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More feedback #1
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Nader-Zarei, Konfetti (ch...)
(After Tucker-Ol, Konfetti-ch - Oriolesman,)

Cotangent bundles and their relatives
Symmetry

Minor

Singularity constant bundle (exact) (exact)

Lagrangian microfunction

Scheme of moduli over a ring of

Ordinary sheaves of vector spaces

Constant bundles

E data

H =ラン

This lecture: Three situations in which the

Symplectic topology of Mn can be described

In terms of (different kinds of) sheaves on

A space B.
A Lagrangian submanifold \( \mathfrak{L} \) varies.

If \( \forall \, \xi \in \mathfrak{H}(L, T) \) varies.

Let \( \mathfrak{M} \) be an

Simplectic topology of \( \mathfrak{M} \cap B \times B \)

The contact complex picture is

\[
\begin{array}{c}
\frac{d\psi}{\partial \nu} = \mathfrak{M} \subset \mathfrak{L} \cap B \\
\mathfrak{L} = \mathfrak{L} \cap B \\
\end{array}
\]

coordinates \( \rho \) (time) and \( \eta \) (space).

Form \( \omega = d\theta \), \( \theta \) the universal one-form.

in its cotangent bundle, with the standard Simplectic

\( C \) a connected n-dimensional Cohn manifold, \( n = \mathfrak{T} \cdot \mathfrak{B} \)

(\text{Cotangent bundle})
Theorem (Nieder - Taylor and Fukaya - Smith):

\[ \text{If } \tau: B \rightarrow \{1\} \text{ and } L \subset M = T^\times B \text{ is closed, exact, and } \text{holomorphic}, \text{ then } \text{holomorphic, } \]

Many partial results on Arnold's conjecture, modifying

diffeomorphism.

Conjecture (Fel') (Conjecture bundles of compact

Conjecture (Arnold) Suppose that \( B \) is compact.

conjecture to the zero section (through such symplectic)

Then, every closed exact \( L \subset M = T^\times B \) is

Conjecture (Arnold):
of $\mathcal{O}_X$ (Fukaya-Oh, Hom $\neq \mathcal{M}$($\mathbb{L}$, $\mathbb{O}$)).

In fact, we have an underlying quasi-isomorphism

$$\mathbb{H}^0(\text{Hom}(\mathcal{M} \otimes \mathcal{M}^\vee, \mathbb{L})) \cong \mathbb{H}^1(\mathbb{L} \otimes \mathbb{O}).$$

**Example**

For some fixed $w \in \mathcal{H}^2(\mathcal{M}, \mathbb{C} \otimes \mathbb{Z})$, morphisms come from Floer cohomology theory.

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$$w^2(\mathcal{L}) = \mathcal{M} \otimes \mathcal{L} \otimes \mathcal{L} \otimes \mathbb{C} \otimes \mathbb{Z}.$$
Give rise to (general) isomorphisms. Moreover, over fields,

\[ X(\mathbb{F}_p, (\mathbb{Z}_p, \mathbb{Q}_p)) = \mathbb{L}_{et}. \]

Consider the intersection point. Cancel excess intersection points.

Ker morphism direct sum, in theory only.

Then cohomology, the differential use.

\[ \text{Hom}_\mathbb{F}(\mathbb{Z}/p, (\mathbb{Z}/p, \mathbb{Q}/p)) = \mathbb{H}^\bullet(\mathbb{L}_p, \mathbb{L}_p). \]

Per intersection point, there are one generator. Exchange cochains, in the fundamental group.

\[ \text{Hom}_\mathbb{F}(\mathbb{Z}/p, (\mathbb{Z}/p, \mathbb{Q}/p)) \cong \mathbb{G}_m(\mathbb{L}_p, \mathbb{L}_p). \]

Generally,
Here, $F(M)$ is set up using $v = w_2(B)$ pulled back to $M$.

Theorem (Vadori; alternatively, Aboujarad). There is a canonically full and faithful embedding $F(M) \hookrightarrow \Omega^*(B)$. Let $\Omega^*(B)$ be the differential graded derived category of sheaves of vector spaces whose cohomology sheaves are bounded and locally free of finite rank.

$\Omega^*(B)$ is not very interesting; up to (quasi-)isomorphism there is only one object, the zero-section.

Arnold's conjecture predicts that $F(M)$ for $M = T^*B$.
version of the statement in A. Arnold's Compendium: $E \in \mathcal{Q}_{\mathcal{B}}$ and hence $L \in \mathcal{B}$ (Galois-excision). In the

$\xrightarrow{\Rightarrow} E \in \mathcal{Q}_{\mathcal{B}}$ and hence $L \in \mathcal{B}$ (Galois-excision). In the

$H^x(\text{Hom}(\mathcal{Q}_{\mathcal{B}}, E, \mathcal{E})) \cong H^x(\mathcal{B}, L)$

Suppose now that $E$ is a dg local system. Then $E \in \mathcal{Q}_{\mathcal{B}}$ if and only if $E$ is a dg local system. L"efschetz theorem.

This leads to the previously stated theorem.
not all Lagrangian tori. Furthermore, admit one.

\[ M = \frac{T^2 \setminus \mathbb{R}^2}{\mathbb{Z}} \]

where \( T^2 \) is the symplectic manifold. Take the disjoint union \( T^2 \sqcup T^2 \), and consider \( T^2 \times \mathbb{R} \). In particular, \( T^2 \times \mathbb{R} \) contains a canonical section

\[ \mathfrak{g}_2(\mathbb{R}) = \mathbb{R} \times \text{Cl}(n,2). \]

Let \( B \) be a \( \mathbb{Z} \)-affine manifold. This means that \( \text{Logarithm torsion fibrations (with sections)} \)
This is an interesting question for more general affine manifolds (answer not as obvious).

