September 13-16, 1982
TOKYO, JAPAN
Gakushuin University

ADVANCE PROGRAM schedule

MONDAY, SEPTEMBER 13, 1982

Tutorial
The tutorial will be held on Monday, September 13 to introduce software engineering and to explain basic terminology. The talk will be presented by a Japanese lecturer, in Japanese. Details will be available at a later date.

Fee for conference participants:

- $5,000 $25.00
- Participation in tutorial only:
- $10,000 $50.00

TUESDAY, SEPTEMBER 14, 1982

TUESDAY MORNING

9:30-10:00
OPENING REMARKS
K. Kobayashi, Honorary Cochairperson
R.T. Yeh, Honorary Cochairperson
Y. Ohno, General Chairperson
V.R. Basili, Program Cochairperson

10:00-11:00
KEYNOTE SPEAKER
T. Kuranari, Chairman, Congressional Federation for the Promotion of the Information Industry, Japan

11:30-12:30
INVITED SPEAKER
G.M. Weinberg, Gerald M. Weinberg and Associates, USA

TUESDAY AFTERNOON (parallel sessions)

* FA1: 2:30-3:30 PERSPECTIVES IN SOFTWARE ENGINEERING
  The Dimensions of Healthy Maintenance
  R.S. Arnold, University of Maryland and D.A. Parker, NASA/Goddard Space Flight Center, USA
  MAP—a Tool for Understanding Software
  J. Hiles and S. Warren, Amdahl Corporation, USA

* FB1: 2:30-3:30 LANGUAGE PROCESSING ISSUES
  Design Considerations in Language Processing Tools for ADA
  W. Babich, L. Weissman, and M. Wolfe, SoftTech, Inc., USA
  A Closer Look at Iteration: The Self-Stabilizing, Capability of Loops
  A.M. Mili, Texas A&M University, USA

* FC1: 2:30-3:30 CONFIGURATION MANAGEMENT
  Design, Implementation and Evaluation of a Revision Control System
  W.F. Tichy, Purdue University, USA
  Configuration Control for Evolutional Software Products
  O. Shigo, Y. Wada, Y. Terashima, K. Iwamoto, and T. Nishimura, Nippon Electric Co., Ltd., Japan

* PA1: 4:00-5:30 ON MAINTAINING QUALITY SOFTWARE
  Panel Discussion

* PB1: 4:00-5:30 NONCONVENTIONAL PROGRAMMING
  Panel Discussion

* PC1: 4:00-5:30 CAN FORMALIZATION DO ANY GOOD IN PRACTICE?
  Panel Discussion

TUESDAY EVENING

7:00-8:00 p.m. (Reception)
Gakushuin University
9:30-10:30
INVITED SPEAKER
F. Bauer, Technical University of Munich, Germany

WEDNESDAY MORNING (parallel sessions)

• FA2: 11:00-12:30 QUANTITATIVE ASPECTS OF SOFTWARE
  Experimenting with Computer Software Complexity and Reliability
  D. Potier, J.L. Atbin, R. Forreol, and A. Biloadeu, INRIA, France
  A Model for Estimating Program Size and its Evaluation
  M. Itakura and A. Takayamaghi, Fujitsu Limited, Japan
  Experimental Results on the Paging Behavior of Numerical Programs
  W. Abu-Sufrah, R. Lee, M. Maikawi, and P.-C. Yew, University of Illinois, USA

• FB2: 11:00-12:30 REQUIREMENT TECHNIQUES
  Verification System for Formal Requirements Description
  K. Agusa and A. Ohnishi, Kyoto University, Japan
  Requirement Specification Description System in Japanese Language: JSOS
  J. Murai, N. Saito, and N. Doi, Keio University, Japan
  Static and Dynamic Data Modeling as a Prerequisite to Information System Design
  D. Marca and C. McGowan, SofTech, Inc., USA

• FC2: 11:00-12:30 PROGRAMMING ENVIRONMENTS
  The TRW Software Productivity System
  B.W. Boehm and A.B. Pyster, TRW Inc., USA
  An Integrated, Interactive and Incremental Programming Environment for the Development of Complex Systems
  H. Wertz, University of Paris, France
  Toolpack—An Experimental Software Development Environment Research Project
  L.J. Osterweil, University of Colorado, USA

