

A GROUP OF LINKS AND VASSILIEV INVARIANTS

HARUKO AIDA MIYAZAWA

It is known that two knots are V_n -equivalent if and only if they are related by a finite sequence of C_{n+1} -moves. This result does not hold for links if $n \geq 2$. To generalize the result to links, we define an SC_2 -move as a special C_2 -move which satisfies a condition. Then we can show that two links are V_2 -equivalent if and only if they are related by a finite sequence of C_3 -moves and SC_2 -moves. In this talk, I will give another proof of this result. The key of the proof is the following: Let \mathcal{L}^μ be the set of ambient isotopy classes of oriented μ -component links in S^3 and \mathcal{L}^μ / \sim the set of equivalence classes of \mathcal{L}^μ with respect to the relation generated by C_3 -moves and SC_2 -moves. Then we can define an operation on \mathcal{L}^μ / \sim and show that \mathcal{L}^μ / \sim forms a group with the operation. Furthermore we can see that the natural projection $\varphi : \mathcal{L}^\mu \longrightarrow \mathcal{L}^\mu / \sim$ is a Vassiliev invariant of order 2.

TSUDA COLLEGE