

In this talk, I'll first present several new constructions of constructing conflict-avoiding codes especially the following three classes:

- (1) Optimal CAC of certain odd length n and weight 3;
- (2) Tight equi-difference CAC of weight 3 and length $2k \pm 1$; and
- (3) Tight equi-difference CAC of weight 4 and length $6k+1$ where k is a positive integer.

And then, we shall talk about the applications of such codes and propose a new type of "Local" conflict-avoiding codes.