

**Program of the Symposium**  
**NLA99: COMPUTER ALGEBRA**

The Fourth Symposium on Nonlinear Analysis and Applications

JOSAI UNIVERSITY

**September 16, Thursday**

- Opening     **Shigeo Kohno**  
(Dean of the Graduate School of Sciences, Josai Univ.)
- Session I     *Chair* **Teluhiko Hilano**(Kanagawa Inst. Tec.)  
**Kiyoko Nishizawa** (Josai Univ.),  
**Masayo Fujimura** (National Defence Academy)  
Singular Parts of the Polynomial Moduli Spaces  
**Satoshi Nozawa** (Josai Univ.)  
Symbolic Computation in Particle Physics and  
Astrophysics  
**Yuji Kondoh**( Takuma National Coll. of Tech.),  
**Tomokatsu Saito** (Sophia Univ.)  
**Taku Takeshima** (C.S.L. Fujitsu Lab.)  
Finding real solutions of zero dimensional polynomial  
equations  
**Takeshi Aoyama** (Kogakuin Univ.)  
**Isao Makino** (Kogakuin Univ.)  
Calculation log
- Session II     *Chair* **Tadashi Takahashi** (Kobe Univ.)  
**Teluhiko Hilano** (Kanagawa Inst. Tec.)  
Finding real roots of a polynomial with given precision  
**Tomokatsu Saito** (Sophia Univ.)  
Fundamental Concept of Plotting Algebraic Varieties  
**Toshiko Ogiwara** (Josai Univ.)  
**Ken-ichi Nakamura** (Univ. Electro-Communication)  
Rotating wave solutions of some parabolic differential  
equation in annulus

## September 17, Friday

- Session III *Chair Hiroshi Kai* (Ehime Univ.)  
**Tadashi Takahashi** (Kobe Univ. )  
On the analysis of moduli for simple  $K3$  singularities  
by using Risa/Asir  
**Hiroaki Deguchi** (Kobe Univ.)  
On the development of middle regulator  
for computer algebra systems  
**Lihong Zhi** ( Ehime Univ.)  
Solving Non-linear Polynomial Equations  
**Hirokazu Anai** (C.S.L. Fujitsu Lab.)  
Real Quantifier Elimination in Practice  
**Yoichi Obuchi**  
(Director of Josai Information Sciences Research Center )  
a tour through Josai Information Sciences Research Center
- Session IV *Chair Taku Takeshima* (C.S.L. Fujitsu Lab.)  
**Kei-ichi Shiraishi** (Takuma National Coll.of Tech.)  
**Lihong Zhi** ( Ehime Univ.)  
**Matu-Tarow Noda** (Ehime Univ.)  
An Implementation of Wu's Method on Risa/Asir  
**Hiroshi Kai** (Ehime Univ.)  
Hybrid Method in Rational Function Approximation  
**Kyosuke Anada** (Kobe Univ.)  
Computer- Algebra-Interface for Education  
**Masayuki Noro** (C.S.L. Fujitsu Lab.)  
Algorithms for  $F4$
- Session V *Chair Hirokazu Muraio* (Computer Center Univ. Tokyo )  
**Matu-Tarow Noda** (Ehime Univ.)  
Problem Solving Environment  
**Masayuki Suzuki** ( Iwate Univ.)  
Parallel Gröbner Basis Computation on Shared  
Memory Machines

## September 18, Saturday

Session VI *Chair* Masayuki Noro (Fujitsu)

**Kiyoshi Shirayanagi** (NTT)

**Hiroshi Sekigawa** (NTT)

Stabilizing Algebraic Algorithms: theory and system

**Hiroshi Sekigawa** (NTT)

A remark on the polynomial determining super stable points  
in the Mandelbrot set.

**Yayoi Nakamura** (Ochanomizu Univ.)

Construction of the system of differential operators  
in an algorithm for computing the residues.

**Hirokazu Murao** (Computer Center Univ. Tokyo)

Extended  $2^W$ -ary GCD Algorithm

### NLA99 Organizing Committee

Chair Nishizawa, Kiyoko (Josai University)

Co-chairs Saito, Tomokatsu (Sophia University),  
Hilano, Teluhiko (Kanagawa Inst.Tech.)

Members Makino, Isao (Kogakuin University),  
Murao, Hirokazu (Computer Center, University of Tokyo )  
Noda, Matu-Tarow (Ehime University),  
Shirayanagi, Kiyoshi (NTT Communication Science Lab.),  
Takeshima, Taku (C.S.L. FUJITSU LAB. LTD.)

# Photograph of Participants



The 4-th Symposium on Nonlinear Analysis, Josai Univ., Sept., 16-18, 1999

