

$$\begin{array}{l} \alpha = \\ \{\alpha_i\}_{i1} \in \\ \ell^\infty(C) \\ D_\alpha \in \\ B(\ell^2(C)) \\ D_\alpha(x_1,x_2,\ldots):=(\alpha_1x_1,\alpha_2x_2,\ldots). \end{array}$$

$$\begin{array}{l} \sigma_p(D_\alpha)=\\ \{\alpha_i\}_{i1}\\ \{\alpha_i\}\subset\\ \sigma_p(D_\alpha)\\ \alpha_i^{(i)}\\ e^{(i)}\\ \alpha_iI)(e^{(i)}=\\ \sum_n1(\alpha_n-\\ \alpha_i)e_n^{(i)}=\\ 0but e^{(i)}\neq\\ 0.\\ \sigma_p(D_\alpha)\subset\\ \{\alpha_i\}\\ \lambda\notin\\ \{\alpha_i\}\\ (D_\alpha-\\ \lambda I)(x)=\\ 0\\ x\neq\\ 0\\ (\alpha_1x_1,\alpha_2x_2,\ldots)=(\lambda x_1,\lambda x_2,\ldots). \end{array}$$

$$\begin{array}{l} x\neq\\ 0\\ n\in\\ N\\ \alpha_nx_n=\\ \lambda x_n\lambda=\\ \alpha_n\in\\ \{\alpha_i\}\\ \sigma_p(D_\alpha)=\\ \{\alpha_i\}\\ \sigma(D_\alpha)=\\ \frac{\sigma_p(D_\alpha)}{\sigma_p(D_\alpha)}\\ \sigma_p(D_\alpha)\subset\\ \sigma(D_\alpha)\\ \sigma(D_\alpha)\\ \frac{\sigma(D_\alpha)}{\sigma_p(D_\alpha)}\\ \frac{\lambda\notin}{\sigma_p(D_\alpha)}\\ \lambda\notin\\ \sigma(D_\alpha)\\ \lambda\in\\ S(D_\alpha)\\ \lambda\\ D_\alpha-\\ \lambda I\\ (D_\alpha-\\ \lambda I)(x)=\\ (D_\alpha-\\ \lambda I)(y)\\ ((\alpha_1-\lambda)x_1,(\alpha2-\lambda)x_2,\ldots)=((\alpha_1-\lambda)y_1,(\alpha_2-\lambda)x_2,\ldots)(x_1,x_2,\ldots)=(y_1,y_2,\ldots). \end{array}$$

$$\begin{array}{l} y = \\ \{y_n\} \in \\ \ell^2(C) \\ x := \left(\frac{y_1}{\alpha_1-\lambda}, \frac{y_2}{\alpha_2-\lambda}, \ldots \right). \end{array}$$

$$\begin{array}{l} \frac{\lambda\notin}{\{\alpha_i\}}\\ \inf_{i1}\alpha_i-\\ \lambda=\\ d\\ d>\\ 0\\ x\in\\ \ell^2(C)\\ \|x\|_{\ell^2}^2=\\ \sum u_i^2\quad\sum u_i^2 \end{array}$$