Faculté des Sciences Institut d'Informatique Bibliothèque Rue Emile-Argand 11 Bâtiment B, 2<sup>e</sup> étage 2000 Neuchâtel

# Classification des ouvrages

The ACM Computing Classification System (1998) (Association for computing machinery)

- A. General Literature
  - o A.0 GENERAL
  - A.1 INTRODUCTORY AND SURVEY
  - o A.2 REFERENCE (e.g., dictionaries, encyclopedias, glossaries)
  - A.m MISCELLANEOUS
- B. Hardware
  - o B.0 GENERAL
  - B.1 CONTROL STRUCTURES AND MICROPROGRAMMING
    - B.1.0 General
    - B.1.1 Control Design Styles
    - B.1.2 Control Structure Performance Analysis and Design Aids
    - B.1.3 Control Structure Reliability, Testing, and Fault-Tolerance
    - B.1.4 Microprogram Design Aids
    - B.1.5 Microcode Applications
    - B.1.m Miscellaneous

### o B.2 ARITHMETIC AND LOGIC STRUCTURES

- B.2.0 General
- B.2.1 Design Styles
- B.2.2 Performance Analysis and Design
- B.2.3 Reliability, Testing, and Fault-Tolerance
- B.2.4 High-Speed Arithmetic
- B.2.m Miscellaneous

## B.3 MEMORY STRUCTURES

- B.3.0 General
- B.3.1 Semiconductor Memories
- B.3.2 Design Styles)
- B.3.3 Performance Analysis and Design Aids
- B.3.4 Reliability, Testing, and Fault-Tolerance
- B.3.m Miscellaneous

#### B.4 INPUT/OUTPUT AND DATA COMMUNICATIONS

- B.4.0 General
- B.4.1 Data Communications Devices
- B.4.2 Input/Output Devices
- B.4.3 Interconnections (Subsystems)
- B.4.4 Performance Analysis and Design Aids
- B.4.5 Reliability, Testing, and Fault-Tolerance
- B.4.m Miscellaneous

#### B.5 REGISTER-TRANSFER-LEVEL IMPLEMENTATION

- B.5.0 General
- B.5.1 Design
- B.5.2 Design Aids
- B.5.3 Reliability and Testing
- B.5.m Miscellaneous

## B.6 LOGIC DESIGN

- B.6.0 General
- B.6.1 Design Styles
- B.6.2 Reliability and Testing
- B.6.3 Design Aids
- B.6.m Miscellaneous

#### o B.7 INTEGRATED CIRCUITS

- B.7.0 General
- B.7.1 Types and Design Styles
- B.7.2 Design Aids
- B.7.3 Reliability and Testing
- B.7.m Miscellaneous

## B.8 PERFORMANCE AND RELIABILITY

- B.8.0 General
- B.8.1 Reliability, Testing, and Fault-Tolerance
- B.8.2 Performance Analysis and Design Aids
- B.8.m Miscellaneous
- B.m MISCELLANEOUS
- C. Computer Systems Organization
  - o C.0 GENERAL

## C.1 PROCESSOR ARCHITECTURES

- C.1.0 General
- C.1.1 Single Data Stream Architectures
- C.1.2 Multiple Data Stream Architectures (Multiprocessors)
- C.1.3 Other Architecture Styles
- C.1.4 Parallel Architectures
- C.1.m Miscellaneous

#### C.2 COMPUTER-COMMUNICATION NETWORKS

- C.2.0 General
- C.2.1 Network Architecture and Design
- C.2.2 Network Protocols
- C.2.3 Network Operations
- C.2.4 Distributed Systems
- C.2.5 Local and Wide-Area Networks
- C.2.6 Internetworking
- C.2.m Miscellaneous

## C.3 SPECIAL-PURPOSE AND APPLICATION-BASED SYSTEMS

- C.4 PERFORMANCE OF SYSTEMS
- C.5 COMPUTER SYSTEM IMPLEMENTATION
  - C.5.0 General
  - C.5.1 Large and Medium (`Mainframe") Computers
  - C.5.2 Minicomputers
  - C.5.3 Microcomputers
  - C.5.4 VLSI Systems

- C.5.5 Servers
- C.5.m Miscellaneous
- C.m MISCELLANEOUS
- D. Software
  - o D.0 GENERAL
  - D.1 PROGRAMMING TECHNIQUES
    - D.1.0 General
    - D.1.1 Applicative (Functional) Programming
    - D.1.2 Automatic Programming
    - D.1.3 Concurrent Programming
    - D.1.4 Sequential Programming
    - D.1.5 Object-oriented Programming
    - D.1.6 Logic Programming
    - D.1.7 Visual Programming
    - D.1.m Miscellaneous
  - D.2 SOFTWARE ENGINEERING
    - D.2.0 General
    - D.2.1 Requirements/Specifications
    - D.2.2 Design Tools and Techniques
    - D.2.3 Coding Tools and Techniques
    - D.2.4 Software/Program Verification
    - D.2.5 Testing and Debugging
    - D.2.6 Programming Environments
    - D.2.7 Distribution, Maintenance, and Enhancement
    - D.2.8 Metrics
    - D.2.9 Management
    - D.2.10 Design
    - D.2.11 Software Architectures
    - D.2.12 Interoperability
    - D.2.13 Reusable Software
    - D.2.m Miscellaneous

