

THE SECOND NCSU-CHINA
SYMBOLIC COMPUTATION
COLLABORATION WORKSHOP

LINGFENG HOTEL, HANGZHOU, CHINA

March 5–9, 2007

PROGRAM

All lectures will take place in Meeting Room No. 1 on the second floor, Lingfeng Hotel. Group discussions will take place in the meeting room, Lingfeng Hotel, and classrooms in the Department of Mathematics, Zhejiang University.

Monday March 5

08:45 – 09:00 Welcome and Opening Remarks

09:00 – 09:50 DONGMING WANG:
Triangular Decomposition for Dynamic Geometric Constraint Solving

09:55 – 10:45 HOON HONG:
Quantifier Elimination for Dynamic Geometric Constraint Solving

10:45 – 11:00 Tea Break

11:00 – 11:30 TING ZHAO:
Radical Representation of Real Roots of Cubic and Quartic Polynomials Under Inequality Constraints

11:30 – 12:00 DOUGLAS MARKS:
Consistency of Sturm-Habicht Sign Conditions

12:00 – 14:30 Lunch Break

14:30 – 17:30 Group Discussion

18:00 – 19:30 Dinner

Tuesday March 6

- 08:45 – 09:45** ERICH KALTOFEN:
Fast Algorithms for Polynomial Factorization: a Selection
- 09:50 – 10:40** LIHONG ZHI:
Symbolic-Numeric Methods for Polynomial System Solving
- 10:40 – 11:00** **Tea Break**
- 11:00 – 11:30** ITNUIIT JANOVITZ FREIREICH:
Approximate Radical of Ideals with Clusters of Roots
- 11:30 – 12:00** DONGXIA SUN:
Structured Low Rank Approximation of Bezout Matrix
- 12:00 – 14:30** **Lunch Break**
- 14:30 – 17:30** **Group Discussion**
- 18:00 – 19:30** **Dinner**

Wednesday March 7

- 08:45 – 09:35** MICHAEL SINGER:
Differential Algebraic Relations among Solutions of Difference Equations
- 09:40 – 10:30** XIAOSHAN GAO:
Characteristic Set Method for Mixed Difference-Differential Polynomial Systems
- 10:30 – 10:50** **Tea Break**
- 10:50 – 11:20** ALEXEY OVCHINNIKOV:
Bounds in Constructive Theory of Differential Ideals
- 11:20 – 11:50** RUYONG FENG:
Rational General Solutions of Ordinary Difference Equations
- 12:00 – 14:30** **Lunch Break**

- 14:30 – 15:20** IRINA KOGAN:
Smooth and Algebraic Invariants of a Group Action: Local and Global
Constructions
- 15:25 – 15:55** MINGBO ZHANG:
A Decomposition Algorithm for Ordinary Difference Polynomials
- 15:55 – 16:15** **Tea Break**
- 16:15 – 17:00** ZIMING LI:
Univariate Ore Polynomial Rings in Computer Algebra
- 18:00 – 20:00** **Banquet in Shan-Wai-Shan Restaurant**

Thursday March 8

No Scheduled Activities

Friday March 9

- 08:45 – 09:35** MIN WU:
An Algorithm for Computing Linear Dimension of Linear Functional
Systems
- 09:40 – 10:10** TIELIN LIANG:
Automated Generation of Dynamic Diagrams Satisfying Equality and
Inequality Constraints
- 10:10 – 10:30** **Tea Break**
- 10:30 – 11:00** ROBERT QUINN:
Connectivity in Semialgebraic Sets
- 11:00 – 11:30** JINSAN CHENG:
Real Roots Isolation for General Triangular Systems
- 12:00 – 14:30** **Lunch Break**
- 14:30 – 17:30** **Group Discussion**
- 18:00 – 19:30** **Dinner**

Tips

1. Shan-Wai-Shan Restaurant is located in Yuquan Park, 15 minutes on foot from Lingfeng Hotel. Those who have reservations in the restaurant, are allowed to enter the park without entry fee.
2. It takes about 20 minutes on foot to West Lake. Bus No. 16 commutes between the Hubin (lake-side) park and Lingfeng hotel. Most of the parks around West lake are free of entry fee.
3. One may take Bus No. 527 from Lingfeng to Hupao (Dreaming of the Tiger Spring).
4. One needs to transfer to go to Lingyin Temple by public transportation, while it costs about 10 yuan by taxi from Lingfeng hotel to the temple