

Invited talk in conference on Numerical and Asymptotic Methods in Differential Equation, Argonne National Laboratories, February 1990. Invited talk in Browder, s Conference, Rutgers University, May 1990. Invited talk in Free Boundary Conference, Montreal, June 1990. Invited talk in joint U.S. - Brazil Conference in PDE, at IMPA, Rio de Janiero, October, 1990.

LECTURES: 1991

Invited talk, Conference in Metz (France) on Nonlinear Elliptic and Parabolic Equation, June 1991. Invited talk, Conference in Bath, England on Nonlinear Analysis, July 1991. Invited talk, Carnegie Mellon Conference in Nonlinear Analysis, September 1991.

LECTURES: 1992

Invited talk at the Opening of Fields Institute in Canada, June 1992. Invited talk in Rome, Conference on Nonlinear Equations, June 1992. Two invited talks in Nonlinear World, Tampa, Florida, August 1992.

LECTURES: 1993

Talk at SPIE meeting in materials science, Albuquerque, New Mexico, February 1993. Invited talk in Conference on Waves, Delaware, June 1993. Invited talk at ARO Conference at Carnegie Mellon, June 1993. Invited talk in Free Boundary Conference, Toledo, Spain, June 1993 Invited talk at AMS/Canada Conference in Vancouver, August 1993. University of Manitoba, Industrial Mathematics Conference, December 1993.

LECTURES: 1994

Southwest SIAM Chapter, Wake Forest, N.C. March 1994.

LECTURES: 1995

AMS Annual Meeting, January. Glimm, s Conference, Stoneybrook, April. Yamaguti Conference, Kyoto, May. Conference on Free Boundary Problem, Poland, June. ICIAM, Hamburg, July. Conference on Nonlinear PDE, Rome, October.

LECTURES: 1996

Present and Future Directions in Applied Mathematics, Notre Dame, April. AMS-SIAM Summer School in Manufacturing, Williamstown, June.

LECTURES: 1997

Conference in PDE honor of Barenblatt, Rome, May. Conference on Navier Stokes Equation, St. Petersburgh, Russia, October. Conference of Phase Transition, Weierstrass Institute, Berlin, November.

LECTURES: 1998

Free Boundary Problems and Application, Madeira, Portugal, January. Conference in Partial Differential Equation, Northwestern University, March. Conference on Industrial Mathematics, Northeastern University, April. Conference in honor of Joel Smoller, University of California-Davis, April. International Conference in Applied and Industrial Mathematics, Venice, Italy, June. Conference on Phase Transition, Hangzoh, China, June International Conference in Differential Equations, Prague, August Workshop on Material Sciences, Munich, Germany, December

LECTURES: 1999

Conference in Differential Equations, Karmiel, Israel, May Conference in Material Science in Honor of K.H. Hoffman, Munich, June Plenary Talk in ICIAM (International Congress of Industrial & Applied Mathematics), Edinburgh, June International Conference in PDE, Shanghai, July Society of Engineering Science, Austin, Texas, October Conference in Honor of J.L. Lions, Houston, Texas, October Workshop on Multiscale Problems, Heidelberg, Germany, November International Conference on Free Boundary Problems, Chiba, Japan, November

LECTURES: 2000

Conference "Mathematics & its Role in Civilization", University of Macau, January University of Notre Dame, April International Conference on "Nonlinear Parabolic Equations", Tel Aviv, Israel, June SIAM Workshop on Industrial Mathematics, University of Washington, Seattle, October Conference on Nonlinear Analysis, Heidelberg, October RPI "Days of Applied Mathematics", October Workshop on Nonlinear Analysis, Kyoto, Japan, December

LECTURES: 2001

Serrin's Conference, Minneapolis, November Joint Taiwan – AMS conference in Taiwan, December

LECTURES: 2002

Midwest PDE Seminar, October Conference on Cancer Models, Vanderbilt, April Conference in Partial Differential Equations, Netherlands, March

LECTURES: 2003

International Conference in Nonlinear Evolution Equations, Rome, Italy, January Dynamical Systems, Snow Bird, Utah, May International Conference in Partial Differential Equations, Haifa, Israel, June Conference on Applications of Partial Differential Equation, Sdeh Boker, Israel, June Symposium on Application of PDE and Biocomplexity, Notre Dame, Indiana, August

LECTURES: 2004

Petrowski Conference, Moscow, May Nonlinear Analysis, Florida, June SIAM Life Science, Portland, July Conference in Mathematical Biology, Notre Dame, October SIAM regional conference, Dayton, OH, October