## o D.3 PROGRAMMING LANGUAGES

- D.3.0 General
- D.3.1 Formal Definitions and Theory
- D.3.2 Language Classifications
- D.3.3 Language Constructs and Features
- D.3.4 Processors
- D.3.m Miscellaneous

#### D.4 OPERATING SYSTEMS

- D.4.0 General
- D.4.1 Process Management
- D.4.2 Storage Management
- D.4.3 File Systems Management
- D.4.4 Communications Management
- D.4.5 Reliability
- D.4.6 Security and Protection
- D.4.7 Organization and Design
- D.4.8 Performance
- D.4.9 Systems Programs and Utilities
- D.4.m Miscellaneous

#### D.m MISCELLANEOUS

- E. Data
  - o E.0 GENERAL
  - E.1 DATA STRUCTURES
  - E.2 DATA STORAGE REPRESENTATIONS
  - E.3 DATA ENCRYPTION
  - E.4 CODING AND INFORMATION THEORY
  - o E.5 FILES
  - E.m MISCELLANEOUS
- F. Theory of Computation
  - F.0 GENERAL
  - F.1 COMPUTATION BY ABSTRACT DEVICES
    - F.1.0 General
    - F.1.1 Models of Computation
    - F.1.2 Modes of Computation
    - F.1.3 Complexity Measures and Classes
    - F.1.m Miscellaneous

## F.2 ANALYSIS OF ALGORITHMS AND PROBLEM COMPLEXITY

- F.2.0 General
- F.2.1 Numerical Algorithms and Problems
- F.2.2 Nonnumerical Algorithms and Problems
- F.2.3 Tradeoffs between Complexity Measures
- F.2.m Miscellaneous

#### F.3 LOGICS AND MEANINGS OF PROGRAMS

- F.3.0 General
- F.3.1 Specifying and Verifying and Reasoning about Programs
- F.3.2 Semantics of Programming Languages
- F.3.3 Studies of Program Constructs
- F.3.m Miscellaneous

#### F.4 MATHEMATICAL LOGIC AND FORMAL LANGUAGES

- F.4.0 General
- F.4.1 Mathematical Logic
- F.4.2 Grammars and Other Rewriting Systems
- F.4.3 Formal Languages
- F.4.m Miscellaneous
- o F.m MISCELLANEOUS
- G. Mathematics of Computing
  - o G.0 GENERAL
  - G.1 NUMERICAL ANALYSIS
    - G.1.0 General
    - G.1.1 Interpolation
    - G.1.2 Approximation
    - G.1.3 Numerical Linear Algebra
    - G.1.4 Quadrature and Numerical Differentiation
    - G.1.5 Roots of Nonlinear Equations
    - G.1.6 Optimization
    - G.1.7 Ordinary Differential Equations
    - G.1.8 Partial Differential Equations
    - G.1.9 Integral Equations
    - G.1.m Miscellaneous

#### G.2 DISCRETE MATHEMATICS

- G.2.0 General
- G.2.1 Combinatorics
- G.2.2 Graph Theory
- G.2.3 Applications
- G.2.m Miscellaneous
- G.3 PROBABILITY AND STATISTICS
- G.4 MATHEMATICAL SOFTWARE
- o G.m MISCELLANEOUS
- H. Information Systems
  - o H.0 GENERAL
  - H.1 MODELS AND PRINCIPLES
    - H.1.0 General
    - H.1.1 Systems and Information Theory
    - H.1.2 User/Machine Systems
    - H.1.m Miscellaneous

#### H.2 DATABASE MANAGEMENT

- H.2.0 General
- H.2.1 Logical Design
- H.2.2 Physical Design
- H.2.3 Languages
- H.2.4 Systems
- H.2.5 Heterogeneous Databases
- H.2.6 Database Machines
- H.2.7 Database Administration
- H.2.8 Database Applications
- H.2.m Miscellaneous

#### H.3 INFORMATION STORAGE AND RETRIEVAL

- H.3.0 General
- H.3.1 Content Analysis and Indexing
- H.3.2 Information Storage
- H.3.3 Information Search and Retrieval
- H.3.4 Systems and Software
- H.3.5 Online Information Services
- H.3.6 Library Automation
- H.3.7 Digital Libraries
- H.3.m Miscellaneous

## H.4 INFORMATION SYSTEMS APPLICATIONS

- H.4.0 General
- H.4.1 Office Automation
- H.4.2 Types of Systems
- H.4.3 Communications Applications

## o H.5 INFORMATION INTERFACES AND PRESENTATION (e.g., HCI)

- H.5.0 General
- H.5.1 Multimedia Information Systems
- H.5.2 User Interfaces
- H.5.3 Group and Organization Interfaces
- H.5.4 Hypertext/Hypermedia
- H.5.5 Sound and Music Computing
- H.5.m Miscellaneous

