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# ***USC-CSE TECHNOLOGY WEEK***

## ***Annual Research Review and Workshops '99***

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We're getting ready for our Annual Research Review and Executive Workshop, February 8-12, in Los Angeles. This year's theme is Software Engineering Knowledge Acquisition and Management. Details are provided in the accompanying package, with some assumptions about your participation.

Executive Workshop February 10, 1999

In concert with our Annual Research Review February 8-9, 1999 and a Focused Workshop on February 11-12, we are holding our annual USC-CSE Executive Workshop on Wednesday, February 10. A number of our executive-level Affiliates have signed up to discuss emerging corporate-level trends and strategies in acquiring and managing software engineering knowledge assets (see the overview and agenda below, along with an updated summary of the week's events and a registration package).

Please encourage your executives to capitalize on this opportunity to benchmark their level of capability and assess emerging technologies in software engineering knowledge capture and dissemination.

Barry Boehm

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# ***USC-CSE TECHNOLOGY WEEK***

## ***Annual Research Review and Workshops '99***

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USC-CSE Technology Week

***February 8-12, 1999***

We have usually held our Annual Research Review and Executive Workshop in early March, but have been consistently conflicting with the Software Engineering (SE) Process Group conference. We are therefore moving these events to early February.

We also usually have a Focused Workshop in the May-June time frame, but this year there will be 10 SE workshops held in Los Angeles in concert with ICSE 99, the big International Conference on SE. Rather than compete with these, we plan to hold a Focused Workshop February 11-12 as a technical follow-up to the Executive Workshop February 10.

The topic for the Executive Workshop will be Software Engineering Knowledge Acquisition and Management. Many of our Affiliates are formulating corporate knowledge asset management strategies in software engineering or other areas, including life-long learning and corporate knowledge automation. At USC-CSE, we are finding increased demand for SE graduate courses, distance learning, and certificate programs. We are trying to sort out what delivery mechanisms are best suited to SE, and what types of education and training are best done by corporations, by universities, and by commercial organizations such as Learning Tree.

The Executive Workshop will feature executive perspectives on these issues from Dr. Alan Salisbury, CEO of Learning Tree; Dr. Steve Cross, Director of the SEI; Prof. Len Silverman, our Dean of Engineering, and several executives from our Affiliate organizations.

The Focused Workshop on February 11-12 will address Automating SE Knowledge Delivery. One of our new MBASE- related thrusts involves development of a SE Decision Assistant (SEDA) capability, via intelligent agents which can monitor a SE project's artifacts and suggest improved project decisions. Several of our Affiliates are looking into similar capabilities, and we'd like to explore the relative importance and difficulty of alternative technical approaches in this area.

Agenda:

Monday, Feb. 8- Annual Research Review  
- COCOMO II and Extensions; SW Architecture

Tuesday, Feb. 9- Annual Research Review  
- MBASE, SEDA, Win Win, Demos, Affiliates' Panel  
- Steering Group meeting

Wednesday, Feb. 10- Executive Workshop  
- Software Engineering Knowledge Acquisition and Management

Thursday-Friday, Feb. 11-12- Focused Workshop  
- Automating SE Knowledge Delivery

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# USC-CSE TECHNOLOGY WEEK

## *Executive Workshop, February 10, 1999*

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USC-CSE Executive Workshop  
Software Engineering Knowledge Acquisition and Management  
Davidson Conference Center, USC Campus  
Los Angeles, California

*February 10, 1999*

Our commercial, aerospace, and government Affiliates are becoming increasingly engaged with the nurturing and accessibility of their corporate software engineering (and other) knowledge resources. With the increasing pace of change in information technology and associated software engineering best practices, these knowledge resources--both human and automated--are the keys to competitive success and cost-effective delivery of public services.

Creating and sustaining these Software Engineering resources creates major challenges in such areas as:

- Continuing education of software engineers and managers;
- Continuing update of domain, product, and process knowledge;
- Assured delivery of up-to-date knowledge at time of need;
- Selective dissemination of updated information to those most concerned.