WEDNESDAY AFTERNOON (parallel sessions)

• FA3: 2:00-3:30 MAINTENANCE EVALUATION AND TOOLS
  An Insider’s Survey on Software Development
  J.C. Zolnowski and P.D. Ting, Bell Laboratories, USA
  An Examination of Evolution Dynamics
  M.J. Lawrence, University of New South Wales, Australia
  M.H. Halstead’s Software Science—A Critical Examination

• FB3: 2:00-3:30 SPECIFICATION TECHNIQUES
  Functional Specification of Synchronized Processes based on Modal Logic
  Yonezaki and T. Katayama, Tokyo Institute of Technology, Japan
  Specification of Abstract Data Types with Partially Defined Operations
  T. Sakabe, Y. Inagaki, and N. Honda, Nagoya University, Japan
  Capturing More World Knowledge in the Requirements Specification
  S. Greenspan, A. Borgia, and J. Mylopoulos, University of Toronto, Canada

• FC3: 2:00-3:30 TOOLS FOR PROGRAM DESIGN AND CONSTRUCTION
  Consistency Checking within Embedded Design Languages
  A. Rudmik, B.E. Casey, and H. Cohen, GTE Laboratories Incorporated, USA
  Experience with a Module Package in Developing Production Quality PASCAL Programs
  S. Warren, B.E. Martin, and C. Hoch, AMDahl Corporation, USA
  A Form-Based Approach to Human Engineering Methodologies
  H.C. Kuo, C. Li, and J. Ramanathan, The Ohio State University, USA

• PA2: 4:00-5:30 SOFTWARE ENGINEERING EDUCATION AND TECHNOLOGY TRANSFER
  Panel Discussion

• PB2: 4:00-5:30 KNOWLEDGE BASED SYSTEMS
  Panel Discussion

• PC2: 4:00-5:30 IMPLICATIONS ON SOFTWARE ENGINEERING ENVIRONMENTS
  Panel Discussion
• F5B: 2:00-3:30 PROGRAM ANALYSIS AND SYNTHESIS
  Global Data Flow Analysis by Decomposition into Primes
  J.R. Forman, ITT, USA
  A Hierarchical Structuring Method for Function Software Systems
  K. Futatsugi and K. Okada, Electrotechnical Laboratory, Japan
  A New Design Language for Communication Protocols and a Systematic Design Method of Communication Systems
  N. Shiratori, J. Gohara, and S. Noguchi, Tohoku University

• S: 2:00-3:30 SHORT PAPERS
  Visual Aid for FORTRAN Program Debugging
  K. Takahashi, T. Aso, and M. Kobayashi, Fujitsu Limited, Japan
  The Inspection Method Applied to Small Projects
  B. Runge, Runge-data, Denmark
  Software Development with Executable Functional Specifications
  J.E. Urban, University of Southwestern Louisiana, USA
  The Portable Communication Protocol Program COMPAS for Data Terminal Systems
  K. Miyazawa, M. Oda, and S. Kato, NTT Yokosuka Electrical Communication Laboratory, Japan
  Early Experiences with a Multi-Display Programming Environment
  Y. Mano, K. Omaki, and K. Torii, Electrochemical Laboratory, Japan
  A Model for Description of Communication Protocol
  K. Chiba, K. Konishi, and A. Kurematsu, KDD Research and Development Laboratories, Japan

THURSDAY AFTERNOON

• C: 4:00-5:30 SOFTWARE ENGINEERING: CHALLENGES OF TOMORROW
  Closing Session
  Closing Remarks
  H. Enomoto, Program Cochairperson

POSTER SESSION

A poster session will be established to bring more new ideas and concepts to the participants. This session will consist of a few of the best papers submitted that could not be fit into the constraints of the regular program. The authors of the poster session papers are requested to post their papers in allocated spots and to review them for discussion during the session.

