Algebra
Seminar

Intersection of Ekedahl-Oort strata with the supersingular locus in unitary Shimura varieties of $sgn(q − 2, 2)$

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Abstract: Unitary Shimura varieties are moduli spaces of abelian varieties in characteristic p with certain extra structures, including CM by an imaginary quadratic field, of which we consider the case of signature $(q − 2, 2)$. A fruitful way to understand them is by stratifying these spaces. We focus on two such stratifications: the Ekedahl-Oort (EO) stratification, defined with respect to the p-torsion group scheme structure up to isomorphism; and the Newton stratification, defined with respect to the p-divisible group structure up to isogeny. We study the intersection of the supersingular Newton stratum with various E-O strata in some low signature cases. We present the main methods used to conduct this study. This is joint work with Deewang Bhamidipati, Maria Fox, Heidi Goodson, Steven Groen and Emerald Stacy.

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Mathematics and Science Center: MSC W301

Mathematics
Emory University