

## Main publications of Victor Palamodov

### 1. Stability in classical mechanics 1977-2020

- ⊙ *On inversion of Lagrange-Dirichlet theorem and instability of conservative mechanical systems*, Russian Math. Surveys 75 N3, 107-122 (2020)
- ⊙ *Instability of conservative systems with analytic potential function*, Funk. Anal. Appl. 11 N4, 277-288 (1977)

### 2. Integral geometry and applications 2004-2020

- ⊙ *Reconstructions from integrals over non-analytic manifolds*, Communications. in Contemp. Mathematics 2, 2050061(2020)
- ⊙ *Remarks on the second century of the Funk-Radon theory*, in book “The first 100 years of the Radon transform” De Gruyter, pp.129-142 (2019)
- ⊙ *Reconstruction from cone integral transforms*, Inverse Problems 33,104001 (2017)
- ⊙ *Reconstruction from data of integrals*, CRC, 1-169 (2016)
- ⊙ *A parametric method in integral geometry*, Journal d’Analyse mathématique 125, 353-370 (2015)
- ⊙ *On reconstruction of strain fields from tomographic data*, Inverse Problems 31, 085002 (2015)
- ⊙ *Time reversal in photoacoustic tomography and levitation in a cavity*, Inverse Probl. 30, 125006 (2014)
- ⊙ *Fourier duality in integral geometry and reconstruction from non redundant data*, J. Fourier Analysis, Appl. 20 N5, 947-960 (2014)
- ⊙ *A uniform reconstruction formula in integral geometry*, Inverse Problems 28 065014 (2012)
- ⊙ *Remarks on the general Funk transform and thermo-acoustic tomography*, Inverse Probl. and Imag., 4N4, 693-702 (2010)
- ⊙ *Reconstruction from a sampling of circle integrals in  $\mathbf{SO}(3)$* , Inverse Problems 26 095008 (2010)
- ⊙ *Reconstruction of a differential form from Doppler transform*, SIAM J. Math. Anal. 41 N4, 1713-1720 (2009)
- ⊙ *Characteristic problems for the spherical mean transform*, Contemp. Math. 382, 321-330(2005)
- ⊙ *Reconstructive Integral Geometry*, Monographs in Math., Birkhäuser 2004, pp.1-164

### 3. Electromagnetic methods of reconstruction 2002-2020

- ⊙ *An Analytic Method of Phase Retrieval for X-Ray Phase Contrast Imaging*, J. Fourier Analysis, Appl. 26, 79 (2020)
- ⊙ *On the paper T Nara T Furuichi and M Fushimi 2017 Inverse Problems 33*, Inverse problems 34 N9, 098001 (2018)
- ⊙ *An analytic method for the inverse problem of MREPT*, Inverse Probl. 32 N3, 035003 (2016)
- ⊙ *A method of reduction of artifacts in quantitative susceptibility mapping technique*, SIAM Journal of Imaging 9 N1, 481-489 (2016)

⊙ *Gabor analysis of the continuum model for impedance tomography*, Arkiv för matematik 40 N1, 169-187 (2002)

#### **4. Wave propagation and scattering 2000-2016**

⊙ *New approaches to inverse scattering*, Russian Mathematical Surveys, 71 N3, 513–537 (2016)

⊙ *Analytic reconstruction for Compton scattering tomography in Lobachevski plane*, Inverse Probl., 27, 125004 (2011)

⊙ *Inverse scattering as nonlinear tomography*, J. of Wave motion, 47 N8, 635-640 (2010)

⊙ *Fundamental solutions of the acoustic and diffusion equations in nonhomogeneous medium*, Ark. Mat. 42 N1, 119–152 (2004)

⊙ *Impedance tomography, inverse scattering and phase space analysis*, Transl. of AMS 206, Prov. RI, pp.177-192 (2002)

⊙ *Geometrical conservation laws for Maxwell and elasticity systems*, Acta Appl. Math., 74 N1, 57–70 (2002)

⊙ *Dynamics of wave propagation and curvature of discriminants*, Annales de l'Institut Fourier, 50 N6, 1945-1981 (2000)

#### **5. Harmonic analysis 1991-2017**

⊙ *A geometric characterization of a class of Poisson type distributions*, J. Fourier Analysis, Appl. 23 N5, 1227-1237 (2017)

⊙ *Quantum shape of compact domains in phase space*, Contemp. Math. AMS 481 pp.117-136 (2009)

⊙ *Relaxed Gabor expansion at critical density and a 'certainty principle'*, arxiv.org/math.FA/050807 (2005)

⊙ *Localization of harmonic spectrum of Radon transform*, Inverse Probl. 11 N5, 1025-1030 (1995)

⊙ *Distributions and Harmonic Analysis*, Encyclopaedia of Math. Science 72 (1991)

#### **6. Deformations and quantizations 1967-2017**

⊙ *Algebraic symplectic reduction and quantization of singular spaces*, arXiv:1706.08102 (2017)

⊙ *Associative deformations of complex analytic spaces*, Letters in Math. Physics 82 N2-3, 191-217 (2007)

⊙ *Infinitesimal quantization of complex analytic spaces*, Letters in Math. Physics 79, 131-142 (2007)

⊙ *Modular deformations of analytic polyhedra*, arxiv: math.AG/0506412 (2005)

⊙ *Deformation of analytic polyhedra*, J. Algebraic Geom. 2, 263-294 (1993)

⊙ *Tangent fields on deformation of complex spaces*, Mathematics of USSR Sbornik 71 N1, 163-182 (1992)

⊙ *Deformation of Complex Spaces*, in Several Complex Variables IV, Encycl. of Math. Science 10, pp. 105-194 Springer, 1990

⊙ *Multiplicity of holomorphic mappings*, *Funct. Anal., Appl.* 1 N3, 218-226 (1967); Springer, (1995) 1-127

### **7. Systems of differential equations 1967-2014**

⊙ *Hartogs phenomenon for solutions of systems of differential equations*, *Journal of Geometric Analysis* 24(2), 667-686 (2014)

⊙ *Holomorphic synthesis of monogenic functions of several quaternionic variables*, *Journal d'Analyse Math.* 78, 177-204 (1999)

⊙ *Harmonic analysis of solutions of elliptic equations with periodic coefficients*, *Ann. l'Institut Fourier, Grenoble* 43 N43, 751-768 (1993)

⊙ *Linear differential operators with constant coefficients*, Nauka, Moscow 1967, Springer 1970, Japan 1973

⊙ *Differential operators on coherent analytic sheaves*, *Mathematics of USSR Sbornik* 6, 365-391(1968)

### **8. Homological methods in analysis 1968-1972**

⊙ *On Stein manifold Dolbeault complex splits in positive dimensions*, *Mathematics of USSR Sbornik* 17 N2, 289-316 (1972)

⊙ *Homological methods in the theory of locally convex spaces*, *Russian Math. Surveys* 26, 1-63 (1971)

⊙ *The projective limit functor in the category of linear topological spaces*, *Mathematics of USSR Sbornik* 4, 529-559 (1968)

### **9. Mathematical statistics 1966-1968**

⊙ *On verifiable functions*, *Probability theory, Appl.* 13, 96-113 (Russian) (1968)

⊙ *Testing of a multidimensional polynomial hypothesis*, *Soviet. Math Dokl.* 8 N1, 95-97 (1967)

⊙ *Incomplete exponential families and unbiased estimates with the minimal dispersion*, *Probability theory, Appl.* 12 N1, 39-50 (Russian) (1967)

⊙ *An analytic problem in statistic*, *Soviet. Math. Dokl.* 7, 818-820 (1966)