James P. Solazzo* (jsolazzo@coastal.edu), Department of Mathematics, P.O. Box 261954, Conway, SC 29526, and Thomas R. Hoffman. Complex Two-graphs via Equiangular Tight Frames.

In 'A survey of two-graphs', J.J. Seidel lays out the connections between simple graphs, two-graphs, equiangular lines and strongly regular graphs. It is well known that there is a one-to-one correspondence between regular two-graphs and equiangular tight frames. This presentation gives a generalization of two-graphs for which these connections can be mimicked using roots of unity beyond ± 1 . Many of the results for two-graphs have a natural generalization for complex two-graphs. (Received September 15, 2014)