TOOLS FAIR

The 6th ICSE conference committee is planning to have a software tools fair in connection with the conference at Gakushuin University (Tokyo), September 14-16.

The purpose of this tools fair is to examine state-of-the-art software engineering tools on microcomputers or personal computers. Because it is not a sales fair, even experimental tools may be brought to demonstrate their technical values.

Booths will be available free of charge on the third floor of the Memorial Hall Gakushuin University, a major session place of the conference. Booths will be supplied with an exhibition desk and electric power (100 V, 50 Hz). The conference will not be providing aid for transportation and set-up of this exhibition.

Total number of the booths are limited (about 15). It may be necessary to allocate a half-day time slot to each demonstration/booth. People who have any interest, please contact:

Kouichi Kishida
Software Research Associates, Inc.
1-1-1 Hirakawa-cho, Chiyoda-ku
Tokyo 102, Japan
Telex J29457

Deadline for application is July 31, 1982.

I cannot attend the conference, but please send me copies of proceedings when available.

______________________________ $36 (Non-Member) ________________ $27 (Member)
(Order No. 422)
CONFERENCE LOCATION
The Gakushuin University Campus
1-5-1 Meijiro, Toshima-ku, Tokyo 171

REGISTRATION
Registration Fees
The following registration fees will apply to those whose Registration Forms and fees are received by the Conference Secretariat on or before August 10, 1982.

<table>
<thead>
<tr>
<th></th>
<th>Regular members</th>
<th>Junior members</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 10, 1982</td>
<td>¥30,000</td>
<td>¥15,000</td>
</tr>
<tr>
<td>On or after August 10, 1982</td>
<td>¥35,000</td>
<td>¥15,000</td>
</tr>
</tbody>
</table>

• The junior member fee is only for junior trainees. Proof of identity from one's professor or department chairperson must be submitted to qualify.

The registration fee covers the following:
For regular and junior members
- Attendance at the Conference Sessions, Tools Fair, Welcoming Reception, and Conference Kit.

The reception desk on the opening day of the Conference is extremely busy. If at all possible, we ask, therefore, that you complete your registration beforehand. Registrations will also be accepted on September 13 at the Sunshine City Prince Hotel.

Payment
Please use one of the following methods when sending your registration fees.
2. Bank transfer in Japanese Yen (US dollars) to the following account:
   The Dai-ichi Kangyo Bank Ltd., Toranomon Branch
   Account No.: 1318525
   Account: The 6th International Conference on Software Engineering, Information Processing Society of Japan

• Personal checks will not be accepted.

Application for Registration
Please complete the Registration Form and after remitting the appropriate fees, send it to the Secretariat by August 31, 1982. After September 1, please register directly at the registration desk at the Conference site.

Confirmation/Receipt
Upon receiving your Registration Form and confirming your remittance of the appropriate fees, the Secretariat will send you a confirmation/receipt containing your registration number. Please bring this confirmation card when you report for registration at the Conference site.

If you have not received your confirmation/receipt by the time of the Conference, please contact the registration desk at the Conference site.

Applications to:
The 6th International Conference on Software Engineering Secretariat
Information Processing Society of Japan
Kikai Shinko Building
3-5-8 Shiba-Koen, Minato-ku, Tokyo 105, Japan
Phone: (03) 431-2808

HOTEL AND TOURS RESERVATIONS
The Nippon Travel Agency, official travel agent for the Conference, will arrange reservations for the hotel and technical and optional tours. Details of technical tours will be available at a later date.

Those requiring hotel reservations or wishing to participate in tours should complete the appended Registration Form and return it to the Secretariat. Once your Registration Form has been received, you will be forwarded a confirmation card.

Official Hotel (Tokyo)
Sunshine City Prince Hotel charges (including tax and service tax)

<table>
<thead>
<tr>
<th></th>
<th>Single</th>
<th>Standard twin</th>
<th>Deluxe twin</th>
<th>Deposit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>¥10,200</td>
<td>¥13,200</td>
<td>¥17,400</td>
<td>¥20,000</td>
</tr>
<tr>
<td>($)</td>
<td>($)</td>
<td>($)</td>
<td>($)</td>
<td>($)</td>
</tr>
</tbody>
</table>

Optional Tours
See the enclosed Registration Form for details.

