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Designs with the Symmetric Difference Property

The recently completed search for existence of difference sets in small 2-groups has provided a wealth of data to explore other questions. One classical question asks which designs have the symmetric difference property (the symmetric difference of any three blocks is either a block or the complement of a block). We show in this talk that the groups $C_8 \times C_4^t \times C_2$ all have difference sets whose designs have the symmetric difference property, $t \geq 1$, and that these designs are nonisomorphic to the symplectic designs. Joint with Smith, Hoo, Kissane, Liu, Reedy, Sharma, and Sun.