

SPRINGER BRIEFS IN CYBERSECURITY

Lior Tabansky  
Isaac Ben Israel

# Cybersecurity in Israel

 Springer



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Cybersecurity is a difficult and complex field. The technical, political and legal questions surrounding it are complicated, often stretching a spectrum of diverse technologies, varying legal bodies, different political ideas and responsibilities. Cybersecurity is intrinsically interdisciplinary, and most activities in one field immediately affect the others. Technologies and techniques, strategies and tactics, motives and ideologies, rules and laws, institutions and industries, power and money—all of these topics have a role to play in cybersecurity, and all of these are tightly interwoven.

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Lior Tabansky • Isaac Ben Israel

# Cybersecurity in Israel



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# Foreword

Lior Tabansky and Isaac Ben-Israel, a chief cyber-strategist for Israel's government, have compiled a wonderful piece of work. In their SpringerBrief *Cybersecurity in Israel*, they move with ease and elegance from theoretical and historical observations and insights in the field of strategic cybersecurity to the highly specific cases of cybersecurity in Israel – certainly one of the most challenging countries in security. Tabansky and Ben-Israel show that Israel has done a marvelous job in some of these areas. It is a small country, but well-resourced and certainly smart in security matters and, as such, provides a highly interesting case in cybersecurity.

This book successfully illustrates, explains, and analyzes this specific set of options and conditions in front of the larger backdrop of cybersecurity. Tabansky and Ben-Israel start with basic illustrations of Israel's security situation, from its "T'fisat HaBitachon," the National Security Concept, to more detailed descriptions of the Israeli innovation ecosystem and recent developments of Israel's cybersecurity policy. It includes fields of application such as the civil industry and e-Government and the more demanding cases of critical infrastructure protection and military cyber-defense, providing a unique look at Israel's offensive forces, their planning, and their perceptions. They finish with an analytical chapter recapitulating the strategic process, the lessons learned, the risks, and also the impact of national culture.

Tabansky's and Ben-Israel's SpringerBrief is an excellent achievement and a perfect fit for the series. It gives a very rich, interesting, and highly structured account and can be read as a narrative piece of technology and security history. It illustrates and provides an example in how to apply insights and options in cybersecurity to a more unique case. It entails so many inside views from processes and steps that theoreticians and practitioners alike will greatly enjoy this book and benefit from it.

I thank the authors for this great addition to our series. They provide great value.

April 2015

Sandro Gaycken  
ESMT Berlin



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This coauthored book results from the years spent conceptualizing, promoting, teaching, and debating the role of science and technology in international security. We are grateful to all counterparts we have spoken to in conferences, seminars, interviews, and task forces.

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# List of Abbreviations and Glossary

BERD	Business Expenditure on Research and Development
BGU	Ben-Gurion University of the Negev
BIU	Bar Ilan University
CEO	Chief Executive Officer
CERT-IL	Israel National Cyber Event Readiness Team
CHE (מל"ג)	Council of Higher Education
CI	Critical Infrastructures
CIA	Confidentiality, Integrity, and Availability
CIP	Critical Infrastructure Protection
CSIS	Center for Strategic and International Studies
DDoS	Distributed Denial-of-Service Attack
DDR&D	(מפא"ח מaf'at) Ministry of Defense Directorate for Research and Development
DoD	US Department of Defense
ENISA	European Network and Information Security Agency
ERP	Enterprise Resource Planning Management Software
EU	European Union
FP7 EU's	Seventh Framework Programme
GDE	Gross Domestic Expenditure
GDP	Gross Domestic Product
HMI	Human–Machine Interface
HPC	High-Performance Computer
HR	Human Resources
HUJI	Hebrew University of Jerusalem
IAEA	International Atomic Energy Agency
IAF	Israeli Air Force
I-CORE	Israeli Centres of Research Excellence
ICRC	The Tel Aviv University Blavatnik Interdisciplinary Cyber Research Centre
ICT	Information and Communication Technologies
IDF	(צה"ל Tzahal) Israeli Defence Forces

IEC	Israel Electric Company
ILITA	( <i>Ramat</i> רמ"ט) Israeli Law, Information, and Technology Authority
INCB	Israel National Cyber Bureau
INSS	Institute for National Security Studies
ISA	( <i>Shabak</i> שב"כ) Israel Security Agency
ISAC	Information Sharing and Analysis Centres
IT	Information Technology
IT-RMA	Information Technology Revolution in Military Affairs
NCRD	( <i>Molmop</i> מולמ"פ) National Council for Research and Development, Ministry of Science, Technology and Space
NCSA	( <i>Rashut Le'umit le-Haganat ha-Cyber</i> רשות לאומית להגנת הסייבר) National Cyber Security Authority
NISA	( <i>Re'em</i> ) National Information Security Authority
NPT	Nuclear Non-Proliferation Treaty
NSC	(מל"ל) National Security Council
OECD	Organisation for Economic Co-operation and Development
PBC	( <i>Vatat</i> ות"ת) Planning and Budgeting Committee of the Council of Higher Education
PLC	Programmable Logic Controller
PM	Prime Minister
PPP	Public–Private Partnerships
R&D	Research and Development
SCADA	Supervisory Control and Data Acquisition
TASE	Tel Aviv Stock Exchange
TAU	Tel Aviv University
TTC	Technology Transfer Company of a University
US	United States
VC	Venture Capital
WIS	Weizmann Institute of Science
YNW	Tel Aviv University Yuval Ne'eman Workshop for Science, Technology, and Security

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