

## POVZETEK DIPLOMSKGA DELA

V diplomskem delu je predstavljena optimizacijska naloga semidefinitnega programiranja.

V uvodnem poglavju se bomo seznanili z nekaterimi osnovnimi pojmi in definicijami, predvsem s področja matrične algebre in konveksne analize. Spoznali bomo tudi konveksne optimizacijske naloge in se seznanili z nalogo semidefinitnega programiranja.

V drugem poglavju bo sledilo nekaj primerov uporabe semidefinitnega programiranja.

V tretjem poglavju se bomo ukvarjali z dualnostjo pri semidefinitnem programiranju. Našteli bomo pogoje, pri katerih imata rešitvi primarne in dualne naloge isto optimalno vrednost.

V zadnjih treh poglavjih si bomo ogledali orodja in postopke, s pomočjo katerih pridemo do numeričnih rešitev naloge semidefinitnega programiranja.

Math. Subj. Class. (1991) : 90C99, 90C25, 90C30, 90C05, 90C20

Key Words : Semidefinite programming, Convex programming, Nonlinear programming  
Linear programming, Quadratic programming

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