Call for Articles

Handbook of Research on Modern Systems Analysis and Design Technologies and Applications

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Proposal Due Date: March 20, 2007
Full Article Due Date: May 15, 2007

Methodical and well-planned analysis and design is a key factor in successful development, implementation and efficient use of any system. With explosive growth of computer-based systems in diverse application areas, appropriate and additional application specific methods of analysis and design are emerging. New approaches are being developed and new ways of utilizing older and new techniques are being constantly reviewed. In such an ever-evolving environment, practitioners, educators, researchers and professionals of the discipline need access to the most current information about the methodologies, concepts, issues, trends, tools and techniques in systems analysis and design. The *Handbook of Research on Modern Systems Analysis and Design Technologies and Applications* will be most helpful as a single source for comprehensive coverage and definitions of related topics, providing evolution of systems analysis and design methodologies and practices with insight into the comparative study of general and application-specific analysis and design approaches.

This important new publication will be distributed worldwide among academic and professional institutions and will be instrumental in providing researchers, scholars, students and professionals access to the latest knowledge related to systems analysis and design (SA&D). Contributions to this important publication will be made by scholars throughout the world with notable research portfolios and expertise.

Coverage: The *Handbook of Research on Modern Systems Analysis and Design Technologies and Applications* will cover general and application-specific analysis and design aspects of computer-based systems for use in varied applications including, but not limited to, online, offline and real-time systems in the fields of computer, medical, engineering, business, education and research, etc., through articles authored by leading experts in their areas. The *Handbook of Research* will also provide a compendium of terms, definitions and explanations of concepts, processes and acronyms offering an in-depth description of key terms and concepts related to issues, trends and all various aspects in SA&D.

Full Article Submission: Articles, related to any aspects of systems analysis and design, are invited from professionals, educators, researchers and practitioners. We strongly encourage other topics that have not been listed in our suggested topic list, particularly if the topic is related to the research area in which you have expertise. Should you be interested in contributing to this significant project, please submit your proposal by March 20, 2007. Upon acceptance of your proposal, you will have until May 15, 2007, to submit a full article of no more than 12000 words in length.

To submit, *please email your proposal* to mahbubur.syed@mnsu.edu or to author.encyclopedia@gmail.com. The proposal should contain the title, identification of the author (name, email, position, institution, country), Objective and Coverage, and Relevance to Systems Analysis and Design.

If you have any questions regarding submitting one or more proposal, please e-mail either Mahbub Syed at mahbubur.syed@mnsu.edu or Sharifun Syed at author.encyclopedia@gmail.com. ***All submitted articles will undergo a double-blind, peer-review process upon its receipt.*** This publication is tentatively scheduled for publishing by Idea Group Reference - IGR (www.idea-group-ref.com) during 2007-2008 academic year.

TOPICS

Theories, tools and practices related to systems analysis and design (SA&D) including (but not limited to) the following topics:

Evolution of Systems Analysis and Design
Empirical Studies of SA&D methods
Principles and Methodologies
Initiating and Planning Systems Development Projects
Development Life Cycle
Soft Systems Methodology
Joint Application Design
Structured and Object Oriented SA&D
Goal oriented SA&D
Information Engineering
Expert Analysis and design
System Life Cycle
Specification Development
Requirement Discovery
Requirement Analysis Paradigm
Economics of SA&D
Feasibility Analysis
Analysis Methods of Current Systems
Information Gathering Methods and Tools
Logical and Physical Design methods
Database Design
Data Design Methods
File Design
Business Process Modelling
Alternative Design Strategies
Prototyping
Decision Analysis
Risk Analysis
Knowledge based Analysis and Design
Model Driven Analysis
Accelerated Systems Analysis
Component Design
Comparative Study and Evaluation of SA&D methods
Implementation and Testing
Design of Testing
Testing of Design
Human Interface Design
Hardware Interface Design
Roles in Systems Analysis and Design
Project Management and Planning
Tools and Methodologies
Test data
Operation and Maintenance
Maintenance Planning
Performance Planning
Documentation Design
Software Engineering and Implementation
Reuse
Automated Tools for SA&D
Intelligent Systems
CASE
Unified Modeling Language
High Level System Design and Analysis using Abstract State Machines
Emerging Tools for SA&D
Formal methods of SA&D
Application of Expert Systems in SA&D
Intelligent SA&D
Distributed Systems Analysis and Design
Models and methodology for agent-oriented analysis and design
Software Quality Management
Case studies in systems analysis in Design
Success factors and best practices in SA&D
Requirement Management Practices

Education aspects of systems analysis & design (SA&D), including (but not limited to) the following areas:

Evolution of SA&D Education
Issues and prospects in Classroom Education of SA&D
Issues and prospects in Distance Education of SA&D
Curriculum Design and Implementation
Standardized Curriculum
Teaching Programming and Software Development
Technologies for SA&D Education - CBT, Multimedia Video and Audio Conferences etc.
Use of Online Resources - Forums, Virtual Communities, Wikis, Digital Libraries etc.
Case Studies and Evaluation of SA&D Education
Exchange of Teaching Materials
Virtual SA&D Education
Pedagogical Models for SA&D Education
Philosophical Issues in SA&D education
Project Based Education
Problem Based Teaching and Learning
Collaborative Groupware
Group-based Teaching and Learning
Tutorial Design
Assessment Techniques
CASE Tools in SA&D Education
SA&D Research in Classroom

Application-specific analysis, modelling, design, testing, implementation and maintenance of systems including (but not limited to) the following areas:

Agent-Based Systems
Bio Engineering System
Bio Informatics
Bio-Authentication Systems
Identity Management System
Network Systems
E-Government systems
E-Health systems
Business and E-commerce Systems
ERP systems
Database-Driven Systems
Decision Support Systems
Distance Education Systems
Expert Systems
Fuzzy Systems
Information Systems
Interactive Systems
Knowledge based systems
Management Information Systems
Data Ware Housing and Data Mining Systems
Medical Information Systems
Medical Instrumentation
Mobile Systems
Multimedia Systems
Speech Processing Systems
Pattern Processing Systems
Intelligent Systems
Reliable systems
Maintenance Systems
Rapid Application Development
Real Time Systems
Remote Systems
Robotic Systems
Security Systems
Space Mission Analysis and Design
Virtual Systems
WEB-based systems
Role modelling for agent system analysis, design, and implementation
Organizational Abstractions for the Analysis and Design of Multi-agent Systems
Designing concurrent, distributed, and real-time applications with UML
Pre-Built Software Applications
Open Source Software (OSS) Solutions
Commercial off-the-shelf (COTS) applications