

## CURRICULUM VITAE of A.G. RAMM

**NAME:** Alexander G. Ramm, Professor  
**CITIZENSHIP:** U.S. Citizen  
**ADDRESS:** Department of Mathematics  
Kansas State University  
Manhattan, KS 66506-2602, USA.  
Residence: 721 Elling Dr., Manhattan, KS 66502, USA  
**PHONE:** Work - (785) 532-0580  
FAX - 785-532-0546  
**E-MAIL:** ramm@math.ksu.edu  
**HOME PAGE:** <http://www.math.ksu.edu/~ramm>  
**FIELD:** Differential and integral equations  
Operator theory, ill-posed and inverse problems  
Mathematical Physics ( scattering theory, inverse scattering, wave propagation)  
Functional analysis and spectral theory  
Applied mathematics  
Theoretical numerical analysis  
Theoretical electrical engineering, signal estimation, tomography,

**DEGREES:** B.S., Leningrad State University, 1959  
M.S., Leningrad State University, 1961  
Ph.D., Moscow State University, 1964  
Dr.Sci., Mathematics Institute Academy of Science, Minsk, 1972

### EXPERIENCE:

#### 1. Academic

Instructor, Leningrad Institute of Precision Mechanics and optics, 1962-63  
Assistant Professor, Leningrad Institute of Precision Mechanics and Optics, 1964-65  
Associate Professor, Leningrad Institute of Precision Mechanics and Optics, 1965-78  
Visiting Professor and Research Scientist, University of Michigan, 1979-81  
Professor, Kansas State University, 1981-  
**Visiting Professor:** University of Vienna, Goeteborg, Stuttgart, Bonn, Heidelberg, Manchester, London, Uppsala, Royal Inst. of Technology, Stockholm, Acad. Sinica, Taipei, Indian Institute of Science Bangalore, Concordia Univ., Montreal, Institute of Mathematics Ac.Sci USSR, Novosibirsk, Univ of Stockholm, Technion, Israel, Univ. of Cagliari and Milan, Wright Patterson Air Force Base, Univ. of Madrid, Univ. of Grenoble, Politecnico Milan, Univ of Giessen, Univ. of Singapore, Tokyo Metropolitan Univ., Univ. of Palermo, Hebrew Univ., IMPA-Brazil, LMA/CNRS-France, KAIST, Univ. of Leicester

#### 2. Industry, Consulting

Senior Research Scientist, Institute of Precision Mechanics & Optics  
Research Institute, 1964-78 (Electrical Engineering: Antennas and Propagation, Signal Estimation; Optics: Wave Scattering, Resolution Ability, Inverse Problems; Systems Theory, Ill-posed Problems, Network Theory).  
Visiting Scientist, Schlumberger-Doll Research, (1983, August).  
Consultant: Dikewood Corporation, Standard Oil Production Co., Los Alamos National Laboratory.

### PROFESSIONAL RECOGNITION AND HONORS:

Distinguished Visiting Professor supported by Royal Acad. of Engineers, Sep.10-Oct.10, 2009, Univ. of Leicester.  
Invited plenary one-hour speaker at the 7th PACOM. (Pan African Congress of Mathematicians), Aug3-8, 2009, Ivory Coast, Yamoussoukro.  
Plenary speaker at the International Conference Chaos 2009, June 1-5, Chania, Greece,  
Mercator Professor, 2007, Germany, TU Darmstadt.  
Distinguished speaker at HKSTAM, June 18, 2005.  
London Math. Soc. lecturer, May 24-June 10, 2005.  
Khwarizmi International Award, Feb., 2004.  
Distinguished foreign professor at the University of Cairo, Amer. Univ. of Cairo, Al-Azhar Univ. of Cairo, (Nov. 2004, Dec. 2006), Academy of Science of Mexico (Oct. 1997)  
Distinguished Graduate Faculty Award (1997).  
Fulbright Research Professorship at the Technion 1991-92.  
Elected member of the New York Academy of Sciences (1994); Elected member of the Electromagnetics Academy MIT (1990).

Founding Member of the Board of the International Society for Analysis, its Applications and Computation (ISAAC) (1994).

