

LINEAR SERIES ON A CURVE OF COMPACT TYPE

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ABSTRACT. Let \mathcal{M}_g be the moduli space of smooth complex curves of genus g and let $\mathcal{M}_{g,d}^r$ be the sublocus of \mathcal{M}_g whose points correspond to curves possessing g_d^r . If the Brill-Noether number $\rho(g, r, d) := g - (r + 1)(g - d + r) = -1$, it is known that $\mathcal{M}_{g,d}^r$ is an irreducible divisor in \mathcal{M}_g . In this talk, we discuss relations among Brill-Noether loci at most codimension two in $\overline{\mathcal{M}}_g$. This is carried out by finding conditions for the existence/non-existence of a smoothable limit linear series on a specific curve of compact type. It shows Brill-Noether loci of codimension two have mutually distinct supports. This is joint work with Prof. S. Kim at Chungwoon University.