

Two Decades of Interior Point Methods – What next?

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Abstract: The two decades of Interior Point Methods (IPMs) triggered a tremendous theoretical and computational performance improvement in solving linear and also nonlinear optimization problems. In this talk we reflect those achievements and, in the light of the Klee-Minty example, illustrate the theoretical limitations of these two dominant algorithm classes.

The question "What next?" naturally arises. The understanding of the strength and limitations of simplex methods and IPMs may lead to new classes of algorithms.

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