LECTURES: 2005

British Applied Mathematics Conference, Liverpool, April Conference on Applied Mathematics and Mathematical Biology, NJIT, New Jersey, April Workshop on Cancer, University of Michigan, April Conference on Mathematical Biology and Cancer, Banach Institute, Bodrewo, Poland, May Conference in Partial Differential Equations, Stockholm, May International Conference in Free Boundary Problems, Portugal, June Symposium on Mathematical Biology, Paris, September

LECTURES: 2006

PDE conference in honor of Kinderlehrer, Carnegie Mellon, October Conference in Mathematical Biology, Nairobi, Kenya, December

LECTURES: 2007

Conference on Cancer, Dundee Scotland, March Conference on Public Health, Phoenix, Arizona, March ICIAM, Zurich, Switzerland, July 4^a Danish Conference in Applied Mathematics, Copenhagen, August MII Symposium, Philadelphia, October K.H. Hoffman Conference, Munich, Germany, October Future of Mathematics Education in Europe, Lisbon, Portugal, December

LECTURES: 2008

International Conference in Biomathematics, Marrakesh, Morocco, January Conference on Pattern Formation in Developmental Biology, Linz, Austria, January 10^a International Conference on Molecular System Biology, Manila, Philippines, February International Symposium on ICT for Health, Manila, Philippines, March International Conference in Nonlinear Analysis, Orlando, Florida, July Annual meeting of the Korean Society of Mathematical Biology, Seoul, October Future Directions in PDE (Caffarelli's conference) Austin, Texas, December

LECTURES: 2009

African Workshop in Mathematical Biology, Cape Town, January SMB/CSMB International Conference in Hangzhou, China, June BIRS workshop in mathematical biology, Banff, Canada, July Conference on Partial Differential Equations, Prague, December

LECTURES: 2010

International Conference in System Biology, Tel Aviv, Israel, January Workshop on Pattern Formation and Morphogenesis, IHES, Paris, January OCC 2010 World Congress: Oxidants and Antioxidants in Biology, Santa Barbara, Calif., March International Conference in Nonlinear PDES, Dnienpopetrovsk, Ukraine, September Conference in Industrial Mathematics, Tokyo, October Conference in Biological Processes Taiwan, December

LECTURES: 2011

MSRI Workshop on Free Boundary Problem, March PDE International Conference in Toledo, Spain, June PDE International Conference in Dniepopetrovsk, Ukraine, June ICIAM Minisymposia talks, Vancouver, July Cancer Conference, Erice, Sicily, August International Conference on PDEs Applied to Biology, Beijing, October

LECTURES: 2012

International Conference SMB/India, January International Conference in Free Boundary Problems, Bavaria (Germany), June IHES conference in Mathematical Biology, June AIMS International Conference, Florida, July Conference in Mathematical Biology, Harbin, China, September Sustainability Conference, Belgium, October

LECTURES: 2013

Conference in Mathematical Biology, Korea, May Mathematical Biology Workshop, IHES, Paris, June Mathematical Conference in Dynamical Systems, Lodze, Poland, June BEER Conference in Mathematical Biology, Washington D. C. October Mathematical Biology Conference, Bar Ilan University, Israel, October

LECTURES: 2014

MBI Workshop on Cancer-immune interaction, Columbus, April Conference on Cancer, Korea, May Center Regenerative Medicine Cell Based Therapy, Ohio, July

LECTURES: 2015

NIH workshop on Breast Cancer, Washington DC, January MBI Cancer Workshops, April International Conference on Mathematics in the Life and Physical Sciences, Beijing, May Workshop on Management of Natural Resources, Howard University, June Micro-Macro processes in mathematical biology, Banach Institute, Bedlewo, Poland, June Epidemiology and infectious diseases, Erice, Italy, September IMA Workshop on complex biological networks, November

LECTURES: 2016

Workshop on Cancer, Howard University, April Conference in Mathematical Biology, Bialystok, Poland, June Conference in Application of Mathematical Analysis, Lodz, Poland, June SEARCDE 2015, Florida South Coast University, November Workshop in Infectious Diseases, Howard University, November

LECTURES: 2017

SIAM-Argentina Conference, Patagonia, May International conference in Free Boundary Problem, Shanghai, China, July Society Mathematical Biology, Salt Lake City, July Conference in Control and Disease, Porto, Portugal, July Conference on Cardiovascular disease and Cancer, Lisbon, Portugal, November

