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Titolo	Bionic Limb Reconstruction / / edited by Oskar C. Aszmann, Dario Farina
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-60746-1
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XI, 233 p.)
Disciplina	617.39059 617.580592
Soggetti	Surgery, Plastic Orthopedics Surgery Biotechnology Plastic Surgery Orthopaedics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Part I. Severe injuries of the upper extremity -- Chapter 1. General Considerations on Upper Limb Amputation and its Levels -- Chapter 2. Psychosocial importance of the hand, consequences of severe hand trauma, amputation and complete brachial plexus injury -- Chapter 3. Inner amputations of the upper extremity -- Part II. Functional restoration in upper limb amputees -- Chapter 4. Body-powered prosthetic systems -- Chapter 5. Mechatronic Design of Functional Prosthetic Systems -- Chapter 6. Osseointegrated amputation prostheses and implanted electrodes -- Chapter 7. Outcome Measures -- Chapter 8. Biologic alternatives to prosthetic hand replacement -- Part III . Selective nerve transfers in upper limb amputees -- Chapter 9. Motor unit characteristics after selective nerve transfers -- Chapter 10. Targeted muscle reinnervation in upper limb amputees -- Part IV. Phantom pain in limb amputees -- Chapter 11. Epidemiology and mechanisms of phantom limb pain -- Chapter 12. Treatment strategies for phantom limb pain -- Part V. Man-machine

interfaces in prosthetics -- Chapter 13. Control Strategies for Functional Upper Limb Prostheses -- Chapter 14. Implantable myoelectric sensors for prosthetic control -- Chapter 15. Prosthetic feedback systems -- Part VI. Prosthetic replacement in patients with inner amputations -- Chapter 16. Deafferentation pain following brachial plexus avulsion injuries -- Chapter 17. Treatment algorithm for bionic hand reconstruction in patients with global brachial plexopathies -- Chapter 18. Functional and psychosocial outcomes of bionic reconstruction and impact on quality of life, body image perception and deafferentation pain -- Chapter 19. Ethical considerations and psychological evaluation in elective amputation for Brachial Plexus Injuries -- Part VII. Rehabilitation in upper limb prosthetics -- Chapter 20. Principles of Occupational and Physical Therapy in Upper Limb Amputations -- Chapter 21. Novel technologies in upper extremity rehabilitation.-Chapter 22. Conclusions and Future Outlook.

Sommario/riassunto

This book presents the latest techniques in amputation rehabilitation and summarizes the most recent research findings in the field of bionic limb reconstruction. Divided into seven parts written by experts in the field, it provides valuable information on e.g. upper extremity injuries, psychological considerations, prosthetic engineering, and surgical and rehabilitation strategies. Illustrative figures and photos of real-life settings further assist understanding. This book is of interest not only for plastic surgeons, but also for hand surgeons, orthopedic and trauma surgeons as well as therapists, prosthetists and engineers.

2. Record Nr. UNINA9910973994803321

Autore	Pezzotti Giuseppe
Titolo	Advanced materials for joint implants / / Giuseppe Pezzotti
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ISBN	0-429-08699-7 1-62870-765-8 981-4316-88-1
Edizione	[1st ed.]
Descrizione fisica	1 online resource (622 p.)
Disciplina	617.95
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Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	1. General introduction -- 2. Characterization methods -- 3. Polycrystalline alumina for joint replacement -- 4. Polycrystalline zirconia for joint replacement -- 5. Alumina-zirconia composites for joint replacement -- 6. Ultra-high molecular weight polyethylene for joint replacement -- 7. Future trends in joint arthroplasty -- 8. Conclusive remarks.
Sommario/riassunto	Based on an interdisciplinary approach that directly bridges orthopedic concepts to surface science, this book details cutting-edge research in bioceramics science, physical chemistry, biomedical optics, and nanomechanics. The book cites some of the more conventional spectroscopic characterization techniques-including Raman and cathodoluminescence