Payment
Deposit for the hotel and tour fees should be transferred to the following account:
Bank of Tokyo, Shimbashi Branch
Account No.: 43737
Account: The Nippon Travel Agency
Foreign Tourist Department

Official Airlines
Japan Airlines has been appointed the official conference carrier. Please contact your nearest Japan Airlines agent for details.

People from North America may contact:
Auburn Travel Bureau, Inc.
P.O. Box 369
Auburn, N.Y. 13021
Tel: 315-255-1726
Attn: Dudley Livingston

People from Europe may contact:
Mr. H. Schrank
Deutsches Reisbüuro
Eschenheimer Landstrasse 25-27
D-6000 Frankfurt 1
Federal Republic of Germany
Phone: 0611/1566461
TWX: 041529270 DRD

For detailed information on hotels and optional tours, contact the following:
The Nippon Travel Agency
Foreign Tourist Department Shimojima Bldg. 9F
1-2-17 Higashi-Shimbashi, Minato-ku
Tokyo 105, Japan
Phone: (03) 571-5541
REGISTRATION FORM

6TH INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING
September 13-16, 1982  Tokyo, Japan

Mail to: The 6th International Conference on Software Engineering Secretariat
        Information Processing Society of Japan
        Kikai Shinko Building
        3-5-8 Shiba-Koen, Minato-ku, Tokyo 105, Japan

TITLE (check one)  □ Prof.  □ Dr.  □ Mr.  □ Mrs.  □ Miss  □ Ms.

NAME

(First) (Middle Initial) (Last)  PLEASE USE BLOCK CAPITALS

AFFILIATION

OFFICE ADDRESS

COUNTRY

Type of affiliation (check one)

When completing the following, make sure that all relevent items are completely filled in.

CONFERENCE REGISTRATION FEE

□ Regular (before Aug. 10, 1982)  ¥30,000 (U.S. $150)  (1)
□ Regular (after Aug. 10, 1982)  ¥35,000 (U.S. $175)  □
□ Junior  ¥15,000 (U.S. $75)

TUTORIAL REGISTRATION FEE (conducted in Japanese)

□ Will also attend tutorial  ¥5,000 (U.S. $25)  (2)
□ Will not attend tutorial  ¥10,000 (U.S. $50)
□ Tutorial only

BANQUET FEE

□ Will attend  ¥10,000 (U.S. $50)  x  □
□ Will not attend

RECEPTION

□ Will attend  Free
□ Will not attend

TECHNICAL TOURS (to be announced later)

□ Interested  □ Not interested

Total  | (1) + (2) + (3) |  □ ¥  □ $

Make remittance for above amount to following account:
The Dai-ichi Kangyo Bank Ltd., Toranomon Branch
Account No.: 1318525
Account: The 6th International Conference on Software Engineering
         Information Processing Society of Japan

HOTEL RESERVATION (Tokyo)

Sunshine City Prince Hotel (including tax and service tax)

□ Single  ¥10,200 ($51)  x  □
□ Standard twin  ¥13,200 ($66)  □
□ Deluxe twin  ¥17,400 ($87)  □
□ Deposit  ¥20,000 ($100)  □

Check-in date: __________
Check-out date: __________
Arrival schedule
Arriving at ________ on ________ by ________

OPTIONAL TOURS

□ Nikko full-day tour  Sept.  ¥16,400 ($82)  x  □
□ Hakone full-day tour  Sept.  ¥16,400 ($82)  x  □
□ Tokyo morning tour  Sept.  ¥3,800 ($19)  □
□ Tokyo full-day tour  Sept.  ¥8,800 ($44)  □
□ Full-day art tour  Sept. 13  ¥9,400 ($47)  x  □

□ ¥  □ $  □ ¥  □ $

Make remittance for above amount to following account:
Bank of Tokyo, Shimbashi Branch
Account No.: 43737
Account: The Nippon Travel Agency Foreign Tourist Department

Registrations will also be accepted on September 13 at the Sunshine City Prince Hotel.