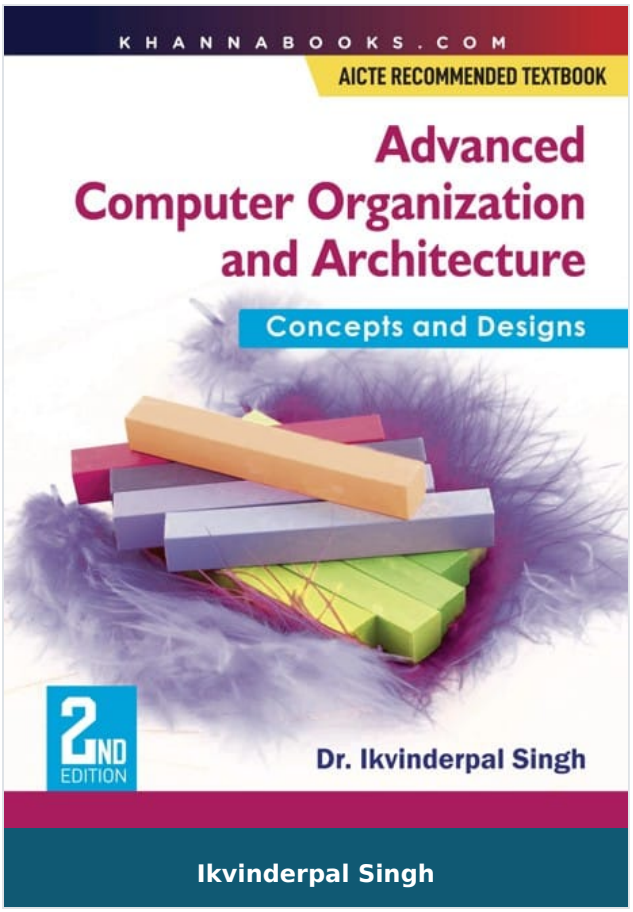


Advanced Computer Organization & Architecture

Author :	Ikvinderpal Singh
ISBN 13 :	978-93-55387-01-1
ISBN 10 :	9355387016
E-ISBN 13 :	978-93-55387-01-1
Edition :	2
Pages :	396
Type of book :	Physical
Year :	2025
Language :	English
Publisher :	Khanna Publishing House
M.R.P :	Rs 549.00
Categories :	UNIVERSITY RECOMMENDED, Computer Science Engineering, Book Store, Computer Science Engineering
Condition Type :	New
Country Origin :	India

Product Description

Describes the introduction of advanced computer architecture and parallel processing. Covers the paradigms of computing like synchronous and asynchronous. Detailed explanation of the Flynn's classification, Kung's taxonomy and reduction paradigm. provides a detailed treatment of abstract parallel computational models like combination circuits, sorting network, PRAM models, interconnection RAMs. Covers the parallelism in uniprocessor systems. Provides an extensive treatment of parallel computer structures like pipeline computers, array computers and multiprocessor systems. Covers the concepts of pipeline and classification of pipeline processors. Give description of super scalar, super pipeline design and VLIW processors. Explains the design structures and algorithms for array processors.

Khanna Publishing House

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

Table Of Contents

- Introduction To Advanced Computer Architecture And Parallel Processing
- Paradigms of Computing: Synchronous
- Paradigms of Computing-Asynchronous MIMD
- Abstract Parallel Computational Models
- Parallelism in Uni-processor Systems
- Parallel Computer Structures
- Pipe lining
- Principles of Designing Pipelines Processors
- Super scalar and Super pipeline Design
- Design Structures and Algorithms for Array Processors

Author

Ikvinderpal Singh

Dr. Ikvinderpal Singh is an Assistant Professor at Trai Shatabdi Guru Gobind Singh Khalsa college Amritsar, bringing 17+ years of academic leadership and research experience to the field of computer science. A Gold Medalist in B.Sc. IT, with an MCA (Distinction) and a Ph.D. in Neural Networks and Image Processing, he is known for blending rigorous research with practical innovation. A prolific academic creator, he has authored 37 books, published 82+ research papers, and designed 100+ industry-aligned skill-development courses. His expertise extends to doctoral evaluation, supervision, and active participation on 100+ editorial and review boards worldwide.

Khanna Publishing House

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320