LECTURES: 2018

Ten invited lectures in CBMS Conference in Mathematical Biology at Howard University, May IMA workshop on Biological Networks, Minnesota, June Conference on Cancer and Cancer Therapy, Marseille, July Ten invited lectures in PDE-Biology Summer School, Fudhan University, Shanghai, July Conference in Computational and Mathematical Medicine, Cancun, Mexico, December

COLLOQUIUM TALKS: 1984-85

Rensselaer Polytech. Institute, Troy, New York, February 13, 1984 M.I.T., Cambridge, Massachusetts, February 14, 1984 Carnegie-Mellon University, Pittsburgh, Pennsylvania, February 16, 1984 Purdue University, West Lafayette, Indiana, September 20, 1984 Tel Aviv University, Tel Aviv, Israel, October 29, 1984 Weizmann Institute, Rehovot, Israel, November 5, 1984 Hebrew Institute, Jerusalem, Israel, November 7, 1984 University of California, Berkeley, California, February 6, 1985 Three talks at the University of North Carolina, Raleigh, North Carolina, May 6-8, 1985 East China Institute of Textile Technology, Shanghai, China, May 28, 1985 Fudan University, Shanghai, China, May 29, 1985 Xian University, China, May 31, 1985

COLLOQUIUM TALKS: 1986-87

Tel Aviv University, December 1986 Ohio State University, February 1987 Oak Ridge, Tennessee, March 1987 University of Michigan, Ann Arbor, September 1987 University of Houston, September 1987 Rice University, September 1987 University of Pittsburgh, October 1987 Institute for Advanced Study, November 1987 Naval Surface Weapon, White Plains, November 1987

COLLOQUIUM TALKS: 1988-89

Princeton, Institute for Advanced Studies, May 1988 Purdue University, November 1988 Yale University, November 1988 Ohio State, December 1988 Wright-Patterson Institute of Technology, Dec. 1988 University of Calif., San Diego, February 1989 Georgia Tech., March 1989 Los Alamos, April 1989 University of Massachusetts, April 1989 Tokyo University, June 1989 Kyoto University, July 1989 Wichita State University, October 1989 Iowa State University, November 1989 Northwestern University, December 1989

COLLOQUIUM TALKS: 1990-91

University of Manitoba, March 1990 Hebrew University, March 1990 Virginia Polytech Institute, August 1990 Tokyo University, November 1990 University of Paris VI, March 1991 University of Augsburg, October 1991 University of Madrid, November 1991 Tokyo University, November 1991

COLLOQUIUM TALKS: 1991-1992

Xerox Webster Research, Rochester, NY, June 1992 Beer Sheva University, Institute for Industrial Mathematics, June 1992 Wayne State, Sept. 1992 University of Tokyo, November 1992

COLLOQUIUM TALKS: 1993-1994

A series of three colloquium talks in three universities in Taiwan, April 1993

National University of Seoul, Korea, August 1993 Ohio State University, October 1993 University of Austin, Texas, November 1993 University of Manitoba, Industrial Mathematics Conference, December 1993 Notre Dame, March 1994 Inst. For Industrial Mathematics, Beer Sheva, Israel, November 1994 Tel Aviv University, November 1994 Hebrew University, December 1994

COLLOQUIUM TALKS: 1995

University Southern Florida, February University of Tokyo, June University of Madrid, June Central Florida University, October University of Michigan, October

COLLOQUIUM TALKS: 1996

University of British Columbia, March University of Madrid, May **COLLOQUIUM TALKS: 1997** University of Madrid, June North Carolina State, October

COLLOQUIUM TALKS: 1998

University of Madrid, January University of Lisbon, January Herroitt-Watt University, February Princeton (Distinguished Lecture Series), February California Institute of Technology, March Rowlee Lecture, University of Nebraska, Lincoln, April Tel Aviv University, May University of Pavia, June Hong Kong Mathematical Society, June Brown University, October Universidad de Complutense, Madrid, November University of Kaiserlautern, Germany, December

COLLOQUIUM TALKS: 1999

University of Texas, Austin, October University of Illinois, Urbana, November

COLLOQUIUM TALKS: 2000

University of British Columbia, April CWI, Amsterdam, May University of Trento, Italy, October Dow, Technical Advisory Board Meeting, Houston, October Vanderbilt University, November

COLLOQUIUM TALKS: 2001

National University of Singapore, December

COLLOQUIUM TALKS: 2002

Fudan University, Shanghai, May Taiwan Normal University, December Taiwan National University, December

