

# THEORY AND ALGORITHMS OF LINEAR MATRIX INEQUALITIES

## Workshop Schedule

### Monday, August 1, 2005

9:00 am Welcome  
Introductions  
Overview

2:00 pm 3 min. Talks  
4:00 Discussion  
5:00 pm Happy Hour

### Tuesday, August 2, 2005

9:00 am Jean Lasserre Generalized Problem of Moments  
10:30 am Discussion

2:00 pm Section I  
Sanjay Lall Systems & Control (Introduction)  
& Jan Willems  
Carsten Scherer From systems to LMIS  
Section II  
Levent Tuncel Hyperbolic Polynomials  
Wing-Suet Li Eigenvalue Horn Inequalities  
Leonid Gurvits Hyperbolic Horn Inequalities  
5:00 pm Happy Hour  
6:45 pm Workshop Banquet

### Wednesday, August 3, 2005

9:00 am Konrad Schmüdgen Commutative & Non-commutative  
Positivstellensätze  
10:30 am Section I Non-commutative Real Algebraic  
geometric applications  
Section II Determinantal Representations  
2:00 pm Section I Differential Operators & Lyapunov Inequalities  
Section II Lifting LMI reps, Moment Methods, etc.  
5:00 pm Happy Hour

### Thursday, August 4, 2005

9:00 am Vicky Powers Real Algebraic Geometry  
10:30 am Section I Fischer Duality  
Section II Model Reduction

2:00 pm	Section I	Minimum Rank Problems
5:00 pm	Happy Hour	

**Friday, August 5, 2005**

9:00 am	Section I	Numerical Methods, Software, etc.
	Section II	Many Variable Systems Interpolation, Single Square Factorization
10:50 am	Dan Voiculescu	Operator Algebras/Free Probability Aspects of Operator Inequalities
2:30 pm		Real Algebraic Geometry vs Operator Theory, and How to teach them
3:30 pm	Open Problems	
5:00 pm	Happy Hour	