

東海大学理学部数学・情報数理談話会

以下の要領において談話会を開催致します。多数の方の御来聴をお待ち致しております。

日時: 2026年5月12日(火) 16:00–17:00

会場: 東海大学湘南校舎18号館8階理学部ゼミ室3 (18-831)

講演者: Euisung Park (Department of Mathematics, Korea University)

タイトル: Secant Rank and Syzygies of Projections of Elliptic Normal Curves

アブストラクト: In this talk, we study the syzygies of projections of elliptic normal curves. This talk is based on joint work with Changho Han. Let $C \subset \mathbb{P}^{d-1}$ be an elliptic normal curve and let C_q denote the projection of C from a point q . A natural question is how the syzygetic properties of the projected curve depend on the position of the projection center. Using the geometry of secant varieties, we relate the Green–Lazarsfeld index of C_q to the secant rank of q with respect to C . In particular, we show that if q lies in the s -th secant variety of C , then $\text{index}(C_q) \leq s - 3$, and equality holds for a general point in that secant variety. Our approach realizes projected elliptic curves as hyperplane sections of suitable elliptic ruled surface scrolls and studies their minimal free resolutions.

世話人: 那須 弘和

nasu@tokai.ac.jp