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Zainteresowania naukowe

Roboty kroczące, algorytmy inteligencji maszynowej, modelowanie i sterowanie układami dynamicznymi

Publikacje

1. **D. Belter, P. Łabęcki, P. Skrzypczyński, Adaptive Motion Planning for Autonomous Rough Terrain Traversal with a Walking Robot, Journal of Field Robotics, (in print)**

2. **Dominik Belter, Michal Nowicki, Piotr Skrzypczyński, Krzysztof Walas, Jan Wietrzykowski, Lightweight RGB-D SLAM System for Search and Rescue Robots, Recent Advances in Automation, Robotics and Measuring Techniques, vol. 351, R. Szewczyk, C. Zieliński, M. Kaliczyńska (Eds.), pp. 11-21, 2015 (pdf)**

3. **D. Belter, Piotr Skrzypczyński, K. Walas, D. Wlodkowic, Affordable Multi-Legged Robots for Research and STEM Education: A Case Study of Design and Technological Aspects, Recent Advances in Automation, Robotics and Measuring Techniques, vol. 351, R. Szewczyk, C. Zieliński, M. Kaliczyńska (Eds.), pp. 23-34, 2015 (pdf)**

4. **D. Belter, M. Kopicki, S. Zurek, J. Wyatt, Kinematically Optimised Predictions of Object Motion, IEEE/RSJ 2014 International Conference on Intelligent Robots and Systems, Chicago, USA, pp. 4422--4427, 2014 (pdf)**

5. **D. Belter, M. Nowicki, P. Skrzypczyński, On the Performance of Pose-based RGB-D Visual Navigation Systems, 12th Asian Conference on Computer Vision (ACCV 2014), Lecture Notes on Computer Science, Springer, D. Cremers et al. (Eds.), London, 2014 J. Wietrzykowski, D. Belter, Boosting Support Vector Machines for RGB-D Based Terrain Classification, Journal of Automation, Mobile Robotics & Intelligent Systems, Vol. 8, No. 3, pp. 28-34, 2014**
(
pdf
)

6. **D. Belter, P. Skrzypczyński, K. Walas, P. Fankhauser, C. Gehring, M. Hutter, M. Hoepflinger, R. Siegwart, Dynamic simulation of legged robots using a physics engine, Mobile Service Robotics, World Scientific, K. Kozłowski et al. (Eds.), Singapore, pp. 567-574, 2014**
P. Łabęcki, D. Belter, Budowa mapy z wykorzystaniem danych RGB-D dla robota kroczącego, Zeszyty Naukowe Politechniki Warszawskiej. Elektronika, z. 194 tom I, Problemy robotyki, K. Tchoń, C. Zieliński (Eds.), pp. 297-306, 2014

7. **Dominik Belter, Krzysztof Walas, A Compact Walking Robot - Flexible Research and Development Platform, Recent Advances in Automation, Robotics and Measuring Techniques, vol. 267, R. Szewczyk, C. Zielinski, M. Kaliczynska (Eds.), pp. 343-352, 2014 