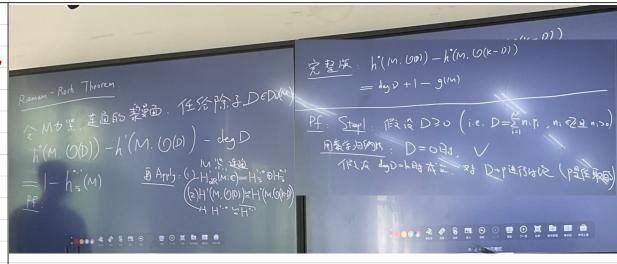
可以 Hoolge 分解的 复流形型 Kälher 流形



$$h(2,00) - din(2ns^{*}) = h'(2,00+1)$$

$$1 - din(2ns^{*}) = din(2ns^{*})$$

$$1 - h'(2,00+1) + h'(2,00)$$

$$= h'(2,00+1) - h'(2,00+1) - (1+d=0)$$

$$= h'(2,00) - h'(2,00) - d=0$$

Step 2. 讨论-般网路子D

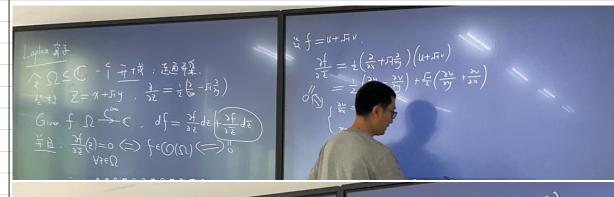
Step2 (岸(坂 1) = D, -D2, D20 及20

(1) 引巻 ) ヨーマナ 3 D, 人

(1) 引巻 ) ヨーマナ 3 D, 人

(1) 「一 
$$O(D-P)$$
 →  $O(D)$  →  $C_P$  →  $C_$ 

induces: 
$$0 \rightarrow H^{\bullet}(\underline{u}, O(D, T)) \stackrel{?}{\rightarrow} H^{\bullet}(\underline{u}, O(D)) \stackrel{?}{\rightarrow} C$$
  
 $\stackrel{*}{\rightarrow} H^{\bullet}(\underline{u}, O(D, T)) \rightarrow H^{\bullet}(\underline{u}, O(D)) \rightarrow 0$   
 $\stackrel{*}{\rightarrow} H^{\bullet}(\underline{u}, O(D, T)) - h^{\bullet}(\underline{u}, O(D, T)) - (dg^{D})$   
 $= h^{\bullet}(\underline{u}, O(D, T)) - h^{\bullet}(\underline{u}, O(D, T)) - (dg^{D})$   
 $= 1 - h_{\overline{o}}^{\bullet, 1}(M)$ 



## f: 2 <del>c∞</del> C 光滑复值函数 全纯 可推 溷和

## **茨轭调和函数**

$$\int_{0}^{2} \left(\frac{3}{2x}\right)^{2} + \left(\frac{3}{2y}\right)^{2} \frac{12}{2} \triangle$$

$$\int_{0}^{2} \left(\frac{3}{2x}\right)^{2} + \left(\frac{3}{2x}\right)^{2} \frac{12}{2} \triangle$$

$$\frac{3}{3232} = \frac{1}{4} \left( \frac{3}{2} - \frac{1}{2} \right) \left( \frac{3}{2} + \frac{1}{2} \right)$$

$$= \frac{1}{4} \left( \frac{3}{2} + \left( \frac{3}{2} \right)^2 \right) = \frac{1}{4} \triangle$$

$$= \frac{1}{4} \left( \frac{3}{2} + \left( \frac{3}{2} \right)^2 \right) = \frac{1}{4} \triangle$$

$$= \frac{1}{4} \left( \frac{3}{2} + \frac{1}{2} + \frac{3}{2} \right) \left( \frac{3}{2} + \frac{1}{2} + \frac{3}{2} \right)$$

$$= \frac{1}{4} \left( \frac{3}{2} + \frac{1}{2} + \frac{3}{2} + \frac{3}{2} \right) \left( \frac{3}{2} + \frac{1}{2} + \frac{3}{2} \right)$$

$$= \frac{1}{4} \left( \frac{3}{2} + \frac{3}{2}$$

M 0 0 9 0 F

$$\frac{\partial}{\partial z} = \frac{1}{4} \left( \frac{1}{2} - F_{3}^{2} \right) \left( \frac{1}{2} + F_{3}^{2} \right)$$

$$= \frac{1}{4} \left( \frac{1}{2} + F_{3}^{2} \right) \left( \frac{1}{2} + F_{3}^{2} \right)$$

