Explicit Inapproximability Bounds for Metric TSP

(Update: April 2015)

This is a short summary of recent improvements on the explicit inapproximability bounds for the instances of metric TSP. It aims at keeping track of the best known explicit bounds for that problem as well as new techniques for proving them. All explicit inapproximability bounds are under the usual complexity theoretic assumption.

- **Metric TSP**
  hard within a factor less than $\frac{123}{122}$ [KLS13]

- **Asymmetric TSP**
  hard within a factor less than $\frac{75}{74}$ [KLS13]

- **(1,2)-TSP**
  hard within a factor less than $\frac{535}{534}$ [EK06, KS12]

- **Asymmetric (1,2)-TSP**
  hard within a factor less than $\frac{207}{206}$ [EK06, KS12]

- **Cubic (1,2)-TSP**
  hard within a factor less than $\frac{1141}{1140}$ [KS13]

- **Graphic TSP**
  hard within a factor less than $\frac{535}{534}$ [KS13]

- **Cubic Graphic TSP**
  hard within a factor less than $\frac{1153}{1152}$ [KS13]

$\square$

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References

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