



# Quantum Free Yang-Mills on the Plane

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We construct a free-probability quantum Yang-Mills theory on the two dimensional plane, determine the Wilson loop expectation values, and show that this theory is the  $N \rightarrow \infty$  limit of  $U(N)$  quantum Yang-Mills theory on the plane.

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Subjects: **Operator Algebras (math.OA)**; Mathematical Physics (math-ph)

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