Visual Servoing via Advanced Numerical Methods [

Chesi, Graziano

Springer London,
2010

Monografía

The text of Visual Servoing via Advanced Numerical Methods has its roots in an invited session presented at the IEEE International Conference on Robotics and Automation at Kobe in May 2009. The work presented here has been much expanded and gives a comprehensive overview of the state of the art in this important area of robotics. The latest contributions from well-known experts in visual servoing provide the reader with solutions to the fundamental and specific problems that have to be solved in using camera-derived feedback to control robotic motion and make it imitative of the actions of human beings. These solutions are based on dedicated numerical methods the development of which has been facilitated by recent progress in video devices, computer hardware and optimisation techniques. The book is organised into three parts reflecting: the uses of image processing and computer vision; control, optimal and robust control; and stability, performance and robustness analysis in visual servoing

Título: Visual Servoing via Advanced Numerical Methods Recurso electrónico-En línea] edited by Graziano Chesi, Koichi Hashimoto

Editorial: London Springer London 2010

Descripción física: XXVI, 422p. 458 illus., 209 illus. in color. digital

Tipo Audiovisual: Engineering Computer vision Biomedical engineering Engineering Control Image Processing and Computer Vision Signal, Image and Speech Processing Biomedical Engineering

Mención de serie: Lecture Notes in Control and Information Sciences 0170-8643 401

Documento fuente: Springer eBooks

Nota general: Engineering (Springer-11647)

Contenido: Human\2013Machine Cooperative Manipulation with Vision-based Motion Constraints -- Lyapunov-based Structure and Motion Estimation in Visual Servoing -- Measurement Errors in Visual Servoing -- Planar Catadioptric Stereo Sensors for Vision-based Navigation and 3-D Scene Reconstruction -- Visual Servoing with Occlusion Handling -- Image-based Visual Servo Control Design with Multi-constraint Satisfaction -- Omnidirectional Visual Servoing -- Optimal Camera Trajectory Under Visibility Constraint in Visual Servoing Using Variational Calculus -- Optimal Control of Image-based Visual Servoing -- Visual Servoing via Predictive Control -- Kernel-based Visual Servoing on SO(3) -- Rational Systems and Matrix Inequalities to the Multicriteria

Analysis of Visual Servo -- Robust Visual Servoing Path Planning in the Presence of Uncertainties -- Visual Servoing for Nonholonomic Systems -- Visual Servoing to Assist Beating Heart Surgery

Restricciones de acceso: Accesible sólo para usuarios de la UPV

Tipo recurso electrónico: Recurso a texto completo

Detalles del sistema: Forma de acceso: Web

ISBN: 9781849960892 978-1-84996-089-2

Autores: Hashimoto, Koichi

Entidades: SpringerLink (Servicio en línea)

Enlace a formato físico adicional: Printed edition 9781849960885

Punto acceso adicional serie-Título: Lecture Notes in Control and Information Sciences 0170-8643 401
