1147-57-698 **Reiko Shinjo*** (reiko@kokushikan.ac.jp), Kokushikan University, School of Science and Engineering, 4-28-1 Setagaya, Setagaya-ku, Tokyo 154-8515, Japan, and **Kokoro Tanaka** (kotanaka@u-gakugei.ac.jp), Tokyo Gakugei University, Department of Mathematics, 4-1-1 Nukuikitamachi, Koganei-shi, Tokyo 184-8501, Japan. *An extension of Jeong's theorem from knot theoretical viewpoint.*

The number f_i of the i-gons of a knot diagram on the 2 sphere satisfying the equation $\sum_{i=2}^{\infty}(4-i)f_i = 8 \cdots$ $(*)$, which follows from the well-known Euler's formula. In this talk,we give a partial answer to the following problem: For any knot K and every sequence of non-negative integers $\{f_2, f_3, f_5, f_6, \ldots, f_n\}$ satisfying the equation $(*)$, does there exist an integer f_4 and a knot projection of K that has exactly f_k k-gons for all $2 \leq k \leq n$? Our result is an extension of Jeong's theorem in graph theory. (Received January 28, 2019)