

# WORKSHOP ON GEOMETRIC CONSTRAINT SOLVING

Thursday, October 23, 2003

Room 110, Morningside Center for Mathematics

## PROGRAM

08:30 – 08:40 **Welcome and Opening Remarks**

08:40 – 09:10 ROBERT JOAN-ARINYO:

Tools to Deal with Under-constrained Geometric Constraint Graphs

09:10 – 09:40 LIPING CHEN

Singularity Analysis of Geometric Constraint System

09:40 – 10:10 DOMINIQUE MICHELUCCI

Intrinsic Formulations of Geometric Constraints

10:10 – 10:40 LU YANG

Solving Geometric Constraints with Distance-Based Global Coordinate System

10:40 – 11:00 Tea break

11:00 – 11:30 CHING-SHOEI CHIANG

Variable-Radius Circles in Constructive Geometric Constraint Solving

11:30 – 12:00 PASCAL SCHRECK

About the Lebesgue Method.

12:00 – 12:30 XIAO-SHAN GAO

Decomposition and Merge for Geometric Constraint

12:40 – Lunch at fourth floor of the **Wu-Ke Hotel Restaurant**

### Registration at

- 2PM-8PM, October 22, at the Wu-Ke Hotel Lobby.
- 8AM-6PM, October 23, outside **Conference Room 212** at the second floor of **The Condensed Matter General Building**.
- 8AM-10AM, October 24, outside **Conference Room 212** at the second floor of **The Condensed Matter General Building**.

THE SIXTH ASIAN SYMPOSIUM ON COMPUTER MATHEMATICS  
October 23–25, 2003

**PROGRAM**

All lectures will take place in **Conference Room 212** at the second floor of **The Condensed Matter General Building**. Speakers should note that the allotted time includes five minutes for questions and change over.

**Thursday, October 23**

**14:00 – 14:10 Welcome and Opening Remarks**

**14:10 – 18:00 Session I**

14:10 – 14:40 CIRO CILIBERTO, FRANCESCA CIOFFI, RICK MIRANDA, FERRUCCIO ORECCHIA  
Bivariate Hermite Interpolation and Linear Systems of Plane Curves with Base Fat Points

14:40 – 15:10 FALAI CHEN, LIN DENG  
Interval Parametrization of Planar Algebraic Curves (presented by Dr. Jiansong Deng)

15:10 – 15:40 JINSAN CHEN  
Blending Quadric Surfaces via a Base Curve Method

15:40 – 16:30 Tea Break and POSTER SESSION

16:30 – 17:00 HONGBO LI, YI CHENG  
A Bracket Method for Judging the Intersection of Convex Bodies

17:00 – 17:30 FANGLING ZENG, FALAI CHEN  
Degree Reduction of Rational Curves by  $\mu$ -Bases

17:30 – 18:00 NOR'AINI ARIS, ALI AND RAHMAN  
On the Division of Generalized Polynomials

**18:30 – 20:30 Reception party at Fourth floor of the Wu-Ke Hotel Restaurant**

**Friday, October 24**

**8:30 – 9:30 Invited talk**

DEEPAK KAPUR Multivariate Resultants based on Cayley-Dixon's Method

**09:30 – 09:50 Tea Break**

**09:50 – 12:10 Session II**

09:50 – 10:20 MAO-CHING FOO, ENG-WEE CHIONH  
Corner Point Pasting and Dixon  $\mathcal{A}$ -resultant Quotients

10:20 – 10:50 IAS KOTSIREAS, EDMOND LAU  
Implicitization of Polynomial Curves

10:50 – 11:10 Tea Break

11:10 – 11:40 YOSUKE SATO, AKIRA SUZUKI, KATSUSUKE NABESHIMA  
Discrete Comprehensive Gröbner Bases II

11:40 – 12:10 XIAO-SHAN GAO AND DINGLANG WANG  
Zero Decomposition Theorems for Counting the Number of Solutions for Parametric Equation Systems

**12:10 – 13:30 Lunch at fourth floor of the Wu-Ke Hotel Restaurant**

**13:30 – 15:50 Session III**

13:30 – 14:00 LIHONG ZHI  
Displacement Structure in Computing Approximate GCD of Univariate Polynomials

14:00 – 14:30 MING ZHANG, R. ALLEN WHITE  
A Molecular Inverse Kinematics Problem: An Approximation Approach and Challenges

14:30 – 14:50 Tea Break

14:50 – 15:20 HUNG-TSAI HUANG, ZI-CAI LI, AIHUI ZHOU  
Global Superconvergence of Biquadratic Lagrange Elements for Poisson's Equation

15:20 – 15:50 K. HAZAVEH, D.J. JEFFREY, G.J. REID, S.M. WATT, A.D. WITTKOPF  
An Exploration of Homotopy Solving in Maple

**16:00 – 20:00 Conference Dinner at the Summer Palace**

## Saturday October 25

**08:30 – 09:30 Invited Talk**

NOBUKI TAKAYAMA Algebraic Algorithms for D-modules and Numerical Analysis

**09:30 – 09:50 Tea Break**

**09:50 – 12:10 Session IV**

09:50 – 10:20 M. HICKMAN, W. HEREMAN  
Densities and Fluxes of Differential-Difference Equations

10:20 – 10:50 ENGUI FAN  
A Series of Exact Solutions of Two Extended Coupled Ito Systems

10:50 – 11:10 Tea Break

11:10 – 11:40 FUDING XIE, HONGQING ZHANG, YONG CHEN, B. LI  
Application of Wu-Ritt Differential Elimination Method in Painlevé Test

11:40 – 12:10 V. HOUSEAUX, G. JACOB, N.E. OUSSOUS, M. PETITOT  
A Complete Maple Package for Noncommutative Rational Power Series

**12:10 – 13:20 Lunch at fourth floor of the Wu-Ke Hotel Restaurant**

**13:30 – 19:00 Sightseeing at Great Wall**

**19:00 – 21:00 Dinner.**