Exploiting geometric properties in combinatorial optimization = Benutten van geomwetrische eigenschappen in combinatiorische optimalisatie

Stellingen

behorende bij het proefschrift

"Exploiting geometric properties in combinatorial optimization"

door

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1. We model a helicopter as a heavy ball connected to the rope. The fastest helicopter trajectory is a circle determined by the rotation about a fixed point. (Chapter 3)

2. The general helicopter problem in non-uniform medium has a nice physical property: if we consider the fastest circle trajectory within any air layer then the product of the circle radius and the layer degradation coefficient is a constant for all the layers. (Chapter 4)

3. There is a sequence of publications devoted to the new achievements in solving the problem of bounding the treewidth of a planar graph with its largest squared grid minor. One can see it as an iterative process converging in time to the real functional dependence. We made one of these iterations. (Chapter 5)

4. There are many ways to make a graph subgraph-free. (Chapter 7)

5. Modern mathematics is an abstract art which may become of vital importance in dozens of years.

6. Operations Research includes almost all mathematical notions one wants to juggle in his mind. (Personal opinion)

7. The fastest way to deal with a new idea is to find a counterexample.

8. In research, the dark times of frustration alternate with the moments of "Ah! That's how it works!".

9. Mathematical humor is a professional disease. Only we can wish in an ordinary postcard:

   "Be $\lim_{n\to\infty}(very)^n$ happy!"