

1. Record Nr.	UNINA9910726294803321
Titolo	Cyberbiosecurity : A New Field to Deal with Emerging Threats // edited by Dov Greenbaum
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	9783031260346
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (308 pages)
Disciplina	174.2944 570.28558
Soggetti	Bioinformatics Biomedical engineering Security systems Synthetic biology Biomedical Engineering and Bioengineering Security Science and Technology Synthetic Biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction: Origin and Intent for the New Field of Cyberbiosecurity -- Cyber and information security in the bioeconomy -- Palmer Mission-Aware Differences in Cyberbiosecurity and Biocybersecurity Policies: Prevention, Detection, and Elimination -- Revisiting the Digital Biosecurity Landscape -- Security Vulnerabilities and Countermeasures for the Biomedical Data Life Cycle -- Cybersecurity Across the DNA-Digital Boundary: DNA Samples to Genomic Data -- Applying CVSS to Vulnerability Scoring in Cyber-Biological Systems -- Biocrime, the Internet-of-Ingestible-Things and Cyber-biosecurity -- Potentials of pathogen research through the lens of cyberbiosecurity, or what threat actors can learn from the Covid-19 pandemic -- How to Protect Biotechnology and Biosecurity from Adversarial AI Attacks? A Global Governance Perspective -- Safeguarding the Guardians to Safeguard the Bio-Economy and Mitigate Social Injustices -- AI for Cyberbiosecurity inWater Systems - A Survey -- Artificial intelligence

and the weaponization of genetic data -- The Attack Surface of Wet-lab Automation. .

Sommario/riassunto

Biocybersecurity applies cybersecurity research to the field of biology, and, to a lesser degree, applies biological principles to the field of cybersecurity. As biologists increasingly research, collaborate, and conduct research online, biocybersecurity has become crucial to protect against cyber threats. This book provides an overview of biocybersecurity through the lens of researchers in academia, industry professionals, and government, in both biology and cybersecurity fields. The book highlights emerging technologies, and identifies emerging threats connected with these technologies, while also providing a discussion of the legal implications involved. This book takes on a multidisciplinary approach, and appeals to both professionals and researchers in the synthetic biology, bioinformatics, and cybersecurity fields.
