



## SKY $\Delta$ 2010 - CFP

### Important Dates

|                        |  |
|------------------------|--|
| <b>April 03, 2010:</b> | Paper Submission – <i>Extended Deadline!</i> |
| <b>April 20, 2010:</b> | Author Notification                          |
| <b>May 01, 2010:</b>   | Camera-Ready Copy                            |
| <b>June 16, 2010:</b>  | Workshop day                                 |

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Call for papers  
SKY  $\Delta$  2010 - International Workshop on Software Knowledge  
<http://SoftwareKnowledge.org>

Hosted at the IEEE International Conference on Software Science, Technology & Engineering  
SWSTE2010 - [http://www.iltam.org/infoblank.php?id=sd\\_swste10\\_call](http://www.iltam.org/infoblank.php?id=sd_swste10_call)  
June 15 - 16, 2010  
Herzlia, Israel

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### SKY $\Delta$ = Software Knowledge

SKY – a shorthand of “Software Knowledge” – is the forum to push up  $\Delta$  the current frontiers of complex software interactions. It aims to trigger a novel domain of expertise related to all bidirectional **Software**  $\langle \triangleright \triangleright \rangle$  **Knowledge** aspects. It starts where others ended up, from the assumption that *semantics* is not a nicety, but intrinsic to the nature of software. SKY aims to offer a very high perspective, badly needed to close the semantic gap. It reflects the expectations that when it comes to Software, the sky’s really the limit.

# SKY Fields

## From **Software** ▷ **Knowledge**

Software is the medium to distil knowledge from raw data. Software is also pure knowledge, in its upper abstraction model levels. Software engineering is, as well, an inspiration for improving knowledge Management

- Knowledge mining and harvesting
- Knowledge representation and modeling
- Knowledge Reuse and metrics
- Software tools for automatic Knowledge engineering and manipulation

## From **Knowledge** ▷ **Software**

Knowledge is distilled abstract software. Thinking Software as Knowledge opens the possibility to apply Knowledge processes, models, techniques and tools in the improvement of Software management and development process.

- Ontologies
- Information Retrieval
- Software Management as Knowledge management
- At last MDA

## The Nature of **Software** △

Consider Software as “strongly typed” and “highly structured” Knowledge. Software is a runnable expression of meaning, thus dynamic and testable Knowledge.

- Upper Software model levels as world and domain views
- Medium Software model levels: strongly typed and structured
- Runnable and testable knowledge representations
- Software Domain Formal Representations

## The Nature of **Knowledge** △

Consider Knowledge as an evolution of Software. The coherence of any software package gradually decays by successive upgrade patches. Similarly Knowledge left alone, without software distillation efforts, inexorably decays by the accumulation of raw information. On the other hand, Knowledge is as traceable as Software, thus amenable to evaluation and selective application.

- What is knowledge?
- Knowledge vs Information vs Data
- Knowledge decay and entropy increase
- Knowledge selectivity and traceability
- Knowledge mining and harvesting

## **VLSSoft** = Very Large Systems’ Software ◁▷

The larger the system, the higher the hierarchical abstraction levels, i.e. the Knowledge, needed to concisely describe and maintain the system. The Web is a striking example of a naturally evolving, immense system and substrate available to everyone wishing to explore it. Semantics is essential to bridge the gap between elementary search keywords and complex knowledge. For the same reasons, semantics is indispensable to bridge the gap between fine-grained OOD and very large Software.

- Web dynamics and interestingness
- Specialized Search Engines
- Search based software engineering
- Semantics above and beyond design patterns

# SKY Topics

SKY topics include but are not limited to:

## Software ▷ Knowledge

- Knowledge Indexing and Repositories Management
- Knowledge Reuse
- Knowledge Development Process
- Agile methodologies for Knowledge development
- Knowledge Metrics
- Knowledge Visualization
- CASE tools for Knowledge Management (CAKE)
- Runnable and testable knowledge representations

## Knowledge ▷ Software

- Software Retrieval and Reuse
- Software Extraction and Indexing
- Software Mining and Harvesting
- Software mining strategies based upon Knowledge evolution.
- Semantic Software Representations (SKOS, Ontologies, and more)
- Software Semantic Networks
- MDA, MDE, MDD

## Software △

- Software as knowledge: definitions and properties
- Software as runnable and testable semantics
- Software Domain Formal Representations
- Upper Software model levels : New Methods
- Medium Software model levels: New Methods
- Lower Software model levels: (5GL / 6 GL)
- Software Classification

## Knowledge △

- What is knowledge?
- Knowledge vs. Information vs. Data
- Knowledge Representation and Modeling
- Knowledge Traceability for Information Retrieval
- Knowledge Selectivity
- Knowledge Classification
- Knowledge Transformation

## VLSSoft ◁▷

- Knowledge and Software in the Web context
- Interestingness for rearranging search results
- Novel Knowledge search techniques
- Software search engines
- Search assisted finding of suitable components/models/code for reuse
- Web Software Retrieval
- Software Sharing: Meta-models, interchange formats, and infrastructure tools

## Workshop Organizers

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## Program Committee

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- David C. Rine, George Mason University, USA
- Michal Smialek, Warsaw University of Technology, Poland

## Guidelines for Submission

Papers to be published by SKY fall into the following categories:

- Research papers: state of the art in the field (8 pages);
- Position papers: discussion on ongoing problems in the area, solutions and studies on how the problem could be solved (5 pages);
- Industrial papers: industrial experience in the area, case studies, problems and solutions (8 pages);

Papers should be formatted according to the IEEE Guidelines.

### Full Papers Submission:

Authors are welcome to send their contributions. Submitted papers must be original, unpublished and must not be under any other evaluation process. Each submitted paper will undergo a blind rigorous review process by two members of the Program Committee.

Please email your papers to (SKY [at] SoftwareKnowledge.org). If you have questions regarding submission do not hesitate to contact us by e-mail (SKY [at] SoftwareKnowledge.org).

### Publication:

All papers accepted for presentation at the SKY 2010 Workshop will be published in the Workshop Proceedings (hardcopy and CD) available at the workshop.

Outstanding papers among those presented at the SKY 2010 Workshop will be selected by the program committee to be published in a special journal issue, to appear after the workshop. Authors of outstanding papers will be notified and invited to edit the papers according to reviewers' comments and in a format suitable for journal publication.

Detailed information about the journal issue will be provided during the SKY 2010 Workshop.

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