ASCM'96 Program and Announcement for Participation (Final Version)

The Asian Symposium on Computer Mathematics (ASCM) is an international forum for the exchange of ideas and techniques for doing mathematics by computer, which includes symbolic computations, mechanical theorem proving, computational geometry, combined symbolic/numeric method, applications of symbolic computations in education and other fields, and software design.

ASCM'96 will take place in Kobe, August 20 through 22, 1996, organized by the Japan Society for Symbolic and Algebraic Computation (JSSAC, Japan) in cooperation with the Mathematics Mechanization Research Center (MMRC, China).

The conference will be carried on two tracks: the Regular Track (RT) and the Education Track (ET) for Japanese attendants of special interest. The Regular Track activities include invited presentations and original research contributions on computer mathematics; the Education Track focuses on teaching and learning of mathematics with computer mathematics tools, including original research contribution, reports, panel discussions, school simulation and software demos. –More– reports, panel discussions, school simulation and software demos.

A dinner party is programmed on the second day evening.

Language

Official language for the Regular Track is English. For the Education Track Japanese is the main language; some presentations may be in English, though.

Organization

General Chair: Tadashi Takahashi, Kobe University,
Tsurukabuto, Nada-ku, Kobe 657, Japan
Phone: 078-803-0957, Telefax: 078-803-0990
takahasi@icluna.kobe-u.ac.jp

Organizing Committee:
Local Arrangement Chair: Naoto Niki (Science University of Tokyo)
Shigetoshi Katsura (College of Sci. & Tech., Tohoku)
Hidetsune Kobayashi (Nihon Univ.)

Matu-Tarow Noda (Ehime Univ.),
Ko Sakai (Tsukuba Univ.),
Tateaki Sasaki (Tukuba Univ.)
Tadashi Takahashi (Kobe Univ.)
Taku Takeshima (Fujitsu Labs.)
Katsuhide Tsushima (Osaka Electro-Communic. Univ.)

Program Committee:
Chair: Kiyoshi Shirayanagi (NTT Labs.),
Akio Furukawa (SEG),
Li Lian (Lanzhou Univ.),
Liu Zhuojun (Academia Sinica),
Taketomo Mitsui (Nagoya Univ.),
Hirokazu Murao (Univ. of Tokyo),
Yosuke Sato (Ritsumei-Kan Univ.),
Nobuki Takayama (Kobe Univ.),
Kazuhiro Yokoyama (Fujitsu Labs.)

Conference Site

Faculty of Human Development, Kobe University,
Tsurukabuto, Nada-ku, Kobe 657, Japan

Access

Kobe city is one of the beautiful and exotic port facing to the Seto Inland Sea. It is located about half hour access by trains from Osaka.

Kobe University is located on the hill side of Kobe city.

The most convenient stations are
Rokkō-Michi station (JR: Japan Railway),
Hankyū-Rokkō station (Hankyu.)

To get to Kobe University, take buses bound for "Tsurukabuto-Danchi-yuki (36.)" Number (36) is an identifier of bus lines.

Finally get off at "Hattatsu-Kagakubu-mae" bus stop, and 1 minute walk brings you to the conference place.

If you come from ShinKobe station of Shinkansen, take a subway to Sannomiya station (JR) and then take JR train to Rokkō-Michi station.

Conference Fee

Regular Track 10,000 yen†
Regular Track Student 3,000 yen†

†: Including proceedings of RT distributed at the conference. Note! Persons who registered on RT can also attend ET symposium.

Dinner party

Extra payment, 3,000 yen/person, will be required for the dinner party besides the Conference fee.

Accommodations

For overseas visitors, the organizing committee will assist to make reservations of Hotels near the conference site.

Please check and fill in the attached hotel reservation form.
Remit it WITH the ASCM registration form to the organizing committee:

Tadashi Takahashi, Kobe University,
Tsurukabuto, Nada-ku, Kobe 657, Japan
Phone: 078-803-0957, Telefax: 078-803-0990
takahasi@icluna.kobe-u.ac.jp

Here is a list of several hotels for your reference. Note that the listed rate may change. All hotels in the list are located around Sannomiya and ShinKobe stations in Chuo-ku, Kobe city. Distance call prefix for this area is 078.

Hotel Name	Rate (Yen) (single/per night)	Tel.
ShinKobe Oriental Hotel	14,300	291-1121
Sannomiya Terminal Hotel	9,900	291-0001
Kobe Tokyu Inn	9,700	291-0109
Number 2 Green Hill Hotel	8,300	222-0909
Kobe Hana Hotel	7,800	221-1087
–More– Kobe Hana Hotel	7,800	221-1087
Kitagami Hotel Annex	7,200	391-8781, 392-0401
Number 1 Green Hill Hotel	7,000	222-1221
ShinKobe Sun Hotel	6,820	272-1080
San Side Hotel	6,700	232-3331

Regular Track PROGRAM

Aug. 20 (Tue.)

