

1147-57-560

Tomo Murao* (t-murao@math.tsukuba.ac.jp), 1-1-1 Tennodai, Tsukuba, Ibaraki 305-8571, Japan. *MCQ Alexander pairs and MCQ Alexander matrices for handlebody-links.*

Recently, Ishii and Oshiro introduced an (augmented) Alexander matrix for a classical link, which is a matrix constructed by using a pair of maps called an (augmented) Alexander pair. An (augmented) Alexander matrix yields various link invariants such as the twisted Alexander polynomial, the quandle cocycle invariant and so on. In this talk, we introduce a pair of maps, called an MCQ Alexander pair, which gives a linear extension of a multiple conjugation quandle (MCQ), where an MCQ is a universal algebraic system to define arc coloring invariants for handlebody-links. Further we introduce an MCQ Alexander matrix for a handlebody-link, which is a handlebody-link version of an Alexander matrix, by using an MCQ Alexander pair. (Received January 26, 2019)