
11 BIBLIOGRAFIA

1. Abba, G.; Chaillet, N. *Robot dynamic modelling using a power flow approach with application to biped locomotion*. Autonomous Robots 6, 1999, pp. 39-52.
2. Allen, T.J.; Quinn, R.D.; Bachmann, R.J.; Ritzmann, R.E. *Abstracted biological principles applied with reduced actuation improve mobility of legged vehicles*. Proc. of the Int. Conf. on Intelligent Robots and Systems, 2003, pp. 1370-1375.
3. Callegari, M.; Cannella, F.; Ferri, G. *Multi-body modelling of timing belt dynamics*. Proc. of the Institution of Mechanical Engineers Journal of Multi-body Dynamics 217(K), 2003, pp. 63-75.
4. Cardona, S. y Jordi, L. *Presentació d'informes científics i tècnics*. Barcelona, UPC, ETSEIB, Departament d'Enginyeria Mecànica, 2000.
5. Cardona, S.; Clos, D. *Teoria de màquines*. Barcelona, Edicions UPC, 2000.
6. Chapman, S.J. *Máquinas eléctricas*. Santafé de Bogota, Colombia, Ed. McGraw-Hill Interamericana, 1993.
7. Chironis, N.P.; Sclater, N. *Mechanisms and mechanical devices sourcebook*. Ed. McGraw-Hill, 1991.
8. CLAWAR network. *Walking machines catalogue*.
[http://www.fzi.de/ipt/WMC/walking_machines_katalog.html, setembre 2003]
9. Decker, K.H. *Elementos de máquinas*. Bilbao, Ed. Urmo, 1980.
10. Dhaouadi, R. *Nonlinear friction compensation in Harmonic Drives with hysteresis*. Proc. of the Int. Conf. on Advance Intelligent Mechatronics, 2003, pp. 278-283.
11. Dhaouadi, R.; Ghorbel, F.H.; Gandhi, P.S. *A new dynamic model of hysteresis in Harmonic Drives*. Transactions on Industrial Electronics 50(6), 2003, pp. 1165-1171.
12. Ferrando, F. *Optimización de variadores centrífugos de correa trapezoidal*. Tesi doctoral. Barcelona, Universitat Politècnica de Catalunya, 1994.

13. Fumio, o. *Evaluation of a rigid body model for a SCARA-type robot with Harmonic Drive transmissions*. Proc. of the Int. Conf. on Intelligent Robots and Systems, 1993, pp. 787-794.
14. Galvez, J.A.; Estremera, J.; Gonzalez de Santos, P. *SIL04-a versatile quadruped robot for research in force distribution*. Proc. of the 3rd Int. Conf. on Climbing and Walking Robots, 2000, pp. 371-383.
15. Gandhi, P.S.; Ghorbel, F.H.; Dabney, J. *Modeling, identification and compensation of friction in Harmonic Drives*. Proc. of the Conf. on Decision and Control, 2002, pp. 160-166.
16. Garcia, E.; Gonzalez de Santos, P. *Relevant friction effects on walking machines*. Proc. of the 4th Int. Conf. on Climbing and Walking Robots, 2001, pp. 135-142.
17. Gassmann, B.; Scholl, K.U.; Berns, K. *Locomotion of LAURON III in rough terrain*. Proc. of the Int. Conf. on Advance Mechatronics, 2001, pp. 959-964.
18. Gates Corporation. *Trends in power transmissions: synchronous drive systems*. [<http://www.gates.com/landing/poly>, febrer de 2004].
19. Genta, G.; Amati, N. *Planar motion hexapod walking machines – a new configuration*. Proc. of the 4th Int. Conf. on Climbing and Walking Robots, 2001, pp. 619-626.
20. Gienger, M.; Löffler, K.; Pfeiffer, F. *Towards the design of a biped jogging robot*. Proc. of the Int. Conf. on Robotics and Automation, 2001, pp. 4140-4145.
21. Gonzalez de Santos, P.; Gálvez, J.A.; Estremera, J.; García, E. *SIL04: a true walking robot for the comparative study of walking machine techniques*. Robotics and Automation Magazine, 2003, pp. 23-31.
22. Guardabrazo, T.A.; Jimenez, M.A.; Gonzalez de Santos, P. *A detailed power consumption model for walking robots*. Proc. of the 6th Int. Conf. on Climbing and Walking Robots, 2003, pp. 235-242.
23. Harmonic Drive AG. *Precision in Motion. Catalogue*. 2003
24. Harmonic Drive. *Components sets*. [http://www.harmonicdrive.de/en/2_2.htm, novembre 2003]

