Instanton Suns and Monodromy Lecture 2 (F= (G-) U(1)) (F- Invariant W(X1,..., Xn))
(F= Compact globalin m. Cn -> gx

M(r)/G = a · Kähler space (Sometimen a mansfeld) ty. depends on location of re Im(n). X=pt'(r)/6 in a finic variety.

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Say rank G=n-d.

Say rank G=d.

=) dian x X=d.

Consider subsets of dot the homes, couls Xi, , --- , Xid Low open set in Cd contains of decend to a subsul & X? X° X' -- X2 1 -- 1 M= -51x012 +1x12 -- +1x51~

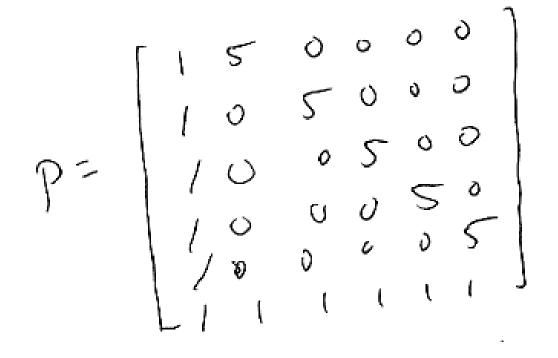
Ko X1,-, Ky a cond chart? |X5|² = r +5(x0|²-1x|²-...-/xyl²

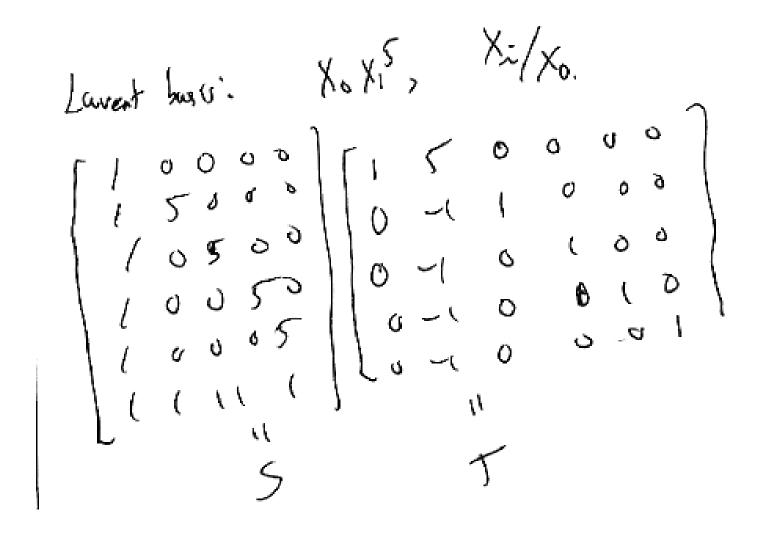
if r>0, open set contrain of andrew can be solved. use (MI) to make X5 realIn the example, 1-1(v)/6 = + hd space of O(5) am C1P4 3W=0. W=Xo(x5+-+x5+x,12x,x,x,x) W=Xo(x5+-+x5+x,2x,x,x) A5+-+x5+x,-x=0. on a gunti hypusurfue in CIP's.

Families of CY manifolds? Families of C7 mur.

2 types of params: Coefs int.

(capturisticit) (Pir) = P runnesutri integers TTX Vir Lowent Sugn for Fining. To X the (tia) = T





Mirmi replue P, S, T by tp, ft, 5 In examply for mirror graph () U(1) x 753

(Briefly stip analysis of 1-1mp effects)

Instanton expansions:

Cahunday of their variety is comput)

(applies of their variety is comput)

For Xi, -- Xid to be words in some chart, need player (xxi, -- Xid) has at worst a finite Kennel. if there is a finite Kernel, Cd/Ker., singularitia. H*(X, Q) (in shill be calculated.

Fact: $H^{x}(x, \alpha)$ is generated as α -algebra $H^{y}(x)$.

Let $H^{y}(x)$ $G^{y}(x)$ $G^{y}(x)$ G -> U(1)^N. $X = \mu^{-1}(r)/G$.

any chamber of G. determine a U(1)-suche

(or C^{+} -Suelle). can identify H'(x, a) = char(6) & a.

Specifically,

if Gaets on Xi by Xi, $\chi_i = \int_{a}^{a} T(e) dx$ $\chi_i = \int_{a}^{a} T(e) dx$ eMa = basis & char(6) & a. Na Lasis for H2(x, a)

$$\frac{3}{3} = \sum_{i=1}^{n} Q_{i}^{i} = \int_{i=1}^{n} Q_{i}^$$

(Stanley-Resner ideal)
The this is a complete set of relations.

[Si, --- . Sia] [X]

Correlation functions in (typologuil) FLSM.

E -> On governed by 2. M-1(r)/G. 200. 200.

Q= low comparates of Chind fades.

D=M21(212) CM

D=M21(212) CM

D|M2= P:M2>CN (J, ... 5 k ?) oz = a certain point Pz on Z Should be mysped to deducin ₹,={x,=0}.

dassial term:

Insist that hop I -) (Me be

try-trivial, and minimize energy.

=) map is constant.

ME: C2 -> PR for u(c) ME: (r)/u(1).

$$C^2 \rightarrow C^n$$
: $\lambda : U(1) \rightarrow C$
 $X_j = f_j(s,t)$ homeofoly d_j

when $d_j = deg\left(\frac{\lambda_j}{k_j}\right)$

the horid: $d_j = 0$ for $(k_j \circ \lambda)$
 $\chi_j = (\text{withint an } C^2$.

The restrict is to import sit.

If I is constant, means the image point less on (XIC=0).

$$\left\langle \left(\mathcal{T}_{\lambda_{1}}^{-} - \mathcal{T}_{\lambda_{1}}^{-} \right) \right\rangle = \pm \left(\left(\mathcal{X}_{\lambda_{1}}^{-} = 0 \right) n - n \left(\mathcal{X}_{\lambda_{1}}^{-} = 0 \right).$$

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$$\left\langle \left(\mathcal{T}_{\lambda_{1}}^{-} - 0 \right) \right\rangle$$

$$\frac{\partial W}{\partial x_{i}} = 0.$$

 $\frac{1}{P(f_1(s,t))} = 0$ $\frac{1}{P(s,t)} = 0$ This will ranish clentrally it it vanishs at dot! Points.

duisi class & P = anti-canal dass of X. dx max

$$\frac{\langle \sigma_{i_1} - \sigma_{i_K} \rangle_{GLSM}}{11}$$

$$\frac{\langle \sigma_{i_1} - \sigma_{i_K} \rangle_{GLSM}}{\sqrt{\sigma_{i_1} - \sigma_{i_1}}} = \frac{1}{\sqrt{\sigma_{i_1}}} = \frac{1}{\sqrt{\sigma_$$

if mys (-> (n of dies dj.

if mys (Pin) & E \(\chi_1 = 0 \) \(\chi_1 \) \(\chi_2 \chi_1 \) \(\chi_1 \chi_2 \chi_2 \chi_1 \) \(\chi_2 \chi_2

Cn=42/2777 (-K)-do+1 /m
-do=5m

$$x_{5} = f_{m}(s,t)$$
 $y = y - m$
 x_{6} has dear s_{m}
 $P()$ has dear s_{m}
 $P()$ has $s_{m} = -(y_{5m}^{5mH}(s)^{5})$
 $-(y_{5m}^{3}(-s_{m})^{5mH}) = -(y_{5m}^{5mH}(s)^{5})$
 $= -(-s_{5m}^{5mH}(s)^{5mH})$