Organizer of the special sessions at the A.M.S. meetings 1980, April, 1982 Jan., 1988 Jan., 1990 March, 1998 March  
Certificate of Appreciation, Univ. of Michigan, 1981, for technologically promising ideas.

Faculty research award, KSU, 1982

Senior Visiting Fellowships: SERC of Great Britain, June-Aug 1984; University of Bonn, 1984, 1985, 1989; Univ. of Heidelberg 1987; NSERC of Canada, Concordia Univ., May-Aug 1990.

NATO grant for joint research with Prof. R. Burge and Dr. M. Fiddy (King's College), 1985-1986.

AFOSR, NSF and ONR travel and ordinary grants.

Certificate of Recognition, 11th world IMACS Congress, (1985).

Research Professor at WPAFB (summer 1993).

Research Professor at the Univ. of Cagliari and Milan (summer 1994).

Research Professor, Complutense Univ., Madrid, Univ. of Grenoble, Politecnico Milan, Technion, Haifa, 1995.

Research Professor, Univ. of Bremen, Inst. for Appl. and Comput. Math, Heraklion, Crete, 1996 (summer).

Research Professor, INRIA, Univ. of Grenoble, 1997 (summer).

DAAD Research Professor, Institute of theoretical physics, Univ. of Giessen, 1998 (summer)

Research Professor, Hebrew Univ and Ben-Gurion Univ., May-June 1999.

Research Professor, Univ. of Singapore, July 1999.

Research Professor, Univ. of Milano and Palermo, May-July, 2000.

Research Professor, IMPA, Jan 3-27, 2001,

DAAD Research Professor, May 20- Aug 20, 2001, Univ. of Giessen

CNRS Research Professor, Feb.1, 2002- Jan. 31, 2003.

KAIST, May 20-June 19, 2003

MFO, June 23-Aug 19, 2003

IAS Ben Gurion Univ., Hebrew Univ., May-June 2004

London Math. Soc. lecturer at the Univ. of Belfast, Bath, Edinburgh, Queen Mary Univ. and King's College, May 24-June 10, 2005

Distinguished speaker at HKSTAM, June 18, 2005, and City Univ. of Hong Kong, June 15-24, 2005.

IAS Ben Gurion Univ., May-June 2006.

Mercator Professor, TU Darmstadt, May-Dec. 2007

Univ. of Leicester, May-June 2008.

ETHZ, May-June 2009, Univ. of Leicester, Sep. 10-Oct 10, 2009.

#### **EDITORIAL WORK:**

Associate Editor of the Journals: Nonlinear Analysis: Theory, Methods, Appl. (NATMA), Jour. of Inequalities in Pure and Appl. Math. (JIPAM), International J. Comp. Sci and Math (IJCSM), Australian Jour. of Math Anal and Appl (AJMAA), International J. of Appl. Math. Sci., International J. of Tomography and Statistics, Jour. of Functional Analysis and Approximation Theory (JFAAT), J. of Comput. Anal. Appl (JCAA), Advances in Nonlinear Analysis and Applications (ANAA), PanAmerican Math. Journal, Math. Sci. Research Journal, Internat. Journ. of Appl. Math., Internat. Journ. of Diff. Equations and Applications, Nonlinear Functional Analysis and Applications (NFAA), Cubo a Math. Journal, Journ. of Egypt. Math. Soc.,

#### **HONORARY AND PROFESSIONAL SOCIETIES:**

New York Academy of Science, Electromagnetic Academy MIT, International Society for Analysis, Applications and Computing, American Mathematical Society, International Assoc. of Math. Physics.