At USC, we have been increasingly addressing issues of distance learning, continuing education, and automating delivery of software engineering knowledge. With this workshop, we wish to explore with Affiliate executives and complementary software engineering knowledge providers (commercial education and training providers; tool and methodology providers; nonprofits and consortia) how this picture is likely to unfold, and where are the best places for university education and research to contribute.

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# *USC-CSE TECHNOLOGY WEEK*

## *Executive Workshop, February 10, 1999*

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### *Preliminary Agenda (\* --Invited; \*\*--Committed)*

8:15 - 10:00 am                      Overview Presentations

- \*\*Dr. Len Silverman, Dean of Engineering, USC
- \*\*Dr. Barry Boehm, Director, USC-CSE
- \*Dick Law, Lockheed Martin
- \*\*Dr. Alan Salisbury, CEO, Learning Tree

10:30 am - 12:00 noon            Panel: Commercial Sector Issues and Initiatives

- \*\*Dr. Robert Martin, VP, Lucent
- \*\*Dr. Emil Sarpa, VP, Sun
- \*\*Mike Sweeney, VP, EDS
- \*\*Walker Royce, VP, Rational
- \*Dr. Rich DeMillo, VP, Bellcore

1:00 pm - 2:30 pm            Panel: Aerospace Sector Issues and Initiatives

- \*\*Dr. Art Pyster, Chief Scientist-SW, FAA
- \*\*Dr. Gary Kang, VP, TRW
- \*\*Dr. David Evans, Aerospace
- \*\*Wayne Sebera, VP, Litton

3:00 pm - 4:30 pm            Emerging Technology

- \*\*Dr. Steve Cross, Director, CMU-SEI
- \*\*Prof. Lewis Johnson, USC-ISI
- \*\*Doug Rosenberg, President, Iconix
- \* Judd Neale, CEO, SPC
- \*\*Prof. Dan Port, USC-CSE

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# ***USC-CSE TECHNOLOGY WEEK***

## ***Annual Research Review and Executive Workshops '99***

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USC-Focused Workshop  
Automating Software Engineering Knowledge Delivery  
Seaver Science Auditorium, USC Campus  
Los Angeles, CA,

***February 11-12, 1999***

Automating software engineering knowledge delivery runs a spectrum from providing automated Web/Internet access to corporate software engineering resources, through project decision rationale capture and legacy software design recovery, to agents providing software engineering decision advice and automated applications generation based on domain knowledge.

We have been developing various initial capabilities along these lines. The web site for our annual series of digital library student projects (<http://sunset.usc.edu/classes>) contains guidelines for scoping and structuring the team products and processes. Our WinWin system has a rationale capture capability linking the rationales for win conditions, issues, and the adoption or rejection of proposed issue-resolving options. Lewis Johnson's Media Doc system provides task-oriented information about legacy software systems. We have developed some initial Software Engineering Decision Assistant (SEDA) tools for process model selection, risk identification, and software cost-quality attribute tradeoff decisions. Bob Balzer and Dave Wile have developed several domain knowledge-based application generators.

We and several of our Affiliate organizations have found that there are a number of issues involved in developing and operating such capabilities.

Some examples are:

- ❖ What are the best ways of structuring knowledge to support different classes of services?
- ❖ What are the particular challenges in structuring and providing useful knowledge about software processes and software products?
- ❖ How does one address the formidable problem of knowledge base evolution in rapidly-changing technology areas?
- ❖ How does one effectively integrate a set of individual services?

We have been gathering experience on some aspects of these questions, and look forward to comparing these experiences with Affiliates exploring similar issues. A candidate set of Affiliate presenters is indicated below.

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***USC-CSE TECHNOLOGY WEEK***  
***Focused Workshop, February 11-12, 1999***

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Preliminary Agenda

Thursday, February 11

7:30 - 8:15 am	Continental Breakfast
8:15 - 9:30 am	Reprise of USC Experiences Barry Boehm, Dan Port, Bob Balzer, Lewis Johnson
9:30 - 10:00 am	Break
10:00 - 11:30 am	Affiliate Experiences (Invited)(* - Accepted) John Salasin, DARPA* Rick Hefner, TRW Dave Weiss, Lucent Lisa Finneran, SPC* Marc Kellner, SEI Doug White, AFRL
11:30 - 12:00 pm	Breakout Group Determination Candidate Topic:     Group Leader, Scribe  Automating Product Knowledge: Belz/Kerner, Egyed Automating Process Knowledge: Brown, Abi-Antoun Knowledge Capture & Delivery: Johnson, Park/Port
12:00 - 1:00pm	Lunch
1:00 - 5:30pm	Breakout Groups

