



International
Scientific Conference



Algebraic and Geometric Methods of Analysis



Devoted to 160 anniversary of
Dvytro Grave
(25.08.1863 - 19.12.1939)
Academician of the Ukrainian
Academy of Sciences, the
first director of the Institute of
Mathematics of NAS of Ukraine

May 29 – June 1, 2023
Odesa, Ukraine

LIST OF TOPICS

- Algebraic methods in geometry
- Differential geometry in the large
- Geometry and topology of differentiable manifolds
- General and algebraic topology
- Dynamical systems and their applications
- Geometric and topological methods in natural sciences
- Geometric problems in mathematical analysis

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The Gorenstein flat model structure relative to a semidualizing module

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Abstract.

A model structure on a category is a formal way of introducing a homotopy theory on that category, and if the model structure is abelian and hereditary, its homotopy category is known to be triangulated. So a good way to both build and model a triangulated category is to build a hereditary abelian model structure.

Let R be a ring and C be a left R -module. In this talk, we construct a unique hereditary abelian model structure on the category of left R -modules, in which the cofibrations are the monomorphisms with G_C -flat cokernel and the fibrations are the epimorphisms with C_C -cotorsion kernel belonging to the Bass class $\mathcal{B}_C(R)$.

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E. Lytvynov <i>Lie structures of the Sheffer group over a Hilbert space</i>	58
R. El Maaouy, D. Bennis, L. Oyonarte, J. R. G. Rozas <i>The Gorenstein flat model structure relative to a semidualizing module</i>	60
O. Makarchuk <i>On the structure of the distribution of one random series.</i>	61
S. Maksymneko <i>Homotopy types of diffeomorphisms groups of simplest Morse-Bott foliations on lens spaces</i>	62
Iu. Marko <i>Spaces of idempotent measures with countable support</i>	62
S. Marouaniv <i>SKT hyperbolic and Gauduchon hyperbolic compact complex manifolds</i>	63
N. Mazurenko, M. Zarichnyi <i>Invariant $*$-measures</i>	66
M. Mhamdi <i>Hölder Continuity of Generalized Harmonic Functions in the Unit Disc</i>	67
Ł. Michalak <i>Reeb graph invariants of Morse functions, manifolds and groups</i>	69
P. Mormul <i>Car+trailers' systems are locally nilpotentizable (a Trieste 2000 conference revisited)</i>	70
J. Morris <i>Degree theory for proper C^1 Fredholm mappings with applications to boundary value problems on the half line</i>	70
S. Myroshnychenko, K. Tatarko, V. Yaskin <i>How far apart can the projection of the centroid of a convex body and the centroid of its projection be?</i>	71
M. Nesterenko <i>Contractions of representations and realizations of Lie algebras</i>	73
Yu. Nikolayevsky <i>Geodesic orbit pseudo Riemannian nilmanifolds</i>	74
Z. Novosad, A. Zagorodnyuk <i>The conditions of hypercyclicity of weighted backward shifts</i>	75
T. Obikhod <i>Studying the properties of a superpotential using algebraic equations</i>	76
P. O. Olanipekun <i>On critical submanifolds of the Willmore energy in four dimensions</i>	78
I. Ovtsynov <i>Fermat–Torricelli sets of finite sets of points in Euclidean plane</i>	80
C. A. Pallikaros <i>Degenerations of complex associative algebras of dimension three</i>	82
J. F. Peters, F. Peu, J. Zia <i>Several forms of the geometric Lusternik-Schnirel'mann category</i>	82