**COLLOQUIUM TALKS:** Princeton, Cornell, Brown, Madison-Wisconsin, Rice, Univ. of Delaware, Iowa St. Univ., Wayne St. Univ. Detroit, Univ. Of Utah, Salt Lake City, Texas A & M Univ., Kansas Univ. at Lawrence, Univ. of Alberta, Canada, Univ. of Bonn, Univ. of Stuttgart, Univ. of Mich., Argonne Nat. Lab., Naval Res. Lab., Math. Res. Center in Madison-Wisconsin, UCSD, UC Berkeley, Stanford, Mich. State Univ., Univ. of Pittsburgh, General Motors Res. Labs., Shell Res. Center, Houston, Univ. of W. VA., Univ. of Arizona, Washington St. Univ., Case Western Reserve Univ., Kansas St. Univ., Univ. of Madrid, Univ. of Florence, Univ. of Goteborg, Royal Institute of Technology, Stockholm, Univ. of Uppsala, Vrije Univ., Amsterdam, Nat. Bureau of Standards, Howard Univ., Univ. of Vienna, Tech. Univ. of Vienna, Schlumberger-Doll Research Lab., Ridgefield, CT., Univ. of Gottingen, Sohio Petroleum Research Lab., Dallas, Univ. of Minnesota, Minneapolis, Schlumberger Well Services, Houston, Univ. of Manchester, Univ. of London, Univ. of Tubingen, Univ. of Minnesota, Univ. of Marceille (Luminy), Univ. of Helsinki, Univ. of Muenchen, Royal Radar and Signal Establishment, Great Malvern. Catholic Univ. Washington D.C., ERIM, Ann Arbor, MI, Univ. of Nevada, Las Vegas, Acad. Sinica, Taipei, Indiana University, Bloomington, Wichita State University, University of Heidelberg, Bonn, Regensburg, Karlsruhe, Frankfurt, Bielefeld, Indian Institute of Science, Bangalore, Institute for basic research, Istanbul, IIT Delhi, Cornell University, Univ. of Munster, Univ. of Lund, Univ. of Linkoping, Courant Inst. NYU., RPI, Troy, Yale Univ., Boston Univ., Univ. of

