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Creating Value Under Uncertainty Adele Goldberg	7
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Two disciplines, decision analysis and scenario planning, provide a level of rigor to the task of looking into the future. Both combine information available in the present with explicit assumptions, interpretations, and consequences. Why are these disciplines of interest in software engineering?

Classification Theory

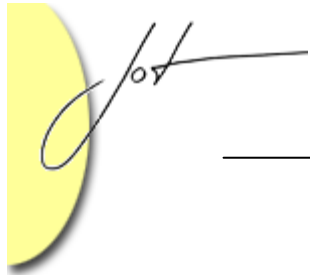
The Theory of Classification, Part 4: Object Types and Subtyping Anthony J.H. Simons	27
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The "Theory of Classification" explains the behavior of languages such as Smalltalk, C++, Eiffel and Java in a consistent framework, modeling features such as classes, inheritance, polymorphism, message passing, method combination and templates or generic parameters. This installment focuses on sub-typing.

Business Objects

The Dark Side of Object Learning: Learning Objects Mahesh H. Dodani	37
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The "holy grail" of (object) learning has been to facilitate just-in-time learning of skills that is delivered in a manner that works best for the learner. That is, the right skills at the right time in the right way. The state of the art of learning objects shows that it is, at best, at its infancy, and needs substantial work to make it effective.

**Cyber Databases**

- On Database Technology for US Homeland Security** 43
Won Kim

In the wake of the September 11 terrorist attacks, the US government has initiated a wide set of measures to forestall replay of such attacks. One such measure is to encourage development and adoption of information technology to detect and apprehend suspects and security risks, and to manage emergencies should such an attack elude prevention. One element of information technology that is indispensable, particularly in preventing terrorism, is database technology.

Objects and Agents

- Agent-Based Manufacturing: A Case Study** 51
James Odell

In traditional manufacturing, information systems mimic organizational structures, utilizing a top-down, command-and-control structure. The Agile Manufacturing Information System (AMIS) is a new approach and operational model that addresses the problems of traditional manufacturing practices.

Eiffel

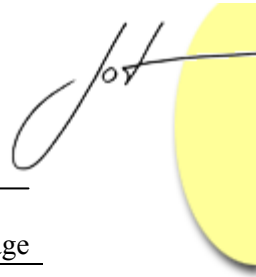
- The Single Model Principle** 63
Richard Paige and Jonathan Ostroff

There are two approaches to using modeling languages such as UML. One approach is based on a single model with constructions of different views based on this model and with consistency checking (automatic or semi-automatic) among the views. The single-model approach is best at providing seamless and reversible engineering of reliable software.

OO Requirements Engineering

- Requirements Engineering** 83
Donald Firesmith

This second article introduces the remaining reusable process components that are useful for requirements engineering: the requirements work units, the producers of the requirements work products that perform these work units, and the associated languages that are involved in requirements engineering.



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Access Graphs G. Ardourel, Michael Huchard	95
<p>A notation is described that is suitable for modeling, evaluating, comparing and translating static access control.</p>	
CentiJ: An RMI Code Generator Douglas Lyon	117
<p>The CentiJ system synthesizes Java source code through an RMI based transport layer for distributed computation. The technique generates bridge pattern code that automates the creation of virtual proxies for message forwarding.</p>	
UML Extensions for Design Pattern Compositions Jing Dong	149
<p>By extending UML notation, a design pattern is identifiable and traceable from its application and composition with other design patterns.</p>	
C# and Java: The Smart Distinctions Dominik Gruntz	163
<p>This paper does not repeat the presentation and discussion of the new language features of C#, but rather focuses on simple and small distinctions to Java that fix common programming trap doors. Some of them are so subtle that they are only recognized when the language report is carefully read.</p>	
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