

$$\begin{array}{ccc}
\mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \infty \\ \blacktriangleleft \end{array} \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \mathbb{C} \\ \blacktriangleleft \end{array} \begin{array}{c} 01 \\ \mathbb{C} \end{array} & \xrightarrow{=} & \frac{\bar{\partial}\gamma = \frac{\partial\gamma}{\partial\bar{z}}d\bar{z}}{\gamma \in \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \infty \\ \blacktriangleleft \end{array} \mathbb{C}} \\
\downarrow \iota & & \\
\mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \infty \\ \blacktriangleleft \end{array} \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \mathbb{C} \\ \blacktriangleleft \end{array} \begin{array}{c} 01 \\ \mathbb{C} \end{array} & \xrightarrow{=} & \frac{\varphi d\bar{z}}{\bar{\partial} \underbrace{\varphi d\bar{z}} = 0} \\
\downarrow \jmath & & \\
\mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \infty \\ \blacktriangleleft \end{array} \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \mathbb{C} \\ \blacktriangleleft \end{array} \begin{array}{c} 01 \\ \mathbb{C} \end{array} & \xrightarrow{=} & \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \infty \\ \blacktriangleleft \end{array} \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \mathbb{C} \\ \blacktriangleleft \end{array} \begin{array}{c} 01 \\ \mathbb{C} \end{array} \sqcap \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \infty \\ \blacktriangleleft \end{array} \mathbb{C}_r \begin{array}{c} \blacktriangleright \\ \mathbb{C} \\ \blacktriangleleft \end{array} \begin{array}{c} 01 \\ \mathbb{C} \end{array}
\end{array}$$

$$\bigwedge_{\varphi} \bigvee_{\gamma} \frac{\partial \gamma}{\partial \bar{z}} = \varphi$$

$$\bigvee \left\{ \begin{array}{l} 0 < r_n \nearrow r \\ \chi_n \in \mathbb{C}_{\infty}^{\nabla \mathbb{C}} \end{array} \right. \bigwedge_n \left\{ \begin{array}{l} \text{Trg } \chi_n \in \mathbb{C}_{r_{n+1}} \\ \chi_n = 1 \\ \bigvee \gamma_n \in \mathbb{C}_{\infty}^{\nabla \mathbb{C}} \\ \frac{\partial \gamma_n}{\partial \bar{z}} = \chi_n \varphi \end{array} \right.$$

$$\bigvee_{\hat{\gamma}_n} \left\{ \begin{array}{l} \frac{\partial \hat{\gamma}_n}{\partial \bar{z}} = \varphi \\ \overline{\mathbb{C}_{r_{n-1}}^{\nabla \mathbb{C}} \hat{\gamma}_{n+1} - \hat{\gamma}_n} \leq 2^{-n} \end{array} \right.$$

$$\hat{\gamma}_1 = \gamma_1 : 0 \leq n \curvearrowright n+1$$

$$\frac{\partial}{\partial \bar{z}} \overline{\gamma_{n+1} - \hat{\gamma}_n} = \frac{\partial \gamma_{n+1}}{\partial \bar{z}} - \frac{\partial \hat{\gamma}_n}{\partial \bar{z}} = \chi_{n+1} \varphi - \varphi \Rightarrow \overline{\frac{\partial}{\partial \bar{z}} \overline{\gamma_{n+1} - \hat{\gamma}_n} \gamma_{n+1} - \hat{\gamma}_n} = 0 \Rightarrow \gamma_{n+1} - \hat{\gamma}_n \text{ hol on } \mathbb{C}_{r_n}$$

$$\Rightarrow \overline{\gamma_{n+1} - \hat{\gamma}_n} \rightsquigarrow \sum_{0 \leq m} z^m c_m \text{ glm on } \mathbb{C}_{r_{n-1}} \Rightarrow \left\{ \begin{array}{l} \bigvee^z 1 = \sum_m z^m c_m \in \mathbb{C}_{\nabla \mathbb{C}} \\ \overline{\mathbb{C}_{r_{n-1}}^{\nabla \mathbb{C}} \gamma_{n+1} - \hat{\gamma}_n - 1} \leq 2^{-n} \end{array} \right.$$

$$\hat{\gamma}_{n+1} = \gamma_{n+1} - 1 \Rightarrow \overline{\hat{\gamma}_{n+1} - \hat{\gamma}_n} \leq 2^{-n} \Rightarrow \gamma \rightsquigarrow \hat{\gamma}_n \in \mathbb{C}_{r_n}^{\nabla \mathbb{C}}$$

$$\frac{\partial \hat{\gamma}_{n+1}}{\partial \bar{z}} = \frac{\partial \gamma_{n+1}}{\partial \bar{z}} = \chi_{n+1} \varphi \underset{\mathbb{C}_{r_{n-1}}}{=} \varphi$$

$$\text{bel } U \underset{\text{off}}{\in} \mathbb{C}_r \Rightarrow \bigvee_m U \subset \mathbb{C}_{r_m} \Rightarrow \hat{\gamma}_n \underset{n \geq m}{\rightsquigarrow} \gamma = \hat{\gamma}_m + \underbrace{\sum_{n \geq m} \overline{\hat{\gamma}_{n+1} - \hat{\gamma}_n}}_{=: 1_m} \text{ on } \mathbb{C}_{r_m}$$

$$\frac{\partial 1_m}{\partial \bar{z}} = \sum_{n \geq m} \frac{\partial}{\partial \bar{z}} \overline{\hat{\gamma}_{n+1} - \hat{\gamma}_n} = \sum_{n \geq m} \underbrace{\frac{\partial \hat{\gamma}_{n+1}}{\partial \bar{z}} - \frac{\partial \hat{\gamma}_n}{\partial \bar{z}}}_{\varphi - \varphi} = 0 \underset{\text{Wei}}{\Rightarrow} 1_m \text{ hol on } \mathbb{C}_{r_m}$$

$$\Rightarrow \overline{\gamma} \in \mathbb{C}_{r_m}^{\nabla \mathbb{C}} \wedge \frac{\partial \gamma}{\partial \bar{z}} = \frac{\partial \hat{\gamma}_m}{\partial \bar{z}} + \frac{\partial 1_m}{\partial \bar{z}} = \frac{\partial \hat{\gamma}_m}{\partial \bar{z}} \underset{\mathbb{C}_{r_m}}{=} \varphi$$

$$m \text{ bel } \Rightarrow \gamma \in \mathbb{C}_r^{\nabla \mathbb{C}} \wedge \frac{\partial \gamma}{\partial \bar{z}} = \varphi$$

$$\bigwedge_{\varphi} \bigvee_{\gamma} \Delta \gamma = \varphi \text{ Poisson kern}$$

$$\bigvee_1 \frac{\partial 1}{\partial \bar{z}} = \varphi \Rightarrow \bigvee_{\bar{1}} \frac{\partial \bar{1}}{\partial \bar{z}} = \bar{1} \Rightarrow \frac{1}{4} \Delta \gamma = \frac{\partial^2}{\partial \bar{z} \partial z} \gamma = \frac{\partial}{\partial \bar{z}} \frac{\partial \bar{\gamma}}{\partial \bar{z}} = \frac{\partial}{\partial \bar{z}} \bar{1} = \varphi$$