MD., Univ. of Lowell, Univ. of Paris Süd (Orsay), Univ. of Pierre and Marie Curie, Paris, Florida Atl. Univ., Boca Raton, Tech. Univ. of Berlin, Freie Univ. of Berlin, Univ. of Essen, Univ. of Düsseldorf, NASA Langley Research Center, Virginia Tech. Blacksburg, Institute of Mathematics, Bulgarian Acad. of Sci., Sofia, Univ. of Southwest Louisiana, Nat. Inst. of Standards and Technology, Boulder, Univ. of Aachen, FRG., Univ. of Montreal, Univ. of Kyoto, Univ. of Oklahoma, Univ. of TN., Inst. of Math. Acad. Sci., Novosibirsk, Inst. of Math., Acad. of Sci., Kiev., Univ. of Stockholm, Univ. of Paris-Sud., Polytech. of Turin, Univ. of Pavia, Univ. of Pisa, Politechnico of Milan Ecole Super. Electr., Gif sur Yvette, Inst. for Problems of Mechanics, Moscow, Univ. of Stockholm, Univ. of Uppsala, Inst. of Appl. Math., Moscow, Weizmann Institute, Hebrew Univ., Tel-Aviv Univ., Technion, Bar-Ilan Univ., Univ. of Beer Sheva, Univ. of Haifa, Tübitak Istanbul, TH Darmstadt, Univ. of Siegen, Univ. of Karlsruhe Geophys. Inst., Inst. of App. Math. Acad. Sinica, Beijing Univ., Fudan Univ., Univ. of Sci. & Tech., Hefei, Graduate School, Acad. Sinica, Univ. of Sci. & Tech., Hong Kong, Tokyo Metropol. Univ., Kyoto Univ., Univ. of Muenster, Georgia Tech., Univ. of Cincinnati, CWRU, Univ. of Dayton, Wright-Patterson AFB at Dayton, Novosibirsk Univ., Inst. of Math. Bulg. Acad. Sci., Los Alamos Nat. Lab., Univ. of New Mexico, Sandia Nat. Lab., Univ. of Cagliari, Univ. of Rome, Autonoma Univ. Madrid, Complutense Univ. Madrid, Univ. of Bilbao, Univ. of Barcelona, Supelec Paris, Univ. of Tenerife, IMA Univ. of Minnesota, Univ. of Carlos III, Madrid, Univ. of Grenoble, CNRS Marceille, Univ. of Paris 13, Univ. of Milan, Univ. of Naples, Univ. of Liege, INRIA-Rocquencourt, Univ. of Rome, IAC Rome, Univ. of Lyon, Univ. of Beer Sheva, Technion, Univ. of Milan, TH Darmstadt, Univ. of Erlangen, Univ. of Bremen vision center, Univ. of Athens, Tech. Univ. of Athens, Inst. for Appl and Comput. Math., Heraklion, Crete, UNAM Mexico City, INRIA-Grenoble, CNRS-Marceille, Univ. de Franche Comte-Besancon, IMAG-Grenoble, Univ. of Manitoba-Winnipeg, Autonoma Univ. Mexico City, Univ. of Tennessee at Knoxville, Oak Ridge National Lab., Univ. of Giessen, Chemnitz, Freiberg, Dresden, Bonn, Darmstadt, TU Vienna, Univ. of Vienna, Forschungszentrum Karlsruhe, Complutense Univ. Madrid, Autonoma Univ. Madrid, SDR Research, Univ. of Missouri, Univ. of Nagoya, Kyoto, Tokyo, UCLA, Caltech, Univ. of California at Irvine, at San Diego, Technion, Haifa Univ., Hebrew Univ., Ben-Gurion Univ., Weizmann Inst., Univ. of Palermo, Univ. of Singapore, Inst. of Math. of Nat. Acad. of Sci. of Ukraine, Kiev, Univ. of Lvov, Univ. of MO, Univ. of Milano, Bologna, Roma (La Sapienza), Palermo, Darmstadt, Stuttgart, Giessen, Pusan University, Korea, FAU (Frontiers of Science lecture), UCF, Orlando, Institute of mathematics, Yerevan, Los Alamos CNLS, Univ. Fed. Rio de Janeiro, IMPA, Univ. of Bologna, Pavia, Univ. of Muenster, Bonn, Giessen, Ecole Polytechnique, CNRS-LMS, Frankfurt, Stuttgart, Linz, Chemnitz, Autonoma Univ. Mexico City, Tokyo Metropolitan Univ., Nihon Univ., Meiji Univ., Univ. of Tokyo, Univ. of Kyoto, Polytech. Univ. of Torino, LMA/CNRS-Marseille, INRIA-Antibes, Univ. of Nice, Luminy-theor. physics, Weizmann Inst, Rehovot, Technion, Univ. of Haifa, Ben-Gurion Univ., Univ. of Uppsala, Univ. of Guanajuato at Salamanca, Univ. of Marseille-CMI, INRIA-Rockencourt, Yonsei Univ., SNU (Seoul Nat. Univ), KAIST, Univ. of Dresden, Dresden Math. Seminar, Ben-Gurion Univ., Hebrew Univ., Technion, Queen's Univ. of Belfast, Univ. of Bath, Univ. of Edinburgh, Univ. of Queen Mary, King's College, City Univ. of Hong Kong, Hong Kong Soc. of Theor. and Appl. Mechanics, Oklahoma Univ., LANL, Univ. of Giessen, Dresden, TU Darmstadt, GSI (Gesellschaft für Schwere Ions) Physics Institute, Karlsruhe, Konstanz, Lyon, Charles Univ. Prague, Math. Inst., Prague, TU Delft, Univ. of Barcelona, TU Darmstadt-EM division, IMDEA-Madrid, Bergacadem.-Freiberg, ETH-Zuerich, Univ. of Manchester, Leicester, Birmingham, UCL-Univ. Coll. London, UC Irvine, Oklahoma Univ., UCF Orlando, ETH, Univ. of Konstanz, Univ. of Lausanne, ETH Zurich, Univ. of Innsbruck, Univ. of Leicester, Birmingham, Loughborough, UCL-Univ. Coll., Imperial College-London,

