Record Nr. UNINA9910438052303321 Methodology, models and algorithms in thermographic diagnostics // **Titolo** Josef Zivcak ... [et al.] Pubbl/distr/stampa Heidelberg, Germany, : Springer, c2013 **ISBN** 3-642-38379-3 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (xi, 222 pages): color illustrations Collana Topics in Intelligent Engineering and Informatics; Volume 5 Altri autori (Persone) ZivcakJozef 616.0754 Disciplina Soggetti Medical thermography Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "ISSN: 2193-9411." Note generali "ISSN: 2193-942X (electronic)." Nota di bibliografia Includes bibliographical references. Infrared Thermography -- Thermographic Diagnostics -- Physical Nota di contenuto Nature of Thermography -- Thermography System Implementation in Practice -- Methodology of Thermographic Measurement in Medicine -- Human Body Thermal Atlas -- Thermographic Diagnostics Applied to Problematics of Paraplegia and Tetraplegia (Quadriplegia – Practical Study No. 1 -- Thermographic Diagnostics of the Carpal Tunnel Syndrome - Practical Study No. 2 -- Application of thermographic diagnostics on the area of the distal part of the wrist 168 --Conclusion. Sommario/riassunto This book presents the methodology and techniques of thermographic applications with focus primarily on medical thermography implemented for parametrizing the diagnostics of the human body. The first part of the book describes the basics of infrared thermography, the possibilities of thermographic diagnostics and the physical nature of thermography. The second half includes tools of intelligent engineering applied for the solving of selected applications and projects. Thermographic diagnostics was applied to problematics of paraplegia and tetraplegia and carpal tunnel syndrome (CTS). The results of the research activities were created with the cooperation of the four projects within the Ministry of Education, Science, Research and Sport of the Slovak Republic entitled Digital control of complex

systems with two degrees of freedom, Progressive methods of education in the area of control and modeling of complex object

oriented systems on aircraft turbocompressor engines, Center for research of control of technical, environmental and human risks for permanent development of production and products in mechanical engineering and Research of new diagnostic methods in invasive implantology. .