25. Hirai, K.; Hirose, M.; Haikawa, Y.; Takenaka, T. *The development of Honda humanoid robot*. Proc. of the Int. Conf. on Robotics and Automation, 1998, pp. 1321-1326
26. Hirose, S. *A new design criterion in robotic mechanism (prevention of negative power consumption)*. Proc. Int. Conf. on Intelligent Robots and Systems 1, 1993, pp. 131-135.
27. Hirose, S.; Arikawa, K. *Coupled and decoupled actuation of robotic mechanisms*. Proc. Int. Conf. on Robotics and Automation, 2000, pp. 33-39.
28. Honda Motor Company. *The Honda humanoid robot ASIMO*. [<http://world.honda.com/ASIMO/>, març 2004]
29. INA. *Product selection and information system*. [http://medias.ina.de/medias/en!hp/a33tp_dfsmG5, gener 2004]
30. Kar, D.C. *Design of statically stable walking robot: a review*. Journal of Robotic Systems 20(11), 2003, pp. 671-686.
31. Kar, D.C.; Kurien Issac, K.; Jayarajan, K. *Gaits and energetics in terrestrial legged locomotion*. Mechanism and Machine Theory 38, 2003, pp. 355-366.
32. Karolev, N.A.; Gold, P.W. *Load distribution of timing belt drives transmitting variable torques*. Mechanism and Machine Theory 30(4), 1995, pp. 553-567.
33. Kennedy, C.W.; Desai, J.P. *Estimation and modelling of the Harmonic Drive transmission in the Mitsubishi PA-10 robot arm*. Proc. of the Int. Conf. on Intelligent Robots and Systems, 2003, pp. 3331-3336.
34. Kim, H.; Marshek, K.M. *Force distribution for a flat belt drive with a concentrated contact load*. Mechanism and Machine Theory 25(6), 1990, pp. 667-677.
35. Kim, H.; Marshek, K.M. *Friction characteristics for concentrated load area in a flat belt drive*. Mechanism and Machine Theory 26(4), 1990, pp. 351-358.
36. Kobayashi, H.P.; Inagaki, K. (1991) *Development of a hexapod walking robot: Hexax-I*. Int. Workshop on Intelligent Robots and Systems, 1991, pp. 1545-1549.
37. Koyama, T.; Marshek, K.M. *Toothed belt drives. Past, present and future*. Mechanism and Machine Theory 23(3), 1998, pp. 227-241.

