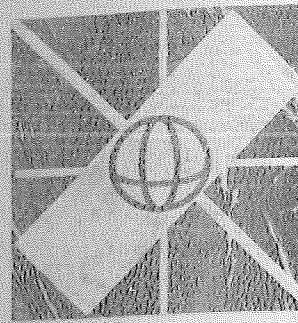


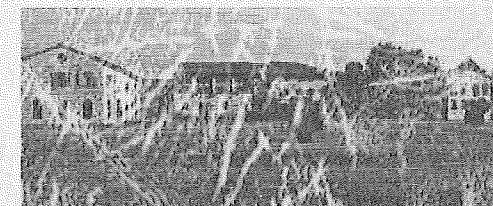
Kic-4

The Fourth IFIP Working Group 5.2 Workshop on Knowledge Intensive CAD



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Working Group 5.2
Workshop on
Knowledge Intensive CAD
KIC-4**

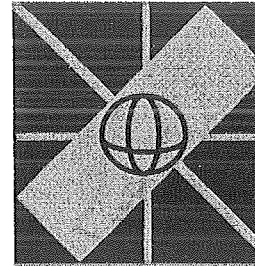
**MAY, 22-24, 2000
CENTRO S. ELISABETTA
UNIVERSITÀ DEGLI STUDI DI PARMA
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Editors: U. Cugini, and M. Wozny

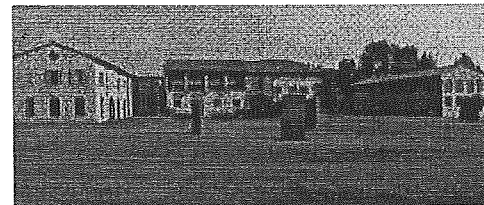
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WORKSHOP HIGHLIGHTS

This year has been a number of high-quality submissions and 24 papers have been selected and organised in streams, among them 3 come from the industrial area.

The streams have been chosen in order to encapsulate particular aspects of the central themes. They are:

- Architectures for knowledge intensive CAD;
- Tools for knowledge intensive CAD;
- Methodologies for knowledge intensive CAD;
- Implementation of knowledge intensive CAD;
- Applications of knowledge intensive CAD;
- Evolution of knowledge intensive design for the life-cycle;
- Formal methods.

We have also invited Dr. Sergei Ikovenko, Invention Machine Corp., Boston, U.S.A., to discuss technology innovation based on knowledge.

Social Events

A banquet will be held on the 23 of May, 2000 at Fondazione Magnani Rocca, located close to Parma and where it is also possible to visit a famous private paintings collection. There are always late bars and restaurant in the Hotels and other places in Parma, and we will be very happy to help you.

KIC-4 – WORKSHOP PRESENTATION

Aim

Computer Aided Design (CAD) technology plays a key role in today's advanced manufacturing environment. To reduce the time to market, achieve zero defect quality the first time, and use available production and logistics resources effectively, product and design process knowledge covering the whole product life-cycle must be used throughout product design. Once generated, this intensive design knowledge should be made available to later life-cycle activities. Due to the increasing concern about global environmental issues and rapidly changing economical situation world-wide, design must exhibit high performance not only in quality and productivity, but also in life-cycle issues, including extended producer's liability.

This requires designers and engineers to use various kinds of design knowledge intensively during product design and to generate design information for use in later stages of the product life-cycle such as production, distribution, operation, maintenance, reclamation, and recycling. Therefore, future CAD systems must incorporate product and design process knowledge, which are not explicitly dealt with in the current systems, in their design tools and design object models.

The IFIP Working Group 5.2 has organized a series of workshops extending the concept of intelligent CAD to the concept of "knowledge intensive engineering". The concept advocates that intensive life-cycle knowledge regarding products and design processes must be incorporated in the center of the CAD architecture. The concept focuses on the systematization and sharing of knowledge across the life-cycle stages and organizational boundaries. The first workshop was held at the Helsinki University of Technology, Espoo, Finland in September 1995. The second workshop was held at Carnegie Mellon University, Pittsburgh, USA, in September 1996. The third workshop was held at the University of Tokyo, Tokyo, Japan, in December 1998.

The aim of the workshop is to clarify and elaborate the concepts of knowledge intensive design and CAD by providing an international forum for mutual discussions and exchange of opinions of experts of the field. The first workshop focused on exploring the concept of knowledge intensive design as a part of knowledge intensive engineering activities. The second workshop examined architectures and methodologies for "knowledge intensive CAD" based on the results of the first workshop. The third workshop focused on the implementations and applications of knowledge intensive CAD systems. The fourth workshop will look at the evolution of knowledge intensive design for the life cycle.

Scope

The scope of the fourth KIC Workshop includes, but it is not limited to:

- Architectures for knowledge intensive CAD
- Tools and methodologies for knowledge intensive CAD
- Implementation of knowledge intensive CAD
- Applications of knowledge intensive CAD
- Evolution of knowledge intensive design for the life-cycle

Workshop Format

Participants to the workshop are limited to a small number, not to exceed 50.

A record book will be published after the workshop by Kluwer Academic Publishers.

Presentation Information

Each speaker has 25 minutes for presentation and 15-20 minutes for questions.

Equipment available is:

- > Overhead projector;
- > Video (PAL e VHS);
- > PC projector;
- > 35mm slide projector.

Please ensure that you let your session chairperson know of your method of presentation before the session starts and make sure you are familiar with how it works. PC presenters are encouraged to have back up method of presentation.

Venue

The fourth KIC Workshop will be held at Centro Santa Elisabetta within the Campus of the University of Parma, Parma, Italy. A web page has been set up at the following address: <http://kaemart.unipr.it/kic4>

Chairperson

Chair: Umberto Cugini, Università di Parma (Italy)

Co-Chair: Michael Wozny, RPI (USA)

Program Committee

George Allen (USA)

Monica Bordegoni (Italy)

David Brown (USA)

Umberto Cugini (Italy)

Mark Cutkosky (USA)

Werner Dankwort (Germany)

Bertrand T. David (France)

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Martti Mantyla (Finland)

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Caterina Rizzi (Italy)

Dieter Roller (Germany)

Christian Rouchon (France)

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Rene Soenen (France)

Hiromasa Suzuki (Japan)

Serge Tichkiewitch (France)

Tetsuo Tomiyama (Japan)

Hiroyuki Yoshikawa (Japan)

Michael Wozny (USA)

Organizing committee

Caterina Rizzi (Italy)
Monica Bordegoni (Italy)

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KIC-4 PROGRAM**Synopsis**

22 May 2000	23 May 2000	24 May 2000
8.30-9.30: Registration 9.30-10.00: Opening Session		
10.00-10.45: Invited Talk	9.00-10.30: Session 4 Tools I	9.00-10.30: Session 8 Formal Methods
10.45-11.00: Coffee break	10.30-11.00: Coffee break	10.30-11.00: Coffee break
11.00-12.30: Session 1 Architecture	11.00-12.30: Session 5 Tools II	11.00-12.30: Session 9 Applications II
12.30-13.30: Lunch	12.30-13.30: Lunch	12.30-13.30: Lunch
13.30-15.00: Session 2 Methodologies I	13.30-15.45: Session 6 Implementation	13.30-15.00: Session 10 Evolution
15.00-15.30: Coffee break	15.45-16.00: Coffee break	15.00-15.30: Coffee break
15.30-17.00: Session 3 Methodologies II	16.00-17.30: Session 7 Applications I	15.30-16.30: Final discussion
17.00-17.30: General discussion	20.00: Social Dinner	