

Toric orbits on Grassmannians and modular compactifications

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Abstract: The study of tame compactifications for quotients of Grassmannians by diagonal torus actions has significant implications for modular problems in algebraic and arithmetic geometry. This talk will present recent joint works on this topic: first, with Songhao Zhu and with Xian Wu on the one-dimensional torus action case; second, with Mingyi Zhang on higher-dimensional torus action cases of rank 2; and finally, with Luca Schaffler, and Xian Wu on higher-dimensional cases of higher ranks. The discussion will conclude with several compelling open questions.