Title: Hemisystem-like structures in finite geometries

Abstract: Beniamino Segre showed in his 1965 manuscript *'Forme e geometrie hermitiane, con particolare riguardo al caso finito'* that there is no way to partition the points of the Hermitian surface $H(3, q^2)$ into lines, when q is odd. Moreover, Segre showed that if there is an m-cover of $H(3, q^2)$, a set of lines covering each point m times, then $m = (q + 1)/2$; half the number of lines on a point. Such a configuration of lines is known as a *hemisystem* and they give rise to interesting combinatorial objects such as partial quadrangles, strongly regular graphs, and imprimitive cometric Q-antipodal association schemes. This talk will be on developments in the field of hemisystems of polar spaces and regular near polygons and their connections to other interesting combinatorial objects.