

Fakultät für Mathematik



**Außerordentliches**  
**Mathematisches Kolloquium**

**EINLADUNG**

**Prof. Dr. Yurii Nesterov**

**(CORE/INMA, Université Catholique de Louvain  
(UCL), Belgium)**

**“Complexity bounds for primal-dual methods  
minimizing the model of objective function”**

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minimizing the model of objective function”**

Abstract:

We provide Frank-Wolfe (Conditional Gradients) method with a convergence analysis allowing to approach a primal-dual solution of convex optimization problem with composite objective function. Additional properties of complementary part of the objective (strong convexity) significantly accelerate the scheme. We also justify a new variant of this method, which can be seen as a trust-region scheme applying the linear model of objective function. Our analysis works also for a quadratic model, allowing to justify the global rate of convergence for a new second-order method. To the best of our knowledge, this is the first trust-region scheme supported by the worst-case complexity bound.

**Zeit: Donnerstag, 27. August 2015  
15.30 Uhr Kaffeejause,  
anschließend 16.00 Uhr Vortrag**

**Ort: Fakultät für Mathematik,  
Oskar-Morgenstern-Platz 1,  
Sky Lounge**

Arnold Neumaier  
Masoud Ahookhosh  
Harald Rindler