12:20-13:30 Conference Registration

13:30-13:40 Official Opening

13:40-14:40 Regular session 1: **Discriminants and Real closed fields**

- Lu Yang, Xiao-Rong Hou and Zhen-Bing Zeng:
  A Complete Discrimination System of a Polynomial
- Shilong Ma and Ning Shucheng:
  Practically Solving Some Problems Expressed by the First Order Theory of the Real Closed Field

14:40-15:10 — Coffee Break (30 min.) —

15:10-16:40 Regular Session 2: **Algebraic/Numeric Combination**

- Li Lian and Niu Yi:
  Approximate parameterization of prime ideals in neighbourhood of a given point
- YongJian Ye, Yiming Ye, Xiang Zhang and QinShi Gao:
  Using a Natural Constraint to Approximate Area and Volume
- Hiroshi Sekigawa:
  Using Interval Arithmetic and Polynomial Norms to Determine Signs of Algebraic Numbers

Aug. 21 (Wed.)

9:30-10:30 Regular Session 3.1: **CA applications and Math. Notation (1)**

- Y. Papegay and S. Philoreau:
  Design and Performance Analysis of Complex Optical Devices using Symbolic Computation
- Zhibin Li:
  A New Method For Finding Solitary Wave Solutions

10:30-11:00 — Coffee break (30 min.) —

11:00-12:00 Regular Session 3.2: **CA applications and Math. Notation (2)**

- Wu Tie-ru, Zhou Yun-shi and Feng Guo-chen:
  Blending two quadratic algebraic surfaces with cubic surfaces
- Yanjie Zhao, Tetsuya Sakurai, Hiroshi Sugiura, and Tatsuo Torii:
  Notation Extension Methods in Mathematical Notation Parsing for Mathematical Computation

12:00-13:30 — Lunch —

13:30-14:30 Invited Talk
John McKay, Concordia Univ.
Title: **CA contribution to Mathematical Problems**

14:30-15:00 — Coffee Break (30 min.) —

15:00-16:30 Regular Session 4: **CA applications to Education**

- Akihiko Saeki:
  The Influence of the Technology on the Teaching and Learning of Trigonometric Functions

- Lin Jian-xiang:
  Let Symbolic Manipulation System well-used for Mathematical Education to articulate symbolic algebra package with object-oriented method
- Tadashi Takahashi and Hirokazu Hashiba:
  On the Efficient Use of Computer Algebra Systems in Mathematics Education

19:00-21:00 Social Party

Aug. 22 (Thu.)

e **9:30-10:30** Regular Session 5.1: **CA Software Systems (1)**

- Shucheng Ning, Shilong Ma, Junhai Li, and Zhiyong Chen:
  A System for Automatically Analyzing Qualitative Behaviors of Dynamical Systems
- Y. Papegay and S. Dalmas:
  QUATERMAN vs. QUATERNICA: A Comparative Implementation of Quaternions in Maple and Mathematica

10:30-11:00 — Coffee break (30 min.) —

11:00-12:00 Regular Session 5.2: **CA Software Systems (2)**

- Zhuojun Liu, Wenda Wu:
  STAR: Small Tool for Algebraic Research
- Takayuki Kando and Masayuki Noro
  Implementation and preliminary experiments of computer algebra system Risa/Asir on parallel computer AP1000

12:00-13:30 — Lunch —

13:30-14:30 Invited Talk
Masami Hagiya (Univ. of Tokyo):
Title:**Constructive Formalization of Planar Graphs**

14:30-15:00 — Coffee Break (30 min.) —

15:00-16:30 Regular Session 6: **Geometry and First Order Theory**

- Tadashi Takahashi:
  On the Relations of Trimodular Type Simple K3 Singularities
- Shang-Ching Chou, Xiao-Shan Gao, and Jing-Zhong Zhang:
  Automated Two-Dimensional Geometric Constraint Solving
- Jinzhao WU and Zhuojun LIU:
  On First-Order Theorem Proving

16:30 Closing

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==================== ASCM96 Registration Form ====================
NAME: __________________, __________________, __________________.
      (given name)        (family name)       (middle name if any)
AFFILIATION:_______________________________________________________.
FULL ADDRESS:_____________________________________________________
___________________________________________________________________.
COUNTRY:___________________________________________________________.
E-MAIL:____________________________________________________________.
Telephone:__________________________ Telefax:_____________________.
RT attendance (Yes/No):___ at 10,000 yen.
RT attendance (Yes/No):___ at  3,000 yen. (For students only!)
ET attendance (Yes/No):___ at  3,000 yen. (with ET procs.)
ET attendance (Yes/No):___ at  1,000 yen. (without ET procs.)
DATE (Year/Month/Day):__/__/__.
Signature:

========= hotel reservation form (Optional): (ASCM96) ============
*****            For overseas attendants only!              *****
*** Do not separate this form from the ASCM96 registration form **
* Check-in Date: _______; Check-out Date: _______.
* Single / Twin (leave preferred one.)
* Extra bed? (Yes / No.)
* Preferable rate per person per night (Select one.):
  6,000-6,999 yen / 7,000-7,999 yen / 8,000-8999 yen /
  9,000-9,999 yen / 10,000 yen or higher

Payment should be made directly to the hotel at check-out.
Usually a deposit is not required.
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Either mail, fax or e-mail the completed form to:

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Either mail, fax or e-mail the completed form to:

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