COLLOQUIUM TALKS: 2003

University of Pittsburg, February University of Akron, April Kent State, April Five talks in North England and Scotland Seminar (Manchester, Leeds, Edinburgh, and Dundee), May University of Kansas, October

COLLOQUIUM TALKS: 2004

Vanderbilt, March Iowa State, April IUPUI, October University of Michigan, October SIAM Great Lake, Dearborn, MI, October University of Minnesota, November University of Cincinnati, November

COLLOQUIUM TALKS: 2005

University of California, Irvine, February Nottingham University, England, April Miami University, September Indiana University, October Oberlin College, October Taiwan Normal University in Taipei, December

COLLOQUIUM TALKS: 2007

Howard University, April University of Minnesota, May Baylor University, Waco, November Simon Fraser University, Vancouver, Canada, November Singapore National University, Singapore, December University of Lisbon, Portugal, December

COLLOQUIUM TALKS: 2008

University of Vienna, January Purdue University, January University of the Philippines, Manila, February POSTEC, Phuang, Korea, October Midwest PDE, Columbus, OH, November

COLLOQUIUM TALKS: 2009

Public lecture in CapeTown, South Africa, January University of Barcelona, Madrid, March University of Heidelberg, October

COLLOQUIUM TALKS: 2010

University of Auckland, New Zealand, February Iowa State, Miller Distinguished Lecture, March Ukraine Academy of Sciences, Kiev, September Ching-Hua University, Taiwan, December

COLLOQUIUM TALKS: 2011

Bar Ilan University, November Beijing University, October China Academy of Science, October

COLLOQUIUM TALKS: 2012

AIMS, Cape Town, January Stellenbosch University, South Africa, January Howard University, October Bar Ilan University, Israel, October Hong Kong (one week series of lectures), December

COLLOQUIUM TALKS: 2013

Michigan State, April Konkuk University, Seoul, May Harbin Institute of Technology, one week lecture series, China CIMAT, Mexico, September, October Duke University, October University of Kansas, October Howard University, October

COLLOQUIUM TALKS: 2014

Arizona State University, April Konkuk University, Seoul, Korea, May

COLLOQUIUM TALKS: 2015

Renmin University, May Beijing Science and Technology, May Beijing Technological University, May

COLLOQUIUM TALKS: 2016

Penn State, February Technical University, Lodz, October Clairmont Colleges, November Nimbios, University of Tennessee, December

COLLOQUIUM TALKS: 2017

FDA, Washington DC, February Fudan University, China, July University of Houston, September

BIBLIOGRAPHY

- 1. On the mean value theorem. Bull. Res. Counc. Israel, Vol. 6A, (1956), 47--49.
- 2. Mean values and polyharmonic polynomials. Michigan Math., Vol. 4 (1957), 67--74.
- 3. Bilinear integrals of polyharmonic functions and of analytic functions. Michigan Math. J., Vol. 4 (1957), 77--84.
- 4. On *n*-metaharmonic functions and harmonic functions of infinite order. Proc. Amer. Math. Soc., Vol. 8 (1957), 223--229.
- 5. On classes of solutions of elliptic linear partial differential equations. Proc. Amer. Math. Soc., Vol. 8 (1957), 418--427.
- 6. On the properties of a singular Strum-Liouville equation determined by its spectral functions. Michigan Math. J., Vol. 4 (1957), 137--145.
- 7. Classes of solutions of linear systems of partial differential equations of parabolic type. Duke Math. J., Vol. 24 (1957), 433--442.
- 8. On n-metacaloric functions. Proc. Amer. Math. Soc., Vol. 8 (1957), 770--776.

