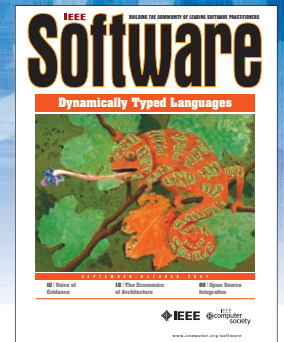


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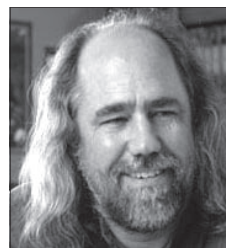
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# Software Evolution: Maintaining Stakeholders' Satisfaction in a Changing World

Publication: **July/August 2010** • Submission Deadline: **1 Nov. 2009**

Companies, governments, and open source communities spend large amounts of resources on a continual basis to fix, adapt, and enhance their software systems. The ability to evolve software rapidly and reliably represents a major challenge in software engineering. This special issue will showcase recent technologies, methodologies, empirical results, and practical experience that can help improve the quality, productivity, and timeliness of software evolution activities and, hence, to maintain and improve stakeholders' satisfaction.

We seek articles on applications of research results, practical experiences, success stories, and lessons learned. The papers should offer practical, reliable insights that have been derived from, or can be applied to, real-world software-intensive systems. Possible types of contributions include

- articles describing state-of-the-art methods, models, and tools, supporting or improving software evolution (with evidence of use and study of practical impact) or bridging the gap between practice and research;
- empirical field studies addressing human, technical, social, and economic issues of software evolution through qualitative and/or quantitative analyses; and
- industrial experiences, including good practices and lessons learned on implementation and/or management of software evolution in specific contexts or domains.

#### Examples of contributions include

- presentation of a tool or technique to support software change activities;
- evaluation of code, design, and architecture quality during software evolution and means to prevent their

- decay and erosion;
- assessment of impact and challenges of software changes, in particular refactorings and restructurings during software evolution;
- economic models to assess software evolution research results and/or practices and to support the planning and management of software evolution;
- good practices, based on evidence of use, in software evolution in general or in
  - parallel, distributed, and decentralized evolution (e.g., across space and time);
  - domain-specific software systems (e.g., consumer electronics, COTS, legacy assets, open source, Web services);
  - resolution of conflicting requirements (e.g., evolvability, security, reliability, or performance); and
- the evolution of large software systems or systems of systems (e.g., keeping entropy and complexity under control, ensuring evolvability under unexpected changes).

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