VCU Discrete Mathematics Seminar

Internal and external partial difference families: constructions and applications

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Wednesday, Mar. 15
1:00-1:50 EST

In person!—in 4145 Harris Hall

(and on Zoom @ `https://vcu.zoom.us/j/92975799914`
`password=graphs2357`

In this talk, I will introduce internal and external partial difference families, recently-defined combinatorial objects which are a very natural generalization of classic structures such as partial difference sets, disjoint difference families and external difference families. I will motivate them via applications, particularly in information security. I will present cyclotomic approaches for constructing them, which offer a new theoretical framework and also yield several results from the literature as special cases.

This is joint work with Laura Johnson (St Andrews).

For the DM seminar schedule, see:

`https://go.vcu.edu/discrete`