

Local characterization of nuclear operator systems

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It will be discussed that an operator system \mathcal{S} is nuclear if and only if there exist nets of unital completely positive maps $\Phi_\lambda : \mathcal{S} \rightarrow M_{n_\lambda}$ and $\Psi_\lambda : M_{n_\lambda} \rightarrow \mathcal{S}$ such that $\Psi_\lambda \circ \Phi_\lambda$ converges to $\text{id}_{\mathcal{S}}$ in the point-norm topology. This generalizes Choi and Effros's result in C^* -algebras.