- H.m MISCELLANEOUS
- I. Computing Methodologies
  - o I.0 GENERAL
  - I.1 SYMBOLIC AND ALGEBRAIC MANIPULATION
    - I.1.0 General
    - I.1.1 Expressions and Their Representation
    - I.1.2 Algorithms
    - I.1.3 Languages and Systems
    - I.1.4 Applications
    - I.1.m Miscellaneous

## o I.2 ARTIFICIAL INTELLIGENCE

- I.2.0 General
- I.2.1 Applications and Expert Systems
- I.2.2 Automatic Programming
- I.2.3 Deduction and Theorem Proving
- I.2.4 Knowledge Representation Formalisms and Methods
- I.2.5 Programming Languages and Software
- I.2.6 Learning
- I.2.7 Natural Language Processing
- I.2.8 Problem Solving, Control Methods, and Search
- I.2.9 Robotics
- I.2.10 Vision and Scene Understanding
- I.2.11 Distributed Artificial Intelligence
- I.2.m Miscellaneous

#### I.3 COMPUTER GRAPHICS

- I.3.0 General
- I.3.1 Hardware Architecture
- I.3.2 Graphics Systems
- I.3.3 Picture/Image Generation
- I.3.4 Graphics Utilities
- I.3.5 Computational Geometry and Object Modeling
- I.3.6 Methodology and Techniques
- I.3.7 Three-Dimensional Graphics and Realism
- I.3.8 Applications
- I.3.m Miscellaneous

#### o I.4 IMAGE PROCESSING AND COMPUTER VISION

- I.4.0 General
- I.4.1 Digitization and Image Capture
- I.4.2 Compression (Coding)
- I.4.3 Enhancement
- I.4.4 Restoration
- I.4.5 Reconstruction
- I.4.6 Segmentation
- I.4.7 Feature Measurement
- I.4.8 Scene Analysis
- I.4.9 Applications
- I.4.10 Image Representation
- I.4.m Miscellaneous

#### I.5 PATTERN RECOGNITION

I.5.0 General

- I.5.1 Models
- I.5.2 Design Methodology
- I.5.3 Clustering
- I.5.4 Applications
- I.5.5 Implementation
- I.5.m Miscellaneous

#### I.6 SIMULATION AND MODELING

- I.6.0 General
- I.6.1 Simulation Theory
- I.6.2 Simulation Languages
- I.6.3 Applications
- I.6.4 Model Validation and Analysis
- I.6.5 Model Development
- I.6.6 Simulation Output Analysis
- I.6.7 Simulation Support Systems
- I.6.8 Types of Simulation
- I.6.m Miscellaneous

#### I.7 DOCUMENT AND TEXT PROCESSING

- I.7.0 General
- I.7.1 Document and Text Editing
- I.7.2 Document Preparation
- I.7.3 Index Generation
- I.7.4 Electronic Publishing
- I.7.5 Document Capture
- I.7.m Miscellaneous
- o I.m MISCELLANEOUS
- J. Computer Applications
  - J.0 GENERAL
  - o J.1 ADMINISTRATIVE DATA PROCESSING
  - J.2 PHYSICAL SCIENCES AND ENGINEERING
  - o J.3 LIFE AND MEDICAL SCIENCES
  - J.4 SOCIAL AND BEHAVIORAL SCIENCES
  - J.5 ARTS AND HUMANITIES
  - J.6 COMPUTER-AIDED ENGINEERING
  - J.7 COMPUTERS IN OTHER SYSTEMS
  - J.m MISCELLANEOUS
- K. Computing Milieux
  - o K.0 GENERAL
  - K.1 THE COMPUTER INDUSTRY
  - o K.2 HISTORY OF COMPUTING
  - K.3 COMPUTERS AND EDUCATION
    - K.3.0 General
    - K.3.1 Computer Uses in Education
    - K.3.2 Computer and Information Science Education
    - K.3.m Miscellaneous

#### K.4 COMPUTERS AND SOCIETY

- K.4.0 General
- K.4.1 Public Policy Issues
- K.4.2 Social Issues
- K.4.3 Organizational Impacts

- K.4.4 Electronic Commerce
- K.4.m Miscellaneous

## K.5 LEGAL ASPECTS OF COMPUTING

- K.5.0 General
- K.5.1 Hardware/Software Protection
- K.5.2 Governmental Issues
- K.5.m Miscellaneous

# o K.6 MANAGEMENT OF COMPUTING AND INFORMATION SYSTEMS

- K.6.0 General
- K.6.1 Project and People Management
- K.6.2 Installation Management
- K.6.3 Software Management
- K.6.4 System Management
- K.6.5 Security and Protection
- K.6.m Miscellaneous

## K.7 THE COMPUTING PROFESSION

- K.7.0 General
- K.7.1 Occupations
- K.7.2 Organizations
- K.7.3 Testing, Certification, and Licensing
- K.7.4 Professional Ethics
- K.7.m Miscellaneous

#### K.8 PERSONAL COMPUTING

- K.8.0 General
- K.8.1 Application Packages
- K.8.2 Hardware
- K.8.3 Management/Maintenance
- K.8.m Miscellaneous
- o K.m MISCELLANEOUS