1067-05-1905Michael E Young* (myoung@iastate.edu) and Giuseppe Mazzuoccolo
(giuseppe.mazzuoccolo@unimore.it). Graphs of arbitrary excessive class.

A 1-factor of a graph is a collection of independent edges, which together are incident on all the vertices of the graph. An *excessive factorization* is a minimum cover of the edge-set of a graph by a set of 1-factors. If such a cover exists, we denote the cardinality by $\chi'_e(G)$. The excessive class of an *r*-regular graph *G* is defined as $exc(G) = \chi'_e(G) - r$. We show that there exists a family of *r*-regular graphs of arbitrarily large excessive index for each integer *r* greater than 3. Furthermore, we answer a question by Bonisoli and Cariolaro showing that all the positive integers can be attained as excessive classes of regular graphs. (Received September 22, 2010)