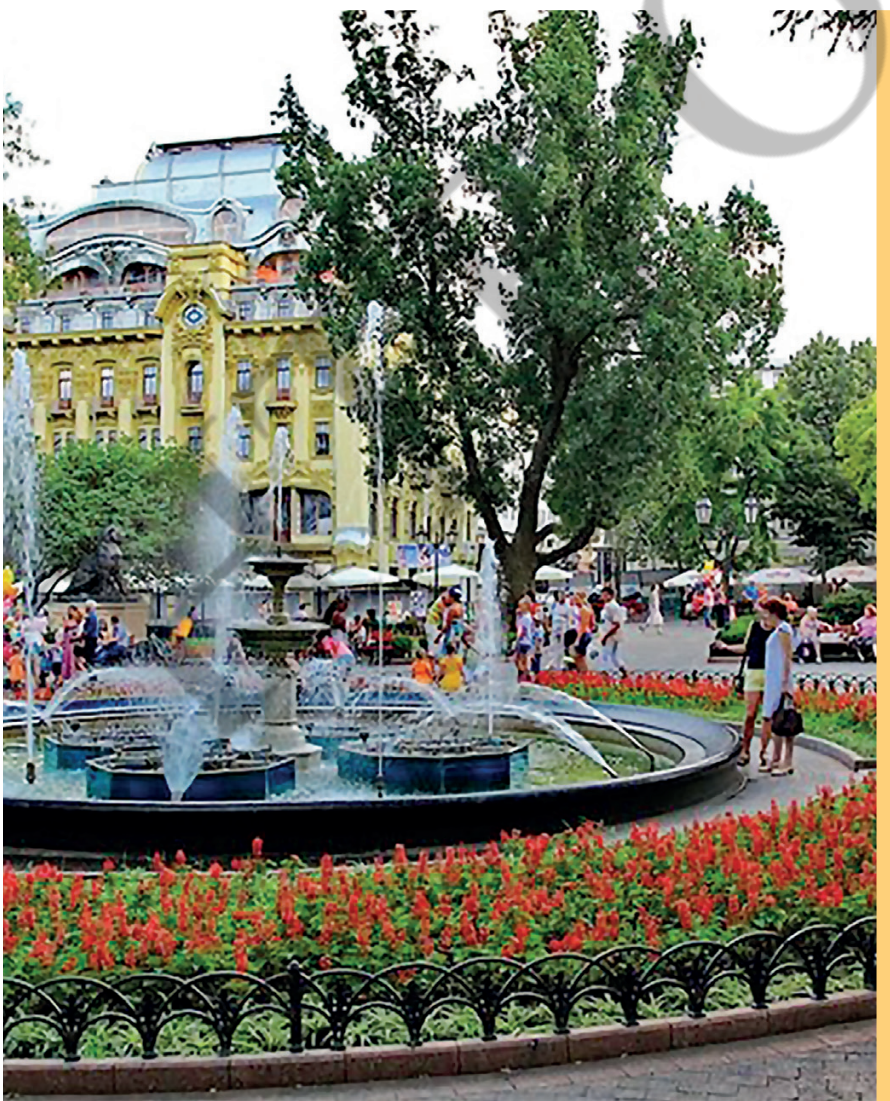
International
Scientific Conference

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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- Ministry of Education and Science of Ukraine
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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 $\mathrm{G_C}$-flat cokernel and the fibrations are the epimorphisms with $\mathcal{C}_C$-cotorsion kernel belonging to the Bass class $\mathcal{B}_C(R)$.

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