#### **MONOGRAPHS and BOOKS:**

1. Theory and applications of some new classes of integral equations. Springer Verlag, New York, 1980, pp.1-356; isbn 0-387-90540-5.
2. Iterative methods for calculating the static fields and wave scattering by small bodies. Springer Verlag, New York, 1982, pp.1-130; isbn 0-387-90682-7
3. Scattering by obstacles. Reidel, Dordrecht, 1986, pp.1-442; isbn 90-277-2103-3
4. Random fields estimation theory. Longman Scientific & Wiley, New York, 1990, pp.1-281; isbn 0-582-03768-9
5. Random fields estimation theory, Expanded Russian edition, Mir, Moscow, 1996, pp. 1-352; isbn 5-03-003031-X
6. Multidimensional inverse scattering problems, Longman Scientific & Wiley, New York. 1992, pp.1-385; isbn 0-582-05665-9;
7. Multidimensional inverse scattering problems, Expanded Russian edition, Mir, Moscow, 1994, pp.1-496; isbn 5-03-002939-7
8. The Radon transform and local tomography. CRC Press, Boca Raton, 1996, pp.1-503 (with A.Katsevich); isbn 0-8493-9492-9.
9. Spectral and scattering theory, Plenum publishers, New York, 1998 (editor A.G. Ramm) isbn 0-306-45829-2

10. Inverse problems, tomography and image processing, Plenum publishers, New York, 1998 (editor A.G. Ramm) isbn 0-306-45828-4
11. Operator Theory and Applications, Amer. Math. Soc., Fields Institute Communications, Providence RI, 2000 (editors A.G.Ramm, P.N.Shivakumar, A.V.Strauss). isbn 0-8218-1990-9
12. Inverse problems, Springer, New York, 2005. isbn 0-387-23195-1
13. Wave scattering by small bodies of arbitrary shapes, World Sci. Publishers, Singapore, 2005. isbn 981-256-186-2
14. Random fields estimation, World Sci. Publishers, Singapore, 2005. isbn 981-256-536-1
15. Dynamical Systems Method for solving operator equations, Elsevier, Amsterdam, 2007. isbn 0-444-52795-8

#### **US PATENTS:**

1. Pseudolocal tomography (with A.Katsevich), number 5,539,800 issued July 23, 1996.
2. Enhanced local tomography (with A.Katsevich), number 5,550,892 issued Aug.27, 1996.

#### **INVITED ADDRESSES:**

1. All-union symposium on wave diffraction; Tbilisi, 1964
2. All-union conference on numerical mathematics, Moscow, 1965
3. International URSI symposium, Stressa/Italy, 1968
4. Third all-union meeting on theoretical and applied mechanics, Moscow, 1968
5. Third all-union conference on heat and mass transfer, Minsk, 1968
6. All-union symposium on wave diffraction, Leningrad, 1970
7. International URSI symposium on electromagnetic waves, Tbilisi, 1971
8. Fourth all-union conference on heat and mass transfer, Minsk, 1972
9. Conference on technical cybernetics, Moscow, 1972
10. International symposium on radioelectronics, Varna, 1974
11. International congress on acoustics, London, 1974
12. All-union seminar on the atom and atomic spectra theory, Tashkent, 1974
13. All-union symposium on the interaction of cosmic dust with the atmosphere, Ashhabad, 1974
14. International symposium on nonlinear networks, Split, Yugoslavia, 1975
15. International conference CVUT, Prague, 1975
16. All-union conference on differential equations, Rjazan, 1976
17. International Conference on Computer-Aided Design of Electromagnetic and Microwave Circuits and Systems, Hull, England 1977
18. International symposium on approximation theory, Campinas, Brazil 1977
19. All-union winter mathematical school, Voronezh, 1977
20. International Congress on applied mathematics, Weimar, DDR, 1978
21. All-union 10 symposium on the representation and analysis of random fields and processes, Suhumi, 1978
22. GAMM Tagung, Wiesbaden, BRD, April 1979
23. International symposium-workshop on wave scattering, Columbus, Ohio, June 1979
24. International symposium on ill-posed problems, Newark, Delaware, October 1979
25. Solutions of some inverse and ill-posed problems, Nav.Res.Lab., Wash. D.C., Oct. 9, 1979
26. A.M.S. Meeting, Kent, Ohio, Nov. 1979
27. A.M.S. Meeting, Boulder, Colorado, March 1980
28. A.M.S. Meeting, Bloomington, Indiana, April 1980
29. International symposium on nonlinear phenomena, Arlington, Texas, June 1980
30. Symposium on real analysis, Mich. State University, June 1980
31. Symposium on scattering theory, Oberwolfach, FRG, August 1980
32. A.M.S. 1980 summer meeting, August 1980 Ann Arbor, MI
33. Conference on integral equations, Oberwolfach, FRG, Dec. 1980
34. Mathematical foundations of the singularity and eigenmode expansion methods, meeting at the University of Kentucky, Lexington, KY, Nov. 1980
35. International conference on spectral theory of differential operators, Birmingham, Alabama, March 26-28, 1981
36. IEEE International symposium on circuits and systems, Chicago, IL, April 27-29, 1981
37. A.M.S. Annual meeting, January 1981
38. 7th International Dundee conference on ordinary and partial differential equations, 3-29-82 to 4-3-82
39. IEEE International symposium on information theory, Les Arcs. France, 6-21-25-1982
40. IEEE International symposium on antennas and propagation, Univ. of New Mexico, Albuquerque, May 1982.