38. Mabie, H.; Reinholtz, C. *Mecanismos y dinámica de maquinaria*. Mexico DF, Ed. Limusa, 1998.
39. Marhefka, D.W.; Orin, D.E. *Gait planning for energy efficiency in walking machines*. Proc. Int. Conf. on Robotics and Automation 1, 1997, pp. 474-480.
40. Maxon Motor. High precision drives and systems. Catalogue. 2003
41. Maxonmotor. *Motores CC*. [<http://www.maxonmotor.es/producto11.htm>, desembre 2003]
42. Mohan, N.; Undeland, T.M., Robbins, W.P. (1995) *Power electronics*. USA, Ed. John Wiley & Sons, 1995.
43. Nakano, Y.; Chono, K.; Yoneda, K.; Kameishi, H. *A dynamic biped walking robot based on the momentum mechanism with flexible beams*. Proc. of the Int. Conf. on Intelligent Robots and Systems 2, 1994, pp. 1318-1323.
44. National Instruments. *Data Acquisition Hardware*. [<http://www.ni.com/dataacquisition/>, abril, 2004]
45. Nishii, J. *Gait pattern and energetic cost in hexapods*. Proc. of the Int. Conf. on Engineering in Medicine and Biology Society 20(5), 1998, pp. 2430-2433.
46. Norton, R. *Diseño de Maquinaria*. México. Ed. Mc Graw-Hill. 1995.
47. Ota, Y.; Yoneda, K.; Ito, F.; Hirose, S.; Inagaki, Y. *Design and control of 6-DOF mechanism for twin-frame mobile robot*. Autonomous Robots 10, 2001, pp. 297-316.
48. Ouezdou, F.B.; Bruneau, O.; Guinot, J.C. *Dynamic analysis tool for legged robots*. Multibody System Dynamics 2, 1998, pp. 369-391.
49. Palacín, J., Donaire, O., Roca, J., Marco, S. *Static walker foot design and implementation*. Proc. of the 4th Int. Conf. on Climbing and Walking Robots, 2001, pp. 181-188.
50. Pfeiffer, F.; Löffler, K.; Gienger, M. *Design aspects of walking machines*. Proc. of the 3rd Int. Conf. on Climbing and Walking Robots, 2000, pp. 17-38.

-
51. Pfeiffer, F.; Löffler, K.; Gienger, M. *The concept of jogging JOHNNIE*. Proc. of the Int. Conf. on robotics and Automation, 2002, pp. 3129-3135.
 52. Pfeiffer, F.; Rossmann, T. *About friction in walking machines*. Proc. of the Int. Conf. on Robotics and Automation, 2000, pp. 2165-2172.
 53. Raby, E.Y.; Orin, D.E. *Passive walking with leg compliance for energy efficient multilegged vehicles*. Proc. of the Int. Conf. on Robotics and Automation 3, 1999, pp. 1702-1707.
 54. Riba, C. *Disseny de màquines V. Metodologia*. Edicions UPC, 2002.
 55. Riba, C. *Mecanimes i màquines III. Dinàmica de màquines*. Edicions UPC, 2000.
 56. Riba, C. *Selecció de motors i transmissions en el projecte mecànic*. Barcelona, Ed. CPDA., 1997.
 57. Riba, C. *Terminologia per a la Teoria de Màquines i Mecanismes. Comissió de la IFToMM per a la Normalització de Terminologia. Versió Catalana*. Barcelona, UPC, ETSEIB, Departament d'Enginyeria Mecànica, 1995.
 58. Robinson, D.W.; Pratt, J.E.; Paluska, D.J.; Pratt, G.A. *Series elastic actuator development for a biomimetic walking robot*. Proc. of the Int. Conf. on Advance Mechatronics, 1999, pp. 561-568.
 59. Roca, J.; Nogués, M.; Cardona, S. *Design, dynamic simulation and experimental tests of leg mechanism and driving system for a hexapod walking robot*. Proc. of the 7th Int. Conf. on Climbing and Walking Robots, 2004.
 60. Roca, J.; Palacín, J.; Bradineras, J.; Iglesias, J.M. *Lightweight leg design for a static biped walking robot*. Proc. of the 5th Int. Conf. on Climbing and Walking Robots, 2002, pp. 383-390.
 61. Roca, J.; Palacin, S.; Cardona, S. *Energy efficiency of a DC motor based driving system for leg movement of a hexapod walking robot*. Proc. of the 6th Int. Conf. on Climbing and Walking Robots, 2003, pp. 845-852.
 62. Sakagami, Y.; Watanabe, R.; Aoyama, C.; Matsugana, S.; Higaki, N.; Fujimura, K. *The intelligent ASIMO: system overview and integration*. Proc. of the Int. Conf. on Intelligent Robots and Systems, 2002, pp. 2478-2483.