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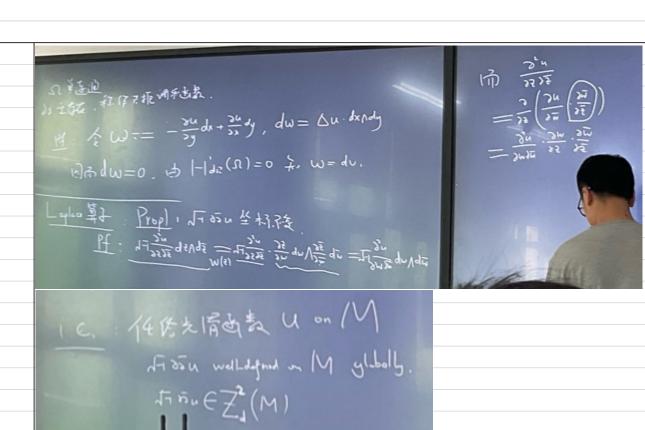
$$= \frac{1}{4} \left( \frac{1}{2} + F_{3}^{2} \right) \left( \frac{1}{2} + F_{3}^{2} \right)$$

$$= \frac{1}{4} \left( \frac{1}{2} + F_{3}^{2} \right) \left( \frac{1}{2} + F_{3}^{2} \right)$$

$$= \frac{1}{4} \left( \frac{1}{2} + F_{3}^{2} \right) \left( \frac{1}{2} + F_{3}^{2} \right)$$

$$= \frac{1}{4} \left( \frac{1}{2} + F_{3}^{2} \right) \left( \frac{1}{2} + F$$

ST单连追 引生存在,称作于振调和出数。



解方程

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H: (1) (1) (1) Well-defined

H: (M) = \overline{Z}: (M) \overline{Z}: (M) \overline{Z}: (M) \overline{Z}: (M) \overline{Z}: \overline{Z}: (M) \overline{Z}: \overline{Z}: (M) \overline{Z}: (M)
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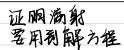
It suffices to prove [0.5ci for)It 0' = 0.+5u is [0.5ci for) [0.5ci fo

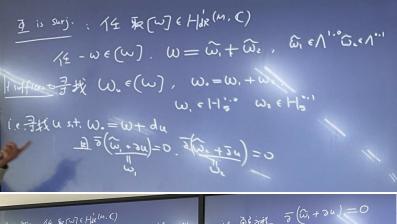
 $\frac{\int_{M} \int_{M} d\theta \cdot - \int_{M} \delta \cdot d\theta}{\left( U \cdot \eta \right)} = 0$   $\frac{(1) \cdot \overline{f} \cdot H_{\overline{f}}(M) \oplus H_{\overline{f}}(M) \longrightarrow H_{\overline{f}}(M)}{\left( W \cdot \eta \right)} \longrightarrow W + \overline{\eta}$   $\frac{\overline{f} \text{ is well-aspead}}{\overline{f} \text{ is i.i.} \text{ i.i.} \text{ i.i.}} d(W + \overline{\eta}) = 3W + 5\overline{\eta} = 0$   $\frac{\overline{f} \text{ is well-aspead}}{\overline{f} \text{ i.i.} \text{ i.i.}} \frac{\overline{f} \text{ i.i.}}{\overline{f} \text{ i.i.}} = 0$ 

i.e.  $\sqrt{(4,\beta)}$  at  $\beta = d\beta$  so forms.

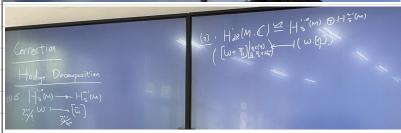
|  $\frac{1}{1}$  and  $\frac{1}{2}$  and  $\frac$ 

证满射 零用到解方程



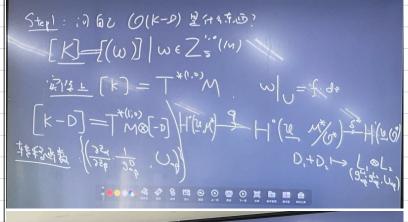






## 2 Serre Duality

## 除于到我丛



$$\begin{aligned} & \frac{3|\lambda-\hat{f}|_{2}^{2}}{\mathbb{Z}_{3}^{-1}(0)(U)} = \left\{ \int_{0}^{1} d^{3}(u) \left( f + D^{2} u \right) \right. \\ & \frac{3|\lambda-\hat{f}|_{2}^{2}}{\mathbb{Z}_{3}^{-1}(0)(U)} = \left\{ \int_{0}^{1} d^{3}(u) \left( f + D^{2} u \right) \right. \\ & \left. \left. \left( \int_{0}^{1} d^{3}(u) \left( f + D^{2} u \right) \right) \right\} \\ & \left. \left( \int_{0}^{1} d^{3}(u) \left( \int_{0}^{1} d^{3$$

$$\frac{\overline{bt}: (\partial(k-b)(\overline{u}) = \{t, v_k(\overline{u}) \mid (t) + k-b \ge 0\}}{\partial(k-b)(\overline{u}) = Z}$$

$$\frac{\sum_{i=0}^{2}(-D)(U)}{D(k-D)(U)} = \begin{cases} f(w)(U) & (fw)-D>0 \end{cases}$$

$$\frac{\sum_{i=0}^{2}(-D)(U)}{D(k-D)(U)} = \sum_{i=0}^{2}(-D)(U)$$

H(U,O)中的元素是什么?

Stop2 H'( $\underline{u}$ ,  $\underline{Z}_{\bullet}^{\bullet}(-D)$ )  $\underline{u}$  H'( $\underline{u}$ ,  $\underline{U}(D)$ )

Stop2 H'( $\underline{u}$ ,  $\underline{Z}_{\bullet}^{\bullet}(-D)$ )  $\underline{u}$  H'( $\underline{u}$ ,  $\underline{U}(D)$ )  $\underline{u}$   $\underline{u}$ 

[1] f.g. w | = hep dt. {(h-p. U-p)} & H'(U, O) Reall: H'(U, O) = H'(M) i.e.: {(h-p. U-p)} | > 1