

1. Record Nr.	UNINA9910299903903321
Titolo	New Trends in Medical and Service Robots : Design, Analysis and Control / / edited by Manfred Husty, Michael Hofbaur
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-59972-0
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (IX, 330 p. 165 illus., 135 illus. in color.)
Collana	Mechanisms and Machine Science, , 2211-0992 ; ; 48
Disciplina	629.892
Soggetti	Control engineering Robotics Automation Engineering design Artificial intelligence Control, Robotics, Automation Engineering Design Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Preface -- Design of a Needle Insertion Module for Robotic Assisted Transperineal Prostate Biopsy, by C. Vaida, I. Birlescu, N. Plitea, N. Crisan, D. Pislă -- Motion analysis of the left ventricle of a human heart for realization in a cardiovascular mock-loop, by S. Kurtenbach, F. Wieja, I. Müller, M. Neidlin, S. J. Sonntag, A. Goetzenich, N. Hatam, P. Bruns, F. Chuembou Pekam, M. de la Fuente Klein, K. Radermacher, C. Hopmann, R. Autschbach, U. Steinseifer, M. Hüsing, B. Corves -- Improved Design of a Gait Rehabilitation Robot, by C. J. Stolle, C. A. Nelson, J. M. Burnfield, and T. W. Buster -- The Role of Technology in the Implementation and Learning of Minimally-Invasive Surgery, by N. Crisan, I. Andras and I. Coman -- Bio-Kinematic Design of Individualized Lift-Assist Devices, by Samuel M. F. Reimer, Kassim Abdul-Sater and Tim C. Lueth -- Organising bodyformation of modular autonomous robots using Virtual Embryogenesis, by Markus Dauschan, Ronald Thenius, Karl Crailsheim and Thomas Schmickl -- Sensor and

Control Concept for a Wearable Robot for Manual Load Handling Assistance, by Patrick Stelzer, Bernward Otten, Werner Kraus and Andreas Pott -- Unilateral Teleoperation Design for a Robotic Endoscopic Pituitary Surgery System, by M. . C. Dede, O. W. Maarroof, G. Ate, M. Ber ker, . Ikay and . Hanaliolu -- Kinematic and dynamic modeling of a multifunctional rehabilitation robot UHP, by Aitziber Mancisidor, Asier Zubizarreta, Itziar Cabanes, Pablo Bengoa and Je Hyung Jung -- Minimally Actuated Four-Bar Linkages for Upper Limb Rehabilitation, by E. Xydas, A. Mueller and L. S. Louca -- Inter-individual Differences in Conscious and Unconscious Processes During Robot-Child Interaction, by I. Giannopulu and T. Watanabe -- Surgical robotics – past, present and future, by F. Graur, E. Radu, N. Al Hajjar, C. Vaida and D. Pisla -- Robotic System Navigation Developed for Hip Resurfa- cing Prosthesis Surgery, by Pedro M. B. Torres , Pau- lo J.S. Gonçalves and Jorge M. M. Martins -- HiBSO hip exoskeleton: Toward a wearable and autonomous design, by R. Baud, A. Ortlieb, J. Olivier, M. Bouri and H. Bleuler -- Balance Control for an Active Leg Exoskeleton based on Human Balance Strategies, by V. Huynh, C. Bidard and C. Chevallereau -- First Investigations into Artificial Emotions in Cognitive Robotics, by Daniel Moser, Ronald Thenius and Thomas Schmickl -- Legal Frame of Non-Social Personal Care Robots, by E. Fosch Villaronga -- Test Bench for Space Remote Docking System, by A. Pisla, C. Vaida, F. Covaciu -- Rob'Autism: how to change autistic social skills in 20 weeks, by S. Sakka, R. Gaboriau, J. Picard, E. Redois, G. Parchantour, L. Sarfaty, S. Navarro and A. Barreau -- Force Balance Conditions of Complex Parallel Mecha- nisms with Mass Equivalent Modeling, by V. van der Wijk -- Numerical Simulations and Experimental Human Gait Analysis Using Wearable Sensors, by D. Tarnita, I. Geonea, A. Petcu and D.N.Tarnita -- Motion Control Algorithm for a Lower Limb Exoskeleton Based on Iterative LQR and ZMP method for trajectory generation, by S. Jatsun, S. Savin and A. Yatsun -- FST Algorithm: Can Tides Assist Bio-Inspired Gradient Taxis?, by Joshua Cherian Varughese -- Ronald Thenius1, Franz Wotawa and Thomas Schmickl. .

Sommario/riassunto

These are selected papers presented at the 5th International Workshop on Medical and Service Robots (MESROB 2016). The main topics of the workshop included: Exoskeleton and prostheses; Therapeutic robots and rehabilitation; Cognitive robots; Humanoid & Service robots; Assistive robots and elderly assistance; Surgical robots; Human-robot interfaces; Kinematic and mechatronic design for medical and assistive robotics; and Legal issues in medical robotics. The workshop brought together researchers and practitioners to discuss new and emerging topics of Medical and Service Robotics. The meeting took place at castle St. Martin in Graz, Austria, from 4-6 July, 2016. .