- 9. Oscillatory solutions of nonlinear autonomous differential equations or order higher than two. Duke Math. J., Vol. 24 (1957), 561--566.
- 10. On two theorems of Phragmen-Lindelof for linear elliptic and parabolic differential equations of the second order. Pacific J. Math., Vol. 7 (1957), 1563--1575.
- 11. On the regularity of the solutions of nonlinear elliptic and parabolic systems of partial differential equations. J. Math. and Mech., Vol. 7 (1958), 43--59.
- 12. Uniqueness properties in the theory of differential operators of elliptic type. J. Math. and Mech., Vol. 7 (1958), 61--67.
- 13. *Linear partial differential systems with an additional differential equation at one point*. J. Math. and Mech., Vol. 7 (1958), 173--190.
- 14. Interior estimates for parabolic systems of partial differential equations. J. Math. and Mech., Vol. 7 (1958), 393--417.
- 15. Liouville's theorem for parabolic equations of the second order with constant coefficients. Proc. Amer. Math. Soc., Vol. 9 (1958), 272--277.
- 16. Boundary estimates for second order parabolic equations and their applications. J. Math. and Mech., Vol. 7 (1958), 771--791.
- 17. On quasi-linear parabolic equations of the second order. J. Math. and Mech., Vol. 7 (1958), 793--809.
- 18. *Remarks on the maximum principle for parabolic equations and its applications*. Pacific J. Math., Vol. 8 (1958), 201--211.
- 19. Convergence of solutions of parabolic equations to a steady state. J. Math. and Mech., Vol. 8 (1959), 57--76.
- 20. Generalized heat transfer between solids and gases under nonlinear boundary conditions. J. Math. and Mech., Vol. 8 (1959), 161--183.
- 21. Asymptotic behavior of solutions of parabolic equations. J. Math. and Mech., Vol. 8 (1959), 387--392.
- 22. On the uniqueness of the Cauchy problem for parabolic equations. Amer. J. Math., Vol. 81 (1959), 503--511.
- 23. Free boundary problems for parabolic equations I: Melting of solids. J. Math. and Mech., Vol. 8 (1959), 499--517.
- 24. Parabolic equations of the second order. Trans. Amer. Math. Soc., Vol. 93 (1959), 509--530.
- 25. Free boundary problems for parabolic equations II: Condensation and evaporation of a liquid drop. J. Math. and Mech., Vol. 9 (1960), 19--66.
- 26. Free boundary problems for parabolic equations III: Dissolution of a gas bubble in liquid. J. Math. and Mech., Vol. 9 (1960), 327--345.
- 27. Mildly nonlinear parabolic equations with application to flow of gases through porous media. Archive Rat. Mech. and Anal., Vol. 5 (1960), 238--248.
- 28. On quasi-linear parabolic equations of the second order II. J. Math. and Mech., Vol. 9 (1960), 539--558.
- 29. Remarks on Stefan-type free boundary problems for parabolic equations. J. Math. and Mech., Vol. 9 (1960), 885--903.
- 30. A new proof and generalizations of the Cauchy-Kowaleski theorem. Trans. Amer. Math. Soc., Vol. 98 (1961), 1--20.
- 31. A strong maximum principle for weakly subparabolic functions. Pacific J. Math., Vol. 11 (1961), 175--184.
- 32. Simplifying the structure of second order partial differential equations. Trans. Amer. Math. Soc., Vol. 99 (1961), 303--307.
- 33. Local isometric imbedding of Riemannian manifolds with indefinite metric. J. Math. and Mech., Vol. 10 (1961), 625--649.
- 34. On fundamental solutions of elliptic equations. Proc. Amer. Math. Soc., Vol. 12 (1961), 533-537.
- 35. Asymptotic behavior of solutions of parabolic equations of any order. Acta. Math., Vol. 106 (1961), 1--43.

- 36. Function-theoretic characterization of Einstein spaces and harmonic spaces. Trans. Amer. Math. Soc., Vol. 101 (1961), 240--258.
- 37. The wave equation for differential forms. Pacific J. Math., Vol. 11 (1961), 1267--1279.
- 38. A new proof and generalizations of the Cauchy-Kowalewski theorem to nonanalytic and to non-normal systems. Symposia in Pure Mathematics, Vol. 4 (1961), 115--119.
- 39. (with W. Littman) *Bodies for which harmonic functions satisfy the mean value property*. Trans. Amer. Math. Soc., Vol, 102 (1962), 147--166.
- 40. (with W. Littman) Functions satisfying the mean value property. Trans. Amer. Math. Soc., Vol. 102 (1962), 167--180.
- 41. Mixed problems for hyperbolic systems. Archive Rat. Mech. and Anal., Vol. 10 (1962), 180--188.
- 42. Cauchy problem in several time variables. J. Math. and Mech., Vol. 11 (1962), 859--889.
- 43. A difference-differential scheme for the general Cauchy problem. J. Math. and Mech., Vol. 11 (1962), 891--905.
- 44. Regularity of fundamental solutions for hyperbolic equations. Archive Rat. Mech. and Anal., Vol. 11 (1962), 62--96.
- 45. (with W. Littman) *Partially characteristic boundary problems for hyperbolic equations*. J. Math. and Mech., Vol. 12 (1963), 213--224.
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