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Nota di bibliografia	Includes bibliographical references (p. 325-327) and index.
Nota di contenuto	Introduction. Programming guidelines -- A brief history of F# -- Benefits of F# -- Introducing F# -- Imperative programming -- Functional programming -- Program structure. Nesting -- Factoring -- Modules. Objects -- Functional design patterns -- F# development -- Data structures. Algorithmic complexity -- Arrays -- Lists -- Sets -- Hash tables -- Maps -- Choosing a data structure -- Sequences -- Heterogeneous containers -- Trees -- Numerical Analysis. Number -- Algebra --Interpolation -- Quadratic solutions -- Mean and variance -- Other forms of arithmetic -- Input and Output. Printing -- Generic printing -- Reading from and writing to files -- Serialization -- Lexing and parsing -- Simple Examples. Functional -- Numerical -- String related -- List related -- Array related -- Higher order functions -- Visualization. Windows forms -- Managed directX -- Tesselating

objects into triangles -- Optimization. Timing -- Profiling -- Algorithmic optimizations -- Lower level optimizations -- Libraries. Loading .NET libraries -- Charting and graphing -- Threads -- Random numbers -- Regular expressions -- Vectors and matrices -- Downloading from the Web -- Compression -- Handling XML -- Calling native libraries -- Fourier transform -- Metaprogramming -- Databases. Protein data bank -- Web services -- Relational databases -- Interoperability. Excel interoperability -- MATLAB interoperability -- Mathematica interoperability -- Complete examples. Fast Fourier transform -- Semicircle law -- Finding nth nearest neighbors -- Logistic map -- Real time particle dynamics -- Appendix A: Troubleshooting.

Sommario/riassunto

""This work strikes a balance between the pure functional aspects of F# and the object-oriented and imperative features that make it so useful in practice, enable .NET integration, and make large-scale data processing possible.""-Thore Graepel, PhD, Researcher, Microsoft Research Ltd. Over the next five years, F# is expected to become one of the world's most popular functional programming languages for scientists of all disciplines working on the Windows platform. F# is free and, unlike MATLAB® and other software with numerical/scientific origins, is a full-fledged programming language.<