For some affine map \( \phi \),

\[
\mathbb{R}^n \times B \xrightarrow{\phi} \mathbb{R}^n \times B
\]

symplectically \( \leftrightarrow \) symplectic.

We have the theorem of Eilenberg: Consider \( B \subset \mathbb{R}^n \) open. Suppose: Then:

Example: Consider \( B \subset \mathbb{R}^n \) open. Suppose: Then:

For \( \mathbb{R}^n \)-affine geometry of \( B \)

The tentative picture

Topological of \( M \)

Symplectic
For the $g$-valuation.

only if \( \lim_{n \to \infty} \frac{1}{n} = 0 \). We write \( \log v = \infty \), but

in other words, infinities may now be \( +0 \) but

for every \( C \) such that \( a_r \to 0 \)

for every \( C \) there are only finitely

many \( a_r \in C \).

In formal sense \( a = \frac{a_r}{r} \) where \( v \in \mathbb{R} \), \( a \in \mathbb{C} \), and:

Definition. The notion \( \forall v \in \mathbb{F} \).

To organize these, we need:

arcs \( r = \int_{u}^{v} \) appear naturally in their cohomology.

this situation, infinities sum indexed by simplicial

Note that we \( \mathbb{Z}_2(M) \) is no longer always exact.
Given \( C \), there are only finitely many \((k_1, \ldots, k_n)\)

\[
\log_b \left( \frac{a_1^{k_1} \cdots a_n^{k_n}}{} \right) = C.
\]

Such that

\[
\forall y \in \mathbb{N} \quad \exists \frac{1}{n} \in \mathbb{Z}.
\]

Following conditions for all \( b \in \mathbb{Z} \), \( a \in \mathbb{Z} \) and satisfying

\[
\prod_{i=1}^{n} a_i = 1
\]

Suppose \( \mathcal{B}(R, \mathfrak{m}) \) is open and connected. Recall that \( \mathfrak{m} \)

arc of the form

The sheaf \( \mathcal{O} \) of \( \mathcal{O}_X \) on \( X \) is non-archimedean holomorphic.

A manifold \( \mathcal{B} \) a sheaf \( \mathcal{O} \) of \( \mathcal{O}_X \) on \( X \) is non-archimedean.

Kontsevich-Siebert's manifolds associate to every \( 2 \)-brane
no longer true (or even makes sense) in general.

For instance, \( f(x, x) = x \times (1, 0) \) is not even one-to-one. Hence, in definition 7, for \( f(M) \) is given our \( A_B \). The ultraharmonic category

is now on \( B \) is compact. The ultraharmonic category

function theory). For the far deeper ultraharmonic phenomenon in complex

Remark. Given \( T \in X \), we

As \( k \to \infty \), at most \( k \log k \) growth \( \forall \alpha \in \mathbb{R}, k \leq 0 \).

As \( k \to -\infty \), rapid decay \( \forall \alpha \in \mathbb{R}, k \leq 0 \).

\( f(t) = \frac{1}{(x^2 + t^2)^{1/2}} \) and

For \( B = (-\infty, 0] \), we get function on the

non-archimedean punctured disc.
About the -smith.

(Polytechnic - Taylor) and \( B \times \frac{\pi}{4} \) (square terms). 

\[ B = \frac{\pi}{4} \times \frac{\pi}{4} \]

We have full proofs for \( B = \frac{\pi}{4} \) whenever the conjecture is true, proved so far the subcategory of \( \mathcal{F}(M) \) comprising all Lagrangean.

The right hand side is the derived category

\[ \mathcal{F}(M) \xrightarrow{\mathcal{D}(\mathcal{E})} \]

faithful embedding

Conjecture. There is a (cohomological) full and

We take to be the pullback of \( \mathcal{W}_2(\mathcal{B}) \).

As before, the definition includes \( \mathcal{W}_2(\mathcal{M}, \mathcal{N}, \mathcal{L}) \), which
depending on the ribbon

\[ w = \theta \]

for a closed oriented surface \( M \), and equip \( E \) to an open oriented surface \( M \), and equip \( E \) to an

surface with a symplectic form \( \omega \) and equip \( E \) with a "fattening of the edges" together with a cyclic ordering of the vertices, which matches the edges of \( E \) (an unoriented graph).

Take a finite ribbon graph \( E \) and

ribbon graphs.
The Fukaya category $\mathbf{F}(M)$ is defined as $\mathbf{F}(M) \leftarrow \mathfrak{X}_G \leftarrow \mathfrak{G}$. It can be an action of the chain complex...

If needed to come with d by function to dg category associated to a d - variety or...

On the smooth part, $X_B$ is the same as in the dg category.

$\mathfrak{G}$ is a global section $\mathbf{L}(\mathfrak{X}_G) \leftarrow \mathfrak{G}$.
In $\mathbb{C}(A^2)$, there are non-isomorphic 2-dimensional vector spaces. There are replaced by 2x2 graded chain complexes. There are 3 natural indecomposable objects.

\[ \begin{array}{c c}
\emptyset & \emptyset \\
\emptyset & 1
\end{array} \]

For a general $d$-valent graph, use $A_{d-1}$ in this way.
The origin of their theories is in "superman fields".

From compact Lagrangian "superman fields".

For noncompact Lagrangian "superman fields."

Conclusion.