

Brief Vita

Professional Preparation

- Novosibirsk University, Novosibirsk, f. USSR: Mathematics and applied mathematics, a degree equivalent to B.S. and M.S. (with distinction), 1974
- Institute of Mathematics, Academy of Sciences, Novosibirsk, f. USSR: Probability and mathematical statistics, a degree equivalent to Ph.D., 1982

Appointments

- Professor, Michigan Technological University (1994–)
- C. C. Hsiung Visiting Professor, Lehigh University, Bethlehem, PA (2000–01, Fall–Spring)
- Associate Professor, Michigan Technological University (1992–94)
- Visiting Associate Professor, CUNY, New York, NY (1992, Spring)
- Visiting Associate Professor, University of Illinois, Urbana-Champaign (1991, Fall)
- Research Specialist, Arizona Cancer Center, University of Arizona (1991, July–August)
- Assistant Professor, Institute of Electrical Engineering, Novosibirsk, f. USSR (1988–1990)
- Assistant Professor, Institute of Railroad Engineering, Novosibirsk, f. USSR (1984–1988)
- Instructor, Institute of Railroad Engineering, Novosibirsk, f. USSR (1977–1984)
- Research Specialist, Institute of Systems Research, Novosibirsk, f. USSR (1975–1977)

Selected publications

- [1] Pinelis, I. Toward the best constant factor for the Rademacher-Gaussian tail comparison. *ESAIM: Probability and Statistics* **11** (2007) 412–426.
- [2] Pinelis, I. Exact inequalities for sums of asymmetric random variables, with applications. *Probab. Theory Related Fields* **139** (2007) 605–635.
- [3] Pinelis, I. On normal domination of (super)martingales. *Electronic J. Probab.* **11** (2006) Paper 39, 1049–1070.
- [4] Pinelis, I. Extremal probabilistic problems and Hotelling's T^2 test under a symmetry condition. *Ann. Statist.* **22** (1994) 357–368.
- [5] Pinelis, I. F. A problem of large deviations in a space of trajectories. *Theory Probab. Appl.*, **26** (1981) 69–84.
- [6] Weidman, P. and Pinelis, I. Model equations for the Eiffel tower profile: historical perspective and new results. *Comptes Rendus Mecanique* **332** (2004) 571–584.

- [7] Pinelis, I. Evolutionary models of phylogenetic trees. With an electronic appendix [DOI 10. 1098 spb. 2003. 2374]. *Roy. Soc. Lond. Proc. Ser. Biol. Sci.* **270** (2003) 1425–1431+15 pp.
- [8] Pinelis, I. A discrete mass transportation problem for infinitely many sites, and general representant systems for infinite families. *Math. Methods Oper. Res.* **58** (2003) 105–129.
- [9] Chubarev, A. and Pinelis, I. Linearity of space-time transformations without the one-to-one, line-onto-line, or constancy-of-speed-of-light assumptions. *Comm. Math. Phys.* **215** (2000) 433–441.
- [10] Pinelis, I. Optimum bounds for the distributions of martingales in Banach spaces. *Ann. Probab.* **22** (1994) 1679–1706.

Synergistic Activities

I.P.’s most extensive expertise is in probability and statistics, including extremal problems, exact inequalities, and limit theorems of probability and statistics; six of his publications in these areas are listed above, [1–5, 10]; for more see I.P. publication list.

I.P. has also demonstrated an outstanding ability to reach out and conduct high-quality research in a wide variety of fields in mathematics and its applications. Such synergistic activities are exemplified by the above references [6] (mechanical engineering), [7] (biology), [8] (operations research and combinatorics), and [9] (geometry and physics). Stories on his work [7] were broadcast by the United Press International and other news agencies. Study [6] has also received wide publicity.

An interesting application of an inequality provided in [4] was given by D. A. Cardon (2002) Convolution operators and zeros of entire functions, *Proc. Amer. Math. Soc.* **130** 1725–1734, where a result of Pólya concerning the Riemann zeta function $\zeta(s)$ was generalized.

Results given in [10] have been used in a number papers; a series of recent applications have been to learning theory, including S. Smale and D.-X. Zhou (2007) Learning theory estimates via integral operators and their approximations, *Constructive Approximation* **26** 153–172.

Thesis Advisor

Gao Ming (M.S.); Elena Kasyanova (Ph.D.); Raymond Molzon (Ph.D.).

Awards

NSF grant “Exact inequalities and limit theorems for Rademacher and self-normalized sums”, 08/01/2008—7/31/2011, \$150,000, Principal Investigator

Outstanding Research Award, 2009, Department of Mathematical Sciences, Michigan Technological University

Outstanding Research Award, 2007, Department of Mathematical Sciences, Michigan Technological University

Outstanding Research Award, 2005, Department of Mathematical Sciences, Michigan Technological University