1163-57-529 **Thang T. Q. Le** (letu@math.gatech.edu), School of Mathematics, Georgia Institute of Technology, 686 Cherry St., Atlanta, GA 30332, and **Adam S. Sikora*** (asikora@buffalo.edu), 244 Math Bldg, University at Buffalo, Buffalo, NY 14260. *Stated SU(n)-skein modules.* Preliminary report.

We introduce stated SU(n)-skein modules $\mathcal{S}_n(M)$ of 3-manifolds M which extend the Reshetikhin-Turaev SU(n)-quantum invariant of links to arbitrary 3-manifolds and quantize the SL(n)-character varieties of M (and their generalizations).

We prove several properties of our skein modules; In particular, a splitting theorem which relates the stated SU(n)-skein module of M to the tensor product of the pieces of M cut along a disk.

In the case of thickened marked surface $\Sigma \times I$, the skein module of it, denoted by $\mathcal{S}_n(\Sigma)$ is a non-commutatuve algebra. We prove that for the bigon it is isomorphic with the quantum group $\mathcal{O}_q sl(n)$. We also show that for any ideally triangulated marked surface Σ, the splitting theorem defines an embedding of $\mathcal{S}_n(\Sigma \times I)$ into the tensor product of stated skein algebras of the ideal triangles and, consequently, into a quantum torus. (Received September 08, 2020)