1 Resources

Book: Timmerman . "Invitation to QG's and Duality." Section on $SU_q(2)$.
Papers. Functional analysis.

- Woronowicz. "Twisted SU(2) group."
- Woronowicz. "Compact matrix pseudogroups."
- Woronowicz. "Compact Quantum Groups."

Peter-Weyl theory.

- Koornwinder. "Orthogonal polynomials in connection to QGs"
- Masuda, Mimachi, Makagami, et al. "Representations of QGs and a q-analog of orthogonal polynomials."

2 Compact (Matrix) Quantum Groups

Vague idea: $G \subset M_N(\mathbf{C})$, a compact group. Things you'd like: representations, harmonic analysis.

$$L^2(G) = \bigoplus_{\pi \in \mathrm{Irr}(G)} L^2_\pi(G)$$

where

$$L^2_\pi(G) = \mathrm{span}\{\pi_{ij}\}_{i,j \leq \dim(\pi)}$$

So, try to reformulate "without points." I.e. think in terms of algebras in stead of matrices, etc. From Gelfand: $G \leftrightarrow C(G)$. Can recover topology. To encode group structure, take duals of multiplication maps.