LINEAR AND NON-LINEAR THEORY OF
GENERALIZED FUNCTIONS AND ITS APPLICATIONS
BANACH CENTER PUBLICATIONS, VOLUME 88
INSTITUTE OF MATHEMATICS
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LIST OF LECTURES

- J. Aleksić, *Equivalence between Colombeau's approximate solutions and measure valued solutions to conservation laws*
- A. B. Antonevich, *On equations with delta-shaped coefficients*
- P. Antosik, *On Mikusiński's seminar in Katowice*
- A. Borys (with W. Sieńko), *Volterra series and multiplication of Dirac impulses*
- C. Bouzar, *Ultra-regular generalized functions*
- S.-Y. Chung, *Laplace equations on nonlinear networks and their inverse problems*
- Y.-S. Chung, *An inverse conductivity problem for evolution equations on networks*
- J.-F. Colombeau, *Nonlinear generalized functions and the Heisenberg-Pauli calculations*
- A. Dadej (with K. Halik), *Product of distributions via Hermite expansions*
- S. Dave, *Global generalized functions on compact manifolds*
- A. Delcroix, *Kernel theorems in spaces of tempered generalized functions*
- P. Domański, *Analytic dependence on parameters of solutions of linear partial differential equations on spaces of distributions*
- R. Estrada, *Distributions that are functions*
- C. Garetto, *Closed graph and open mapping theorems for topological $\widetilde{\mathbb{C}}$-modules and applications*
- R. Gorenflo, *Distributed order pseudo-differential equations: Cauchy and multi-point problems*
- T. Gramchev, *Scales of anisotropic spaces of ultradifferentiable functions*
- K. Grasela, *The algebra of polynomials on the space of ultradifferentiable functions*
- M. Grosser, *Tensor valued Colombeau functions on manifolds*
- M. Hasler, *Asymptotic extensions of topological algebras*
- U. U. Hrusheuski, *On non-autonomous differential equations containing the product of generalized functions in the algebra of mnemofunctions*
- A. Kamiński (with Svetlana Mincheva-Kamińska), *On the convolution, compatibility of supports and convolution algebras of generalized functions*
- A. Karczewska, *Regularity of solutions to stochastic Volterra equations*
- J. Kim, *The invariant subspace problem*
- J.-H. Kim, *Eigenvalue problems for the p-Laplacian and the largest eigenvalue on nonlinear networks*
- J. Kisyński, *Regular initial values for the linear Cauchy problem in a Banach space*
- M. Kobayashi, *Modulation spaces $M^{p,q}$ for $0 < p, q \leq \infty$*

- H. Komatsu, *Heaviside's theory interpreted by Laplace ultradistributions*
- S. Konjik (with M. Kunzinger and M. Oberguggenberger), *Generalized calculus of variations and Noether's theorem*
- M. Kunzinger, *Recent progress in special Colombeau algebras – geometry, topology, and algebra*
- M. Langenbruch (with P. Domański), *Vector-valued hyperfunctions*
- Y.-S. Lee, *Stability of an n-dimensional quadratic functional equation in the space of generalized functions*
- O. Łopuszański, *An operator calculus for generators of C_0-semigroups in the algebra of polynomials on the space of ultradifferential functions on a semiaxis*
- G. Łysik, *The Mellin transformation of exponentially increasing functions*
- F. Mainardi, *Stochastic processes to model anomalous diffusion in physics*
- J.-A. Marti, *Regularity, local and microlocal analysis in theories of generalized functions*
- E. Mayerhofer, *Causality in generalized space-times and the dominant energy condition*
- I. V. Melnikova, *Distribution spaces related to abstract stochastic problems*
- S. Michalik, *Laplace ultradistributions supported by a cone and the Paley-Wiener type theorem*
- P. Mikusiński, *From Boehmians to pseudoquotients*
- S. Mincheva-Kamińska (with A. Kamiński), *On a generalization of the diagonal theorem and its applications in generalized functions*
- B. Mityagin (with P. Djakov), *Schrödinger and Hill operators with singular $H^{(-1)}$ potentials*
- D. Nemzer, *Trigonometric series which vanish on $\sigma < |x| < 2\pi - \sigma$*
- M. Oberguggenberger, *Solutions to hyperbolic systems in the dual of the Colombeau algebra*
- C. Olivera, *Neutrix products on $\mathbb{R}^m$ of homogeneous distributions, quasi-associated distributions and quasi-homogeneous distributions*
- L. Oparnica (with T. M. Atanacković and S. Pilipović), *Semilinear ordinary differential equations coupled with distributed order fractional differential equations*
- E. Özçağ, *Applications of the neutrix calculus to special functions in conjunction with the incomplete Beta and Gamma function*
- Y.-H. Park, *Eigenvalue problem for (p, w)-Schrödinger operators on networks*
- S. Pilipović, *Convoluted operator families and abstract Cauchy problems*
- B. Polat, *Classical electrodynamics in the sense of distributions*
- Y. M. Radyna (with Y. V. Radyna), *Generalized functions on the field of p-adic numbers and on the ring of adeles*
- D. Rakić (with S. Pilipović and N. Teofanov), *Homogeneous distributions in D'_{L^p}*
- L. Rodino, *Gelfand-Shilov spaces and applications*
- D. Scarpalézos, *Analytic and real analytic generalized functions*
- V. M. Shelkovich, *Strong singular solutions to systems of conservation laws: shocks, δ-, δ'-, and $\delta^{(n)}$-shocks ($n = 2, 3, \ldots$)*
- K. Skórnik, *Professor Jan Mikusiński – the 20th anniversary of his death*
- A. G. Smirnov, *Fourier transformation of Sato's hyperfunctions*

- M. R. Soares, *On extension theorems for generalized holomorphic functions*
- S. Sorek (with P. Antosik and A. Kamiński), *On the composition of distributions*
- R. Steinbauer, *Towards tensor valued Colombeau functions*
- M. Stojanović, *Schrödinger equation with nonlinear potential and singular initial data*
- A. Takači, *Solving mathematical models of the viscoelastic bar*
- D. Takači, *Approximate solutions of a class of nonlinear operator differential equations*
- J. Toft, *Continuity properties for pseudo-differential operators acting on modulation spaces*
- V. Valmorin, *On Schwartz kernel theorem in algebras of generalized functions*
- H. Vernaeve, *Algebra homomorphisms of Colombeau generalized functions*
- J. Vickers, *Generalized differential geometry*
- J. Vindas, *Structural theorems for quasiasymptotics of Schwartz distributions*
- D. Vogt, *Partial differential operators in spaces of real analytic functions: right inverses and solutions with parameters*
- M. W. Wong, *Fourier-Wigner transforms and Liouville's theorems for the sub-Laplacian on the Heisenberg group*
- A. L. Yablonski (with N. V. Bedziuk), *Equations in differentials in an algebra of generalized functions*