

NOTE

## FRACTIONAL ASPECTS OF THE ERDŐS-FABER-LOVÁSZ CONJECTURE

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### Abstract

The Erdős-Faber-Lovász conjecture is the statement that every graph that is the union of  $n$  cliques of size  $n$  intersecting pairwise in at most one vertex has chromatic number  $n$ . Kahn and Seymour proved a fractional version of this conjecture, where the chromatic number is replaced by the fractional chromatic number. In this note we investigate similar fractional relaxations of the Erdős-Faber-Lovász conjecture, involving variations of the fractional chromatic number. We exhibit some relaxations that can be proved in the spirit of the Kahn-Seymour result, and others that are equivalent to the original conjecture.

**Keywords:** Erdős-Faber-Lovász Conjecture, fractional chromatic number.

**2010 Mathematics Subject Classification:** 05C15, 05C72.

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Received 22 May 2013  
Revised 28 November 2013  
Accepted 20 February 2014