

Panel: Foundations of Concurrent Object-Oriented Programming

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In recent years, research in concurrent systems has progressed rapidly. A number of new formal models, programming languages, architectures and applications have been developed. Some examples of recent developments include:

- Algebraic, logical and operational frameworks for dynamic concurrent systems have been proposed. These formal models provide a method for reasoning about concurrent objects or actors.
- A number of concepts such as reflection, transactions, and types have been integrated into object-oriented concurrent systems. For example, computational reflection has been used to provide a mechanism for dynamically modifying control flow and for building inheritance abstractions.
- A number of programming languages supporting concurrent object-oriented programming have been developed. These languages include ABCL (University of Tokyo), Acore (MIT), BETA (Oslo and Aarhus), Cantor (Caltech), Janus (Xerox PARC), Rossette (MCC), and Concurrent Smalltalk (Keio).

The panel will discuss these developments as well as future directions in concurrent object systems. It will also report on the results of the **Workshop on Object-Based Concurrent Systems** held in conjunction with OOPSLA/ECOOP '90.