1. Record Nr. UNINA9910813157403321

Autore	Greissl Oliver
Titolo	Betriebsoptimierung moderner Steinkohlenstaubfeuerungen zur Vermeidung von feuerraumkorrosion2 / / Oliver Greissl
Pubbl/distr/stampa	Gottingen, [Germany] : , : Cuvillier Verlag, , 2010 ©2010
ISBN	3-7369-3228-6
Edizione	[1. Auflage.]
Descrizione fisica	1 online resource (131 pages) : illustrations
Disciplina	662.622
Soggetti	Coal - Combustion
Lingua di pubblicazione	Tedesco
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.

2. Record Nr. UNINA9910484034803321

Titolo	Digital Surgery / / edited by Sam Atallah
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-49100-5
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XVIII, 439 p. 190 illus., 175 illus. in color.)
Disciplina	617.9178
Soggetti	Surgery Oncology General Surgery
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	The Cognitive Revolution -- The Vision of Digital Surgery -- Artificial Intelligence for Next Generation Medical Robotics -- Cloud Computing for Robotics and Surgery -- Quantum Theory and Computing for Surgeons -- 5G Networks, Haptic Codecs, and the Operating Theater -- Haptics and Vision Systems for Surgical Robots -- Digital and Printed 3D Models for Surgical Planning -- Realistic Organ Models for Simulation and Training -- The Challenge of Augmented Reality in Surgery -- Navigation and Image-Guided Surgery -- Operating in the Near Infrared Spectrum -- Fluorescence Guided Resections: A Binary Approach to Surgery -- A Virtual Reality for the Digital Surgeon -- Robotic Automation for Surgery -- 3D Bioprinting -- Augmented Reality for Interventional Procedures -- The Visible Patient: Augmented Reality in the Operating Theater -- Augmented Cognition in the Operating Room -- Cooperative and Miniature Robotics: Potential Applications in Surgery -- Human-Machine Integration and the Evolution of Neuroprostheses -- Non-Linear Robotics in Surgery -- Artificial Intelligence and Machine Learning: Implications for Surgery -- AI and Endoscopy: Future Perspectives -- Explainable AI for the Operating Theater -- A Digital Doorway to Global Surgery -- Telementoring for Minimally Invasive Surgery -- Digital Medical School: New Paradigms for Tomorrow's Surgical Education -- 3D Simulation and Modeling for Surgeon Education and Patient Engagement -- Next

Generation Surgical Robots -- Artificial Intelligence and Computer Vision -- The Future of Surgery.

Sommario/riassunto

This book provides a trove of insightful perspectives on the current state and the realization of digital surgery. Digital surgery entails the application of artificial intelligence and machine learning toward automation in robotic-assisted surgery. More generally, the objective is to digitally define the patient, the surgical field, and the surgical problem or task at hand; to operate based on information, rather than based on anatomic planes alone. But digital surgery has shapeshifted into other, equally intriguing faces – many of which are exemplified by topics throughout this book. Digital surgery is fundamental to 3D-printed organs, mind-controlled limbs, image-guided navigation, and tele-mentoring. It is the key that unlocks the metaphorical doorway to surgical access, thereby creating a global framework for surgical training, education, planning, and much more. This text provides methods of measurement and perception outside of the human umwelt – including the ability to visualize fields beyond the visible light spectrum, via near infrared fluorescent organic dyes which are rapidly being bioengineered to target specific tumors, as well as native anatomic structures of interest. Written by experts in the field, Digital Surgery is designed to help surgeons operate with an enriched understanding of an individual's specific attributes: including the human phenome, physiome, microbiome, genome, and epigenome. It also aids surgeons in harnessing the power and fluidity of the cloud, which is emerging as a significant resource for surgeons both regionally and globally.