1106-05-2155 **Zoltan Furedi** and **Zeinab Maleki*** (zmaleki@math.iut.ac.ir), 515 4th St SE, Apt 304, Minneapolis, MN 55414. *On Erdos' conjecture on the number of edges in 5-cycles.*

Erdös, 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 Erdös that such a graph have at most $n^2/36$ non-pentagonal edges. This was mentioned in other paper of Erdös 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 September 15, 2014)