Friday, February 12

7:30 - 8:15am	Continental Breakfast
8:15 - 10:45am	Breakout Groups
10:45 - 11:30am	USC Response

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# ***USC-CSE TECHNOLOGY WEEK***

*ANNUAL RESEARCH REVIEW, EXECUTIVE WORKSHOP and FOCUSED WORKSHOP*

## **HOTEL ACCOMMODATIONS**

February 8-12, Los Angeles

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### ***The Radisson Hotel Midtown***

3540 South Figueroa Street  
Los Angeles, CA 90007  
T: (213) 748-4141  
F: (213) 748-0043

The Radisson Hotel Midtown is conveniently located across the street from the USC campus.

The room rate for USC-CSE Technology Week, Annual Research Review & Executive Workshop attendees is a very attractive \$85/night for single rooms and \$90/night for doubles.

Reservations may be made by calling (213) 748-4141; please attempt to make your reservations by 1/98.

**The deadline for room reservations is January 31, 1999.**

### ***The Los Angeles Athletic Club***

431 West Seventh Street  
Los Angeles, CA 90014  
T: (213) 625-2211  
F: (213) 689-1194

The Club is a European-style hotel featuring deluxe rooms with conversation areas and executive desks, spacious tile baths with hair dryers and plush terry robes, in-room coffee makers, honor bars, irons and pressing boards, and elegant European furnishings.

Guests can expect complimentary use of the Los Angeles Athletic Club's legendary athletic facilities, a complimentary fruit and cheese basket upon arrival, complimentary coffee, tea, and fresh muffins delivered Monday-Friday, complimentary morning newspaper delivery, concierge desk, and nightly turndown service with Belgian chocolates.

The room rate for USC-CSE Technology Week, Annual Research Review & Executive Workshop attendees is an attractive \$120/night.

Reservations may be made by calling (800) 421-8777 or (213) 625-2211.

**The deadline for room reservations is January 1, 1999.**

*University of Southern California  
Center for Software Engineering –Technology Week  
Annual Research Review - Executive Workshop - Focused Workshop*

*February 8-12, 1999*

**Participant Information Sheet**

Name:

Title:

Company:

Department:

Address:

City:

State:

Zip:

Phone:

Fax:

Email:

**I will be attending:** (check all that apply)

**Monday February 8:**

Andrus Gerontology Center Auditorium  
3715 McClintock Avenue

Annual Research Review  
COCOMO II and Extensions; SW Architecture \_\_\_\_\_ Lunch \_\_\_\_\_

**Tuesday February 9:**

Andrus Gerontology Center Auditorium  
3715 McClintock Avenue

Annual Research Review  
MBASE, SEDA, WinWin, Demos, Affiliates  
Panel \_\_\_\_\_ Lunch \_\_\_\_\_ Steering Group meeting \_\_\_\_\_

**Wednesday February 10:**

Davidson Conference Center  
3415 S. Figueroa Street

Executive Workshop  
Software Engineering Knowledge Acquisition and Management  
Lunch \_\_\_\_\_

**Thursday February 11:**

Seaver Science Center  
920 W. 37<sup>th</sup> Street

Focused Workshop  
*Automating SE Knowledge Delivery*  
(panelist) \_\_\_\_\_ (participant) \_\_\_\_\_ Lunch \_\_\_\_\_

**Friday February 12:**

Seaver Science Center  
920 W. 37<sup>th</sup> Street

Focused Workshop  
*Automating SE Knowledge Delivery*  
(panelist) \_\_\_\_\_ (participant) \_\_\_\_\_ Lunch \_\_\_\_\_

**I will need:** (check all that apply)

Parking: \_\_\_\_\_

Special dietary consideration \_\_\_\_\_ please specify \_\_\_\_\_

Handicap parking and access information \_\_\_\_\_

Please reply to:

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