

WEEK 5 SCHEDULE

TABLE 1. July 3-July7

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00-9:00					
9:00-10:00			Research	Research	Research
10:00-11:00	Presentations (PB 390)		Research	Research	Research
11:00-12:00	Presentations (PB 390)		Research	Colloquium (PB 192)	Research
12:00-1:00	Lunch		Lunch	Lunch	Lunch
1:00-2:00	Research		Research	Research	Research
2:00-3:00	Research		Research	Research	Research
3:00-4:00	Research		Research	Research	Research
4:00-5:00	Workshop (PB 134)		Footie		

Workshop: Poster Presentations

Colloquium speaker: Oscar Vega (Fresno State)

Title: Unitals in Projective Planes

Abstract: Unitals may be defined as combinatorial objects that may, or may not, be found as subsets of projective planes. When they are, a unital \mathcal{U} may be defined as a set of $q^3 + 1$ points such that every line in the plane intersects \mathcal{U} in exactly 1 or $q + 1$ points. In this case, unitals may also be seen as extremal objects in more than one way (e.g. largest minimal blocking set, maximal set of absolute points of a polarity)

In this talk, we will introduce what projective planes are, and what unitals are, then we will give an exposition of the geometry created and we will survey the most important results in the theory of unitals. Time permitting, we will take a look at unitals embedded in ‘unusual’ planes, such as the so-called Figueroa planes, where all geometric intuition is gone and thus we must rely in an algebraic presentation of the plane and the unitals to be able to prove theorems.

Weekend Activity: On Tuesday there will be a hike in the morning, a cookout at Tom’s house in the afternoon, and then a trip to the Grizzlies’ game for those who want to go. On Saturday we will go to Monterey Bay, leaving from the dorms at 8:00 a.m.