

# RATIONALITY OF PROPER HOLOMORPHIC MAPS BETWEEN BOUNDED SYMMETRIC DOMAINS

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**Abstract:** In this talk, we study the rationality of a proper holomorphic map  $f : \Omega \rightarrow \Omega'$  between irreducible bounded symmetric domains  $\Omega$  and  $\Omega'$  that maps Shilov boundary to Shilov boundary. More precisely, we show that if  $\Omega$  and  $\Omega'$  are of type one with rank greater or equal to two and  $f : \Omega \rightarrow \Omega'$  extends smoothly to the boundary sending Shilov boundary to Shilov boundary, then  $f$  is of the form  $f = \iota \cdot F$ , where  $F = F_1 \times F_2 : \Omega \rightarrow \Omega'_1 \times \Omega'_2$ ,  $\Omega'_1, \Omega'_2$  are bounded symmetric domains,  $F_1 : \Omega \rightarrow \Omega'_1$  is a rational proper embedding with respect to canonical Kähler-Einstein metrics. Moreover if  $\Omega$  is not of tube type, then  $f$  is a rational map.