



International

Scientific

Conference

Algebraic and Geometric Methods of Analysis

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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

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- Odesa National University of Technology, Ukraine
- Institute of Mathematics of the National Academy of Sciences of Ukraine
- Taras Shevchenko National University of Kyiv
- International Geometry Center
- Kyiv Mathematical Society

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Characterized cycles integration on \mathcal{D} -modules as solutions in \mathbb{L} -holomorphic bundles

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From a moduli space developed to establish the equivalences between different characteristic cycles classes; where some are objects of a complex holomorphic bundle and others elements of a sheaf of coherent \mathcal{D} -modules, are determined co-cycles that represent solutions of the field equations in the holomorphic context and Lagrangian submanifolds. The characteristic cycles of the category of Lagrangian submanifolds are solutions to the field equation on \mathbb{L} -holomorphic bundles in the space-time \mathbb{M} (as complex Riemannian manifold) with singularities. We have the following technical lemma:

Lemma 1 (F. Bulnes). *Characteristic cycles in $C(\mathcal{G})$, as Lagrangians have their equivalent in a flat space \mathbb{P}^{n+4d} , (corresponding to the spertwistor space $\mathbb{P}\mathbb{T}$), as lines bundles in $\tilde{\mathbb{P}}$. The cycles in $C(\mathcal{G})$, are solutions of the field equation on \mathbb{L} -holomorphic bundles to the space-time \mathbb{M} , which includes singularities.*

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