Notations

\( \mathbb{N} \) \hspace{1em} Set of positive integers
\( \mathbb{Z} \) \hspace{1em} Set of integers
\( \mathbb{R} \) \hspace{1em} Set of real numbers
\( \mathbb{C} \) \hspace{1em} Set of complex numbers
\( \sigma(T) \) \hspace{1em} Spectrum of the linear operator \( T \)
\( \sigma_p(T) \) \hspace{1em} Point spectrum of the linear operator \( T \)
\( \sigma_{ap}(T) \) \hspace{1em} Approximate point spectrum of the linear operator \( T \)
\( \sigma_{su}(T) \) \hspace{1em} Surjectivity spectrum of the linear operator \( T \)
\( \sigma_T(x) \) \hspace{1em} Local spectrum of the linear operator \( T \) at a vector \( x \)
\( \rho(T) \) \hspace{1em} Resolvent of the linear operator \( T \)
\( \rho_T(x) \) \hspace{1em} Local resolvent of the linear operator \( T \) at a vector \( x \)
\( \phi_n \) \hspace{1em} \( n \)-th iterate of \( \phi \), that is, \( \underbrace{\phi \circ \phi \circ \cdots \circ \phi}_{\text{n \ times}} \)
\( C_\phi \) \hspace{1em} Composition operator induced by \( \phi \)
\( A(\mathbb{D}) \) \hspace{1em} Disk algebra