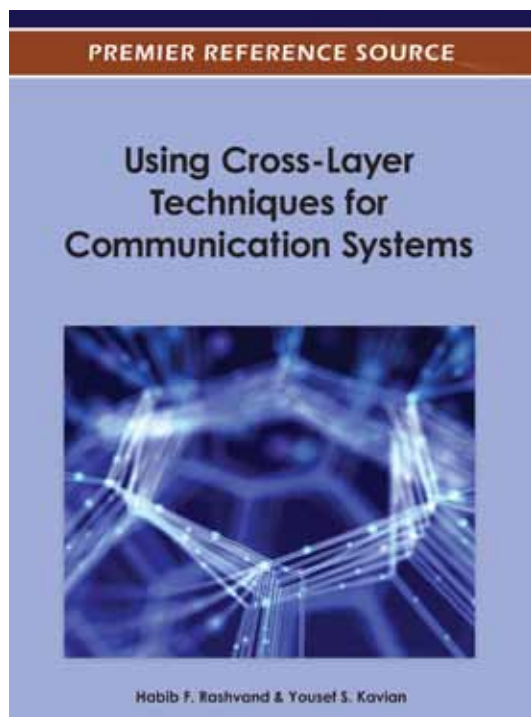


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Using Cross-Layer Techniques for Communication Systems



Habib F. Rashvand (University of Warwick, UK) & Yousef S. Kavian (Shahid Chamran University, Iran)

Although the existing layering infrastructure--used globally for designing computers, data networks, and intelligent distributed systems and which connects various local and global communication services--is conceptually correct and pedagogically elegant, it is now well over 30 years old has started create a serious bottleneck.

Using Cross-Layer Techniques for Communication Systems: Techniques and Applications explores how cross-layer methods provide ways to escape from the current communications model and overcome the challenges imposed by restrictive boundaries between layers. Written exclusively by well-established researchers, experts, and professional engineers, the book will present basic concepts, address different approaches for solving the cross-layer problem, investigate recent developments in cross-layer problems and solutions, and present the latest applications of the cross-layer in a variety of systems and networks.

Topics Covered:

- Cross-layer Communication
- Cross-layer Communication Systems
- Cross-layer Opportunistic and Scheduling Algorithms
- Security and Multi-Agent in Cross-layer Communication Systems
- Design of cross-layer Communication Systems
- layering infrastructure

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Habib F. Rashvand received his B.Sc. in 1969 and post-graduate qualifications in 1970 from the University of Tehran. He was selected for a training mission as the head of division for development of a new Telecom Research Centre as under a new cooperation project between the Iranian PTT and Japanese Industries including the NTT, KTT following his Doctorate at the University of Kent in 1980. Since then he earned a rich blend of industrial research and development positions with industries in collaboration with many universities including University of Southampton, University of Reading, Portsmouth University, Warwick University, and Coventry University. His academic positions compile University of Tehran, University of Zambia, Coventry University, Magdeburg University and University of Warwick. His Professorship in Networks, Systems, and Protocols applied in 1998 to the German Ministry of Education succeeded in 2001. Since 2004, he headed a Special Academic Quality Research Operation under Directorship of Advanced Communication Systems, which involves ITU, CTO, WHO, IEEE/IEE/IET. He was the editor-in-chief, member of editorial board, and invited speaker for many research journals and conferences.

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