1147-57-836 **Megumi Hashizume*** (megumihashizume@gmail.com). *New deformations on spherical curves and Ostlund Conjecture.*

A spherical curve is the image of a generic immersion of a circle into a 2-sphere, and every spherical curve is transformed into the simple closed curve by a finite sequence of deformations, each of which is either one of type RI, type RII, or type RIII.

In 2001, Oestlund conjectured that deformations type RI and RIII are sufficient to describe a homotopy from any generic immersion from a circle into a plane to the standard embedding of the circle.

In order to describe the equivalence class including the spherical curve with no double points, we introduce new certain deformations of type α and type β.

We show that any two spherical curves are equivalent under deformations of type RI and type RIII up to ambient isotopy if and only if two RI-minimal spherical curves obtained from them are transformed each other by a finite sequence of deformations, each of which is either one of type RIII, type α, or type β.

Here, any spherical curve is transformed into the minimal one that has no monogon, called the RI-minimal spherical curve, by successively applying deformations of type RI, each of which resolves a single double point.

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