63. Sanjurjo, R. *Máquinas eléctricas*. Madrid, Ed. McGraw-Hill Interamericana, 1989.
64. Schilling, R.J. *Fundamentals of robotics: analysis and control*. USA, Ed. Prentice-Hall, 1990.
65. Seyfferth, W.; Maghzal, A.J.; Angeles, J. *Nonlinear modelling and parameter identification of Harmonic Drive robotic transmissions*. Proc. of the Int. Conf. On Robotics and Automation, 1995, pp. 3027-3032.
66. Shigley, J.; Uicker J. *Teoría de Mecanismos y Máquinas*. México. Ed .Mc Graw-Hill. 1988.
67. Silva, M. A.; Tenreiro, J.A.; Endes, A.M. *Energy analysis of multi-legged locomotion systems*. Proc. of the 4th Int. Conf. on Climbing and Walking Robots, 2001, pp. 143-150.
68. Silva, M. A.; Tenreiro, J.A.; *Energy analysis during biped walking*. Proc. of the Int. Conf. on Robotics and Automation, 1999, pp. 59-64.
69. Song, S.M.; Waldron, K.J. *Machines that walk: the adaptive suspension vehicle*. Ed. MIT Press, 1989.
70. Suzuki, S.; Furuta, K.; Pan, Y.; Hatakeyama, S. *Biped walking robot control with passive walker model by new VSC servo*. Proc. of the American Control Conference 1, 2001, pp. 107-112.
71. Taghirad, H.D.; Bélanger, P.R. *An experimental study on modeling and identification of Harmonic Drive systems*. Proc. of the 35th Conference on Decision and Control, 1996, pp. 4725-4730.
72. Taghirad, H.D.; Bélanger, P.R. *Robust friction compensator for Harmonic Drive transmissions*. Proc. of the Int. Conf. on Control Applications, 1998, pp. 547-551.
73. Takahama, T.; Inagaki, K. *A design method for practically used walking machine*. Proc. Int. Conf. on Intelligent Robots and Systems 1, 1997, pp. 414-419.
74. Transmission Development Co. *Polyurethane timing belts*.
[http://fp.transdev.plus.com/catalogues/polyurethane/pu_cat_index.htm, desembre 2003]

75. Tuttle, T.D.; Seering, W.P. *A nonlinear model of a Harmonic Drive gear transmission*. Transactions on Robotics and Automation 12(3), 1996, pp. 368-374.
76. Waldron, K.J. *From walking to galloping*. Proc. of the 3rd Int. Conf. on Climbing and Walking Robots, 2000, pp. 1-5.
77. Weidemann, H.J.; Pfeiffer, F.; Eltze, J. *A design concept for legged robots derived from the walking stick insect*. Proc. of the Int. Conf. On Intelligent Robots and Systems 1, 1993, pp. 545-552.
78. Weidemann, H.J.; Pfeiffer, F.; Eltze, J. *The Six-Legged TUM Walking Robot*. Proc. of the Int. Conf. on Intelligent Robots and Systems 2, 1994, pp. 1026-1033.
79. Woods, R. L.; Lawrence K. L. *Modeling and simulation of dynamic systems*. Ed. Prentice Hall, 1997.
80. Yoneda, K. *Design of non-bio-mimetic walker with fewer actuators*. Proc. of the 4th Int. Conf. on Climbing and Walking Robots, 2001, pp. 115-126.
81. Yoneda, K.; Ota, Y. *Non-bio-mimetic walkers*. The International Journal of Robotic Research 22(3-4), 2003, pp. 241-249.
82. Zielinska, T.; Chong, C.K.; Heng, J. *Actuating system of six-legged walking machine*. Proc. of the 4th Int. Conf. on Climbing and Walking Robots, 2001, pp. 611-618.
83. Zielinska, T.; Goh, T.; Chong, C.K. *Design of autonomous hexapod*. Proc. of the 1st Int. Conf. on Robot Motion and Control, 1999, pp. 65-69.