Registration Seminar	
Seminar Title	: On the Klein Quadric
Speaker	: Satyabrat Das (Rollno: 523ma1004)
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Venue	: Seminar Room (Department of Mathematics)
Date and Time	: 19 May 2025 (11:30 am)
Abstract	<sup>:</sup> The Klein quadric $Q^+(5, q)$ in the five-dimensional projective space $PG(5, q)$ is a fundamental object in projective geometry, representing the set of lines in the three-dimensional projective space $PG(3, q)$ . In $PG(3, q)$ , where q is even, the set of all secant lines to a hyperbolic quadric forms a well structured and geometrically significant family. These
	secant lines, which intersect the hyperbolic quadric $Q^+(3, q)$ in two points, correspond under the Klein correspondence to a specific subset of $Q^+(5, q)$ in PG(5, q). Here, we introduce a new characterization that identifies when a set of lines in

a specific subset of  $Q^+(5, q)$  in PG(5, q). Here, we introduce a new characterization that identifies when a see PG(3, q) can be recognized as the set of secant lines to  $Q^+(3, q)$ , using properties of properties of  $Q^+(5, q)$ .