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Nota di contenuto	1. Foreword – Gulshan Rai, National Cyber Security Coordinator, Government of India -- 2. Preface – Sandeep K. Shukla and Manindra Agrawal, IIT Kanpur -- 3. Critical Infrastructure Security and Defense in the 21st Century -- Sandeep K. Shukla, IIT Kanpur -- 4. Cryptology and Mathematical Attacks on Cryptographic Algorithms – Manindra Agrawal, IIT Kanpur -- 5. SCADA Lab for Cyber Security Research and Education – Rohit Negi, IIT Kanpur -- 6. Android Security and Subversion of Privacy – Saurabh Kumar, IIT Kanpur -- 7. Block Chain for Data Integrity and Privacy – Need for an Indian Block Chain – Sandeep K. Shukla, Manindra Agrawal -- 8. Web Security for Robust Web Presence, Neha Ajmani, IIT Kanpur -- 9. Side Channel Attacks – Cache Based Leakage of Secure Data – Biswabandan Panda, IIT Kanpur -- 10. Smart Grid Security in India, S. C. Srivastava, Saikat Chakraborty -- 11. Hardware

Security Research in India, Debdeep Mukhopadhyay, IIT KGP -- 12. Securing Enterprise IT Systems – Rajeev Mathur, Rapid7 -- 13. Indigenous Network Routers – Indian Effort to Create its own Routers, Manish Bajpai, Nivetti Systems -- 14. Cyber Security Global Academic Cooperation – IIT Kanpur's Alliances with US, and Israeli Centers of Excellence in Cyber Security, Sandeep K. Shukla, IIT Kanpur.

Sommario/riassunto	This book of 'directions' focuses on cyber security research, education and training in India, and work in this domain within the Indian Institute of Technology Kanpur. IIT Kanpur's Computer Science and Engineering Department established an 'Interdisciplinary Center for Cyber Security and Cyber Defense of Critical Infrastructures (C3I Center)' in 2016 with funding from the Science and Engineering Research Board (SERB), and other funding agencies. The work at the center focuses on smart grid security, manufacturing and other industrial control system security; network, web and data security; cryptography, and penetration techniques. The founders are involved with various Indian government agencies including the Reserve Bank of India, National Critical Information Infrastructure Protection Center, UIDAI, CCTNS under home ministry, Ministry of IT and Electronics, and Department of Science & Technology. The center also testifies to the parliamentary standing committee on cyber security, and has been working with the National Cyber Security Coordinator's office in India. Providing glimpses of the work done at IIT Kanpur, and including perspectives from other Indian institutes where work on cyber security is starting to take shape, the book is a valuable resource for researchers and professionals, as well as educationists and policymakers.