

1094-46-304

**John D Jasper\*** ([jasperj@missouri.edu](mailto:jasperj@missouri.edu)), 202 Mathematical Sciences Bldg, University of Missouri, Columbia, MO 65211. *Kirkman equiangular tight frames.*

We present a new construction of constant amplitude equiangular tight frames (ETFs), that is, ETFs in which each entry of each frame vector has the same modulus. Our construction builds on the recent work of Fickus, Mixon, and Tremain which uses Steiner systems to construct ETFs, which they have dubbed Steiner ETFs. We show that a Steiner ETF which is constructed using a resolvable Steiner system can be unitarily transformed into a constant amplitude ETF. Since resolvable Steiner systems are sometimes called Kirkman systems, we refer to these as Kirkman ETFs. Several examples are presented, including an infinite class of real Kirkman ETFs. (Received August 26, 2013)