1141-05-161   **Christopher Cox***, Carnegie Mellon University, Pittsburgh, PA , and **Boris Bukh**, Carnegie
Mellon University, Pittsburgh, PA. *A fractional version of Haemers' bound.*

We present a fractional version of Haemers' bound on the Shannon capacity of a graph, which is originally due to Blasiak. This bound is a common strengthening of both Haemers' bound and the fractional chromatic number of a graph. We show that this fractional version outperforms any bound on the Shannon capacity that could be attained through Haemers' bound and show also that this bound is multiplicative. As a consequence, the fractional Haemers bound belongs to the "asymptotic spectrum" in the recent duality result of Jeroen Zuiddam on Shannon capacity. (Received July 27, 2018)