41. AMS annual meeting, Denver, Jan. 1983, Monotone operators and nonlinear passive systems (special session, invited talk)
42. 1983 International symposium on the mathematical theory of networks and systems, June 20-24, 1983, Ben Gurion Univ., Beer Sheva, Israel
43. 1983 International IEEE symposium CAS, Newport Beach, California, May 2-4, 1983
44. Conference on scattering theory, Oberwolfach, July 1983, FRG
45. NATO advanced research workshop on inverse scattering, Bad-Windsheim, FRG, Sept. 1983
46. AMS annual meeting, January 1984, special session PDE
47. International conference on P. D. E., Dundee, June 1984
48. Conference on PDE, Oberwolfach, March, 1985
49. 11th world IMACS congress, Oslo, August 1985, plenary talk
50. Finnish mathematical society meeting, May, 1985
51. Conference of the Chinese mathematicians, Taiwan, July 1986, plenary talk
52. International conference on operator theory, Oct. 1986
53. Conference on inverse problems, Montpellier, Dec. 1986
54. International conference on mathematical geophysics, West Berlin, Feb. 1987
55. AMS meetings March, April 1987
56. European Congress on Simulation, ECS-87, Sep. 1987, Plenary talk
57. Conference on numerical integration, Nov. 1987, Oberwolfach
58. AMS annual meeting, January 1988
59. Annual GAMM meeting, Vienna, April 1988, plenary talk
60. Workshop on inverse problems, Univ. of MD, March 1988
61. The first Woodward conference on Wave phenomena, June 1988, plenary talk
62. International conference on inverse problems, Montpellier, France, Dec. 1988 (2 one-hour lectures)
63. NSF conference on nonlinear wave equations Jan. 1989
64. Oberwolfach conference on differential equations (March 1989)
65. NSF workshop on inverse problems (July 29-August 4, 1989)
66. International conference on inverse problems (Bulgaria, Sep. 1989)
67. Oberwolfach conference on solitons, Jan. 1990
68. NSF conference on inverse scattering, June 1990
69. SIAM annual meeting, July 1990, minisymposium on inverse scattering.
70. International conference "Inverse problems in science and engineering", Osaka, Aug. 1990
71. International Congress of Mathematicians, Kyoto, August, 1990
72. Oberwolfach conference on statistical estimation, Nov. 1990
73. South Eastern conference on differential equations, Blacksburg, VA, Nov. 1990
74. International conference on mathematical modeling, key-note speaker, Univ. of MD, Apr. 1991
75. International conference on signal processing, Cetraro, Italy, plenary speaker, May 1991
76. International conference on ill-posed problems, plenary speaker, Moscow, Aug. 1991
77. International Workshop on inverse problems, invited speaker, Novosibirsk, Aug. 1991
78. US-Israel NSF workshop on operator theory, Beer Sheva, Feb. 1992, invited speaker.
79. International Conference of Computational Engineering Science, ICES-92, invited speaker, Dec. 1992, Hong Kong.
80. Third Midwest conference on geometry, Columbia, Apr. 1993.
81. International conference on quantum inversion, Bad Honnef, FRG, May 1993, plenary speaker.
82. International conference on dynamical systems, May 1993, Atlanta, plenary speaker.
83. International symposium on computerized tomography, Aug. 1993, Novosibirsk, Russia, plenary speaker.
84. International symposium on numerical methods, Aug. 1993, Plovdiv, plenary speaker.
85. International symposium on differential equations, Aug. 1993, Plovdiv, plenary speaker.
86. International symposium on Inverse problems, Sept. 1993, Potsdam, FRG, plenary speaker.
87. Oberwolfach conference on pseudodifferential operators, Jan. 1994, invited speaker.
88. Oberwolfach conference on tomography, Sep. 1994, invited speaker.
89. 26th Midwest conference on differential equations, invited speaker, Oct 7-8, 1994.
90. International ASME conference, Chicago, Nov. 7-11, 1994, invited speaker, special session on inverse problems in mechanics.
91. AMS-SIAM workshop on inverse problems, March 1995, invited speaker.
92. Oberwolfach conference on inverse problems, Feb. 1996, invited speaker.
93. World Congress of Nonlinear Analysts, WCNA-96, Jul. 10-17, 1996, Athens, plenary speaker
94. International conference on inverse scattering, Sep. 3-7, 1996, Lake Balaton-96, plenary speaker
95. International conference on inverse and ill-posed problems, IIPP-96, Sep. 9-14, Moscow, plenary speaker.
96. Mexican math. soc. meeting, Oct. 7-11, 1996, invited speaker.
97. ISAAC International Congress, June 2-7, 1997, plenary speaker.

