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Nota di contenuto	Preface -- Haptics in Robotics, Man-Machine Interface and Neuroscience, by H. Bleuler, and M. Bouri -- Smart Units to Support Competitive Design of Control Systems in Surgical Robotics, by S. Brad, and M. Murar -- Problems and Experiences on Cable-Based Service Robots for Physiotherapy Applications, by M. Ceccarelli -- Resistive Torques in Rehabilitation Engineering Equipments, by B. Chetran, S. Jia and D. Mândru -- New Trends in Service Robotics, by V. Ciupe and I. Maniu -- Automated Book Manipulator in Libraries, by A. Comsa, I. Maniu, N. Modler, E.-Ch. Lovasz and V. Ciupe -- Robot-Assisted Surgery in Urology, by N. Crisan and I. Coman -- Automated Manipulation in Medical and Biotechnological Lab Applications, by F. Dietrich, P. Blumenthal and A. Raatz -- From Educational Robotics towards Social Robots, by I. Doroftei and F. Adascalitei -- Scanning System Integrated within Biometric Measurements, by C.M. Gruescu, E.-C. Lovasz, A. Garaiman, C. Crba and R. Bodea -- FPGA-based Haptic Teleoperation, by A. Hace and M. Franc -- An Integrated Approach for Intelligent Path Planning and Control of Mobile Robot in Structured Environment, by D. Kati, A. osi, M. Šušić and S. Graovac -- On Medical and Service Robots with Compliant Dynamic Control, by A. Pisla -- Structural Analysis and Synthesis of Parallel Robots for Brachytherapy, by N. Plitea, C. Vaida, B. Gherman, A. Szilaghyi, B. Galdau, D. Cocorean, F. Covaciu and D. Pisla -- Contribution to Development of Modular Compliant Anthropomorphic Robot Hand,

by A. Rodi, B. Miloradovi, S. Popi, S. Spasojevi and B. Karan --
Comparison of Human and Artificial Finger Movements D. Tarnita, C.
Berceanu -- Authors Index -- Subject Index.

Sommario/riassunto

This book contains mainly the selected papers of the First International Workshop on Medical and Service Robots, held in Cluj-Napoca, Romania, in 2012. The high quality of the scientific contributions is the result of a rigorous selection and improvement based on the participants' exchange of opinions and extensive peer-review. This process has led to the publishing of the present collection of 16 independent valuable contributions and points of view and not as standard symposium or conference proceedings. The addressed issues are: Computational Kinematics, Mechanism Design, Linkages and Manipulators, Mechanisms for Biomechanics, Mechanics of Robots, Control Issues for Mechanical Systems, Novel Designs, Teaching Methods, all of these being concentrated around robotic systems for medical and service applications. The results are of interest to researchers and professional practitioners as well as to Ph.D. students in the field of mechanical and electrical engineering. This volume marks the start of a subseries entitled "New Trends in Medical and Service Robots" within the Machine and Mechanism Science Series, presenting recent trends, research results and the new challenges in the field of medical and service robotics.
