Meeting: 1002, Pittsburgh, Pennsylvania, SS 1A, Special Session on Invariants of Knots and 3-Manifolds

1002-57-230 **Dorin Cheptea*** (dcheptea@buffalo.edu), Department of Mathematics, State University of New York at Buffalo, Buffalo, NY 14260-2900. *The representation of the Mapping Class Group induced by the TQFT(s) of the LMO and the universal quantum invariant of 3-manifolds.* Preliminary report.

In a previous paper (joint work with Thang Le) we constructed a TQFT for the LMO invariant, along with a series of truncated TQFTs. Recently, Habiro and Le have proved the existence of universal quantum invariants $\tau_M^{\mathfrak{g}} \in \Lambda$, and recovered from these the Ohtsuki series. The later is also known to be recovered via weight systems from the LMO invariant.

Here we attempt to create a similar "commutative diagram" for manifolds with boundary, to construct a TQFT for τ, and to derive information about the induced representation of the Mapping Class Group. (Received September 14, 2004)