

**Problem 2.** Characterize 2-regular graphs which are felicitous.

Using the same argument as Graham and Sloane [4], we have the following.

**Theorem 12.** *Almost all graphs are not felicitous.*

We conclude with the following conjectures:

- (1) Every  $n$ -dimensional cube is felicitous.
- (2) Every graph is a subgraph of felicitous graph.
- (3) (Graham and Sloane) Every tree is felicitous.
- (4) The graph  $P_n \cup C_{2k+1}$  is felicitous for all  $n \geq 4$ .

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### References

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