1077-05-2412 **Eimear Byrne**, **Michael Kiermaier** and **Alison Sneyd*** (alison.sneyd@ucdconnect.ie). *A Family of Codes with Two Homogeneous Weights.*

It was first shown in [2] that a projective linear code over a finite field with two nonzero Hamming weights determines a strongly regular graph. In [1], this result was extended to show any proper, regular, projective linear code over a finite Frobenius ring with two nonzero homogeneous weights also determines a strongly regular graph. Here we give a construction for an infinite family of proper, regular, projective codes with two nonzero homogeneous weights over the ring $GF(q) \oplus GF(q)$.

References

[1] E. Byrne, M. Greferath and T. Honold, *Ring Geometries, Two-Weight Codes and Strongly Regular Graphs*, Designs, Codes and Cryptography, 48 (1) (2008) 1–16.

[2] P. Delsarte, *Weights of linear codes and strongly regular normed spaces*, Discrete Math., 3 (1972) 47–64.

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