Meeting: 1003, Atlanta, Georgia, SS 15A, AMS Special Session on Quantum Topology, I

1003-57-1096 **Dorin Cheptea*** (dcheptea@buffalo.edu), Mathematics Department, State University of New York at Buffalo, Buffalo, NY 14260-2900. *A TQFT for the universal quantum invariant of 3-manifolds and the induced representation of the Torelli Group.* Preliminary report.

In a previous paper (joint work with T. Le) we constructed a TQFT for the LMO invariant of 3-dimensional manifolds, along with a series of truncated TQFT(s). Recently, Habiro and Le have proved the existence of the universal quantum invariants $\tau_M^{\mathfrak{g}} \in \Lambda$, and recovered from these via Taylor expansion the Ohtsuki series. The later is also known to be recovered via weight systems from the LMO invariant.

Here we attempt to establish a similar "commutative diagram" for manifolds with boundary, to construct a TQFT for τ, and to investigate the induced representation on certain subgroups of the Mapping Class Group. (Received October 03, 2004)