CALL FOR PAPERS

2ⁿᵈ IFIP Working Conference on Computer Aided Innovation
October 8-9, 2007
Hosted by
Delphi Corporation, Technical Center Brighton
and
Product Development IT - Chrysler Group, DaimlerChrysler Corporation

CAI is a young domain in the array of CAx technologies. The goal of CAI is to support enterprises throughout the complete innovation process.

Although some existing ideas and concepts of CAI focus on assisting product designers in their creative stage, a more comprehensive vision conceives CAI systems beginning at the creative stage of perceiving business opportunities and customer demands, then continue helping in developing inventions and, further on, providing help up to the point of turning inventions into successful innovations in the market.

As Product Life Cycle Management tools are being integrated with Knowledge management methods and tools, new alternatives arise regarding the Engineering Desktop.

It is expected that changes in innovation paradigms will occur through the use of Computer Aided Innovation methods and tools, which structure is partially inspired by modern Innovation Theories as TRIZ, ASIT, Axiomatic Design, Synectics, General Theory of Innovation, Mind Mapping, Brain Storming, and Lateral Thinking among others.

On the other side the rouse of new information technology and methods, such as semantic web, data mining, text mining, theory of chaos and evolutionary algorithms are being increasingly used for more accurately foretelling the next steps in the technological evolution and in the development of new products. The 2nd IFIP Working Conference on Computer Aided Innovation is aiming at clarifying the essential factors characterizing these new arising tools for bridging the gap between the traditional methods and current trends in search of efficient innovation.

Sponsor:

International Federation of Information Processing, Technical Committee 5: Working Group 5.4 Computer Aided Innovation (IFIP-TC-5, WG5.4-CAI)

Co-Sponsors:
- Delphi Corporation, Technical Center Brighton;
- Product Development IT - Chrysler Group, DaimlerChrysler Corporation;
- Tecnológico de Monterrey, Research Chair Creativity, Inventiveness and Innovation,

Aims:
- Calling for contributions for clarifying the role of computer aided innovation tools.
- Contributing to the further development of the Engineer's Desktop focusing on end-to-end product creation process with methods and tools to ensure the feasibility and success of innovations in early stages of the innovation process
  - product-related validation (e.g. requirements processing, simulation)
  - process-related validation (e.g. frontloading).
- Addressing the main motivations of the industrial sector, regarding the engineering innovation activity with computer tools and methods.
- Discussing organizational, technological and cognitive aspects of the application of CAI methods and tools, and also an evaluation of their effectiveness and efficiency
- Addressing the main motivations of the academic community regarding theoretical foundations of CAI

Co-chairs:

Noel León, Chair WG5.4 and
Director Research Chair CIII,
ITESM, Campus Monterrey
Tel. +(52) 81 81582012
e-mail: noel.leon@itesm.mx

Su Kyeong Cho, Vice-Chair (USA)
WG5.4
DaimlerChrysler Corp.
CAx Research & Technology
Tel: + (1) 248 576 9721
e-mail: sc211@daimlerchrysler.com

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Topics:
- Basic definitions to Computer Aided Innovation;
- Engineering Design and Innovation;
- Modern Innovation Theories and CAI;
- Validation of innovations;
- Fundamental Approaches: CAD-CAE an CAI-software;
- PDM-PLM and CAI;
- Data Mining, Text Mining and CAI
- Semantic Web and CAI;
- Optimization and Innovation;
- Shape and Topology Generators and Optimization;
- Design Automation and CAI;
- Integration of CAI methods and tools into engineering processes;
- Innovation Process and Engineering Information Pipeline;
- Innovation in collaborative networks of enterprises;
- Professional virtual communities and innovation

Theme Proposals for the Papers:
- Research Papers describing contributions and latest results of fundamental investigations;
- Industrial Papers identifying industrial needs for computer aided innovation approaches and methods, experiences and demands;
- Speculative Papers advancing experiences with new theories, approaches and methods, without necessarily offering validated results;
- Engineering Creativity and Innovation Education Papers on new experiences from education, training, teamwork and case examples.

Submission of Papers:
The papers should be submitted as attachment to the following email address: ifip-tc5cai.mty@servicios.itesm.mx
All papers will be reviewed using a blind refereeing process by at least two members of the International Program Committee. Every accepted paper will be required to be resubmitted in a final version. One of the authors must expose the paper at the symposium.
Key dates:
- Deadline for extended abstract submission (2000 words length approx.): March 15
- Notification of acceptance: May 15
- Final Paper Submission: June 15
- Deadline for Camera Ready Manuscripts: July 15

Local Organizing Committees: **Conference Activities at Delphi:** • M. Ashtiani (Chair) **Visit to Chrysler Museum** • S.K. Cho (Chair • V. Korivi • K. Ko --- **Participation Intent:** Please email to ifip-tc5cai.mty@servicios.itesm.mx the attached participation intent information to ensure that you are on the mailing list of future announcements of this meeting. --- **Best paper award:** IFIP TC-5 grants 1000 Euros for the best paper of the Working Conference. --- **Tour:** A tour to Chrysler Museum will be organized by the Product Development IT - Chrysler Group, DaimlerChrysler Corporation at the end of the first day.	**Proceedings:** All accepted papers with paid registration will be included in the Proceedings of the Conference, to be published by Springer Publishers as IFIP series. **Paper Format:** Final papers should be maximum 10 pages in length (a full page of text is approx 500 words). A typical paper might be for example 4500 words long (including references) + plus figures. For the paper template in MS Word, go to http://www.wkap.com/ifip/. **Journal:** Selected outstanding papers will be asked to update for being published as a Special Issue of Journal of Advanced Manufacturing Systems (JAMS) Guide for authors and sample papers as well as information about the refereeing process and information about other relevant journals are available on web site: http://www.worldscinet.com/jams/mkt/editorial.shtml --- **Venue:** Delphi Corporation Technical Center Brighton 12501 E. Grand River Brighton, MI 48114, USA Tel: 810-494-4617 Email: **Mansour.ashtiani@delphi.com**