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**Zoltan Furedi** and **Zeinab Maleki\*** (zmaleki@math.iut.ac.ir). *On Erdos' conjecture on the number of edges in 5-cycles.* Preliminary report.

Erdős, Faudree, and Rousseau in 1992 showed that a graph on  $n$  vertices and with at least  $\lfloor n^2/4 \rfloor + 1$  edges comprise at least  $2\lfloor n/2 \rfloor + 1$  edges on triangles and this result is sharp. They also considered a conjecture of Erdős that such a graph have at most  $n^2/36$  non-pentagonal edges. This was mentioned in other paper of Erdős and also in Fan Chung's problem book.

In this talk we give a graph of  $\lfloor n^2/4 \rfloor + 1$  edges with much more, namely  $n^2/8(2 + \sqrt{2}) + O(n)$  pentagonal edges, disproving the original conjecture. We also show that this coefficient is asymptotically the best possible. (Received October 27, 2014)