

# Microsoft Research Lecture

Logo Politecnico

**Venerdì 25 maggio 2001**

**Ore 10.00**

**Aula S.01 - Politecnico di Milano  
Piazza Leonardo Da Vinci, 32**

The Microsoft Common Language Runtime  
A common type system for integrating multiple  
programming languages

*Dr Jim Miller - Microsoft Corporation*

*Presentazione del Prof. Carlo Ghezzi  
Dipartimento di Elettronica e Informazione  
Politecnico di Milano*

## **The Microsoft Common Language Runtime**

### **A common type system for integrating multiple programming languages**

*Dr Jim Miller, Microsoft Corporation*

Integrating multiple programming languages so that they can inherit from one another, and thus share a common class library, is a difficult problem because of the diversity of type systems found in programming languages. This talk describes a common type system for this purpose that has been used to deeply integrate over 15 languages, including both commercial and research languages, ranging from C++ to ML to Haskell to SmallTalk to C#. But providing a common type system alone isn't enough to allow programmers to create class libraries for use in multiple languages. In addition, a subset of the full type system, which we call the common language specification, is required for external interfaces that are designed for used across languages. This talk describes the common type system, the common language specification, and their implementation in the Microsoft Common Language Runtime.

Dr Miller holds a PhD from the Massachusetts Institute of Technology, and is currently a Lead Program Manager for Microsoft Corporation. His research work over the past 25 years has included parallel processing, programming languages, programming environments, computer security and collaborative systems. In addition, he created and managed the Technology and Society Domain at the World Wide Web Consortium, where he dealt with issues of child protection (PICS), privacy protection (P3P), security and trust management, electronic commerce, and accessibility.

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