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Ph.D. (N. Copernicus 1986; Queen's 1991)

Research Interests

Probability measures on topological groups and related problems in functional and harmonic analysis, ergodic theory, and the theory of topological groups.

Publications

- *On contraction groups of automorphisms of totally disconnected locally compact groups*. To appear in Israel J. Math.
- *Probability measures on* [SIN] *groups and some related ideals in group algebras*. Monatshefte Math. **155** (2008), 135-144.
- *The Choquet-Deny theorem and distal properties of totally disconnected locally compact groups of polynomial growth*. New York J. Math. **13** (2007), 159-174 (with C.R.E. Raja).
- *Dissipation of convolution powers in a metric group*. J. Theoretical Probability **20** (2007), 487-503.
- *The Choquet-Deny equation in a Banach space*. Canadian J. Math. **59** (2007), 795-827 (with M. Neufang).
- *On the asymptotic behaviour of iterates of averages of unitary representations*. Illinois J. Math. **48** (2004), 1117-1161.
- *Ergodic and mixing probability measures on* [SIN] *groups*. J. Theoretical Probability **17** (2004), 741-759.
- *Countable amenable identity excluding groups*. Canadian Math. Bull. **47** (2004), 215-228.
- *Probability measures on almost connected amenable locally compact groups and some related ideals in group algebras*. Illinois J. Math. **45** (2001), 195-212.
- *On shifted convolution powers and concentration functions in locally compact groups*. Contemporary Math. **261** (2000), 23-41.
- *Random walks on almost connected locally compact groups: boundary and convergence*. J. d'Analyse Mathématique **74** (1998), 235-273.
- *Contractive automorphisms of locally compact groups and the concentration function problem*. J. Theoret. Probab. **10** (1997), 967-989.
- *Concentration functions in locally compact groups*. Math. Annalen **305** (1996), 673-691 (with J. Rosenblatt and G. Willis).
- *A Poisson formula for solvable Lie groups*. J. d'Analyse Mathématique **68** (1996), 183-208.
- *The asymptotic σ-algebra of a recurrent random walk on a locally compact group*. Israel J. Math. **94** (1996), 201-219.
- *Strong approximate transitivity, polynomial growth, and spread out random walks on locally compact groups*. Pacific J. Math. **170** (1995), 517-533.
- *The density of the image of the exponential function and spacious locally compact groups*. J. Lie Theory **5** (1995), 129-134.
- *On the asymptotic and invariant σ-algebras of random walks on locally compact groups*. Probab. Theory and Related Fields **101** (1995), 147-171.

- *Exponential boundedness and amenability of open subsemigroups of locally compact groups*. Canadian J. Math. **46** (1994), 1263-1274.
- *Strongly approximately transitive group actions, the Choquet-Deny theorem and polynomial growth*. Pacific J. Math. **165** (1994), 115-129.
- *Interaction times in quantum scattering: the sojourn time operator approach versus the Feynman path integral approach*. Physical Review **A48**, (1993), 3375-3378 (with D.M. Wardlaw).
- *Sojourn time operator approach to interaction time in quantum scattering: General formulation for arbitrary scattering systems*. Phys. Rev. **A45** (1992), 292-306 (with D.M. Wardlaw).
- *Poisson and Furstenberg boundaries of random walks*. C. R. Math. Rep. Acad. Sci. Canada **XIII** (1991), 279-284.
- *Connection between complex interaction times and the sojourn time operator*. Phys. Rev. **A**43 (1991), 5137-5140 (with D.M. Wardlaw).
- *Sojourn time approach to interaction time in quantum scattering. One dimensional scattering with internal degrees of freedom*. Phys. Rev. **A42** (1990), 5253-5268 (with D.M. Wardlaw).
- *Sojourn time, sojourn time operators, and perturbation theory for one-dimensional scattering by a potential barrier*. Phys. Rev. **A40** (1989), 6210-6218 (with D.M. Wardlaw).
- *Time delay, resonances, Riemann zeros, and chaos in a model quantum scattering system*. J. Phys. **A**: Mathematical and General **22** (1989), 3561-3575 (with D.M. Wardlaw).
- *The concept of a time-of-sojourn operator and spreading of wave packets*. J. Math. Phys. **30** (1989), 1505-1514.
- *Time delay in tunneling: the sojourn time approach versus the mean position approach*. Phys. Rev. **A38** (1988), 5404-5407 (with D.M. Wardlaw).
- *Time delay in tunneling: transmission and reflection time delays*. Phys. Rev. **A37** (1988), 2843-2854 (with D.M. Wardlaw).
- *Master equation - the information gain minimum approximation*. Z. Phys. B - Condensed Matter **67** (1987), 249-256 (with A. Kociszewski).
- *Higher order moments and the maximum entropy inference - the thermodynamic limit approach*. J. Phys. A - Mathematical and General **20** (1987) 915-926.
- *On the microcanonical ensemble for a spin system interacting with one-mode electromagnetic field*. Z. Phys. B - Condensed Matter **59** (1985), 483-491 (1985).
- *On the thermodynamic limit in information thermodynamics with higher order temperatures*. Acta. Phys. Polon. **A63** (1983), 3-19.
- *Information thermodynamics with the second order temperatures for the simplest classical systems*. Acta. Phys. Polon. **A60** (1981), 645-659.
- *An information-thermodynamical approach to kinetics of polymerization*. Acta Phys. Polon. **A59** (1981), 635-643 (with R.S. Ingarden).
- *On the partition function in classical information thermodynamics with higher order temperatures*. Bull. Acad. Polon. Sci. Ser. Phys. Astr. **28** (1980), 119-123 (with R.S. Ingarden).