98. The mathematics of life sciences, Jan. 28-31, 1998, Texas Tech. Univ., one-hour invited speaker.
99. International conference MTCP-98, modern trends in comput. physics, Joint Instit. for Nuclear Research, Dubna, June 15-20, 1998, plenary speaker.
100. Oberwolfach conference on tomography, Aug. 2-8, 1998, invited speaker.
101. International conference "Operator theory and applications" Winnipeg, Oct. 7-11, 1998, plenary speaker
102. Workshop on the Radon transform, Univ. of Nagoya, Nov. 1998, key-note speaker.
103. Braude College PDE days, main speaker, May 18-20, 1999,
104. Israel Math. Union annual meeting, invited speaker, May 26, 1999.
105. Internat. workshop on inverse problems and wave scattering, Lvov, Sep. 20-23, 1999, plenary speaker.
106. Internat. conference PDE 2000, Clausthal, Germany, July 24-28, 2000.
107. Internat. conference on nonlinear analysis, Korea, Pusan, Aug.31-Sep.5, 2000, plenary speaker.
108. Internat. conference on dynamical systems and chaos, Armenia, Sep. 11-18, 2000, plenary speaker.
109. Mathematics and medical imaging, Frontiers of Science Lecture, FAU, Oct. 11, 2000
110. Dynamical systems and linear and nonlinear ill-posed problems, Los Alamos Nat. Lab, CNLS colloquium, Dec. 6, 2000
111. Inverse and direct problems and applications, Gargnano, Apr. 2-6, 2001, main lecturer
112. Dynamical systems and linear and nonlinear ill-posed problems, lectures at the Auton. Univ., Mexico City, Sep.17-21, 2001.
113. AMRTMA conference on acoustic, mechanics and related topics of mathematical analysis, June 2002, France.
114. Oberwolfach conference on tomography, Aug. 11-17, 2002
115. Conference on mathematical modelling of wave phenomena, Vaxjo University, Sweden, Nov. 3-8, 2002, plenary speaker
116. Internat. workshop on random fields, Guanajuato, Nov 27-30, 2002, plenary speaker
- 117 International seminar on nonlinear analysis and spectral problems, Complutense Univ., Madrid, June 14-16, 2004, invited speaker
- 118 Workshop on PDE, Hebrew Univ., June 2004, invited speaker.
- 119 IPAM conference "Mathematics of the Ear and Sound Signal Processing", January 31 - February 2, 2005
- 120 Midwest Geometry Conference, Apr 28-May 1, 2005, Ohio St. Univ
- 121 LMS lectures, May 24-June 10, 2005
- 122 HKSTAM, June 18, 2005, distinguished invited speaker.
- 123 5cipe, Cambridge, July 9-16, 2005.
- 124 ICAM05-Internat. Conference on Appl. Math., Bandung, Aug.22-26, 2005, plenary speaker
- 125 ICMAA06-Internat. Conference on Math. Anal. and Appl., Assiut, Egypt, Jan 3-6, 2006, plenary speaker.
- 126 Midwest geometry conference, Univ. of Oklahoma, May 5-7, 2006.
- 127 ETOPI7, Sydney, July 9-14, 2006, plenary speaker.
- 128 IPDO-2007, Miami, Apr. 16-18, 2007, key-note speaker.
- 129 World Congress of Engineering and Applied Mathematics, London, July 2-4, 2007, key-note speaker.
- 130 International Conference on Inverse Quantum Scattering Theory, Aug.27-31, 2007, Hungary, Lake Balaton-Siofok, plenary speaker.
- 131 Workshop on PDE, Darmstadt, Sep. 24-26, 2007, invited speaker
- 132 Analysis of Multiphase Problems, Prague, Oct. 8-12, 2007, special lecture.
- 133 IMDEA-Madrid, Nov 29, 2007, invited talk.
- 134 Oberwolfach workshop, Material Theories, Dec. 16-21, 2007, invited speaker
- 135 International Conference Chaos-2008, Chaotic modeling and simulation, June 3-6, 2008, Chania, Crete, Greece, plenary speaker.
- 136 World Congress of Nonlinear Analysts, WCNA-2008, Orlando, Florida, July2-9, 2009, key-note speaker.
- 137 International Conference Chaos-2009, Chaotic modeling and simulation, June 1-5, 2009, Chania, Crete, Greece, plenary speaker,
- 138 PanAfrican Congress of Mathematicians, PACOM7, Aug.3-8,2009, plenary one-hour speaker.
- 139 International Workshop, DIPED2009, Lvov, Sep.21-24, 2009, plenary one-hour speaker.

#### **LIST OF COURSES TAUGHT:**

##### **Undergraduate courses:**

Calculus and analytic geometry, advanced calculus, differential equations, technical calculus, linear algebra, elementary PDE, integral equations, special functions and their applications, mathematics:its form and impact.

##### **Graduate courses:**

Ordinary differential equations, PDE, functional analysis and its applications, spectral and scattering theory for differential equations, singular integral equations, complex analysis, theoretical numerical analysis, ill-posed problems, integral transforms, asymptotic methods, iterative solution of the static problems, mathematical methods for engineers, mathematics of wave propagation, electrodynamics, quantum mechanics, integral equations and applications, inverse scattering theory, inverse problems in analysis and PDE, nonlinear functional analysis, theory of passive networks, entire functions in antenna synthesis and optics, approximation theory, potential theory, calculus of variations, distribution theory, probability theory, random fields estimation theory.

#### Ph.D students

T. Miller, A.Zade-Chavoshi, Peiqing Li, A.Katsevich, Yan Chuntao, R.Hayrapetyan, A.Smirnova, H.S.Hoang, S.Indratno.

#### Articles for mathematical encyclopedia, Kluwer, Dordrecht, 2001, Supplement volume 3.

1. Ordinary differential equations, property  $C$  for, pp.295–296.
2. Local Tomography, pp. 241-242.
3. Partial Differential Equations, Property  $C$  for, pp. 298–299.
4. Inverse Scattering, half-axis case, pp. 209–211.
5. Inverse scattering, full line case, pp. 207–208.
6. Obstacle scattering, pp. 284–286.
7. Inverse scattering: multidimensional case, pp. 211–212.
8. Pseudolocal tomography, pp. 310–311.
9. Reproducing kernel, pp. 328–329.
10. Reproducing kernel Hilbert Space, pp. 329–331.

#### PROFESSIONAL PUBLICATIONS:

- [1.] On the Kotelnikow's theorem. Electrocommunication, 10, (1962), 71-72.
- [2.] A necessary and sufficient condition for compactness of embedding. Vestnik Lenigr. Univ.(Vestnik) N 1, (1963), 150-151. (Math. Rev. 27 #1808).
- [3.] Investigation of the scattering problem in some domains with infinite boundaries I, II, Vestnik 7, (1963), 45-66; 19, (1963), 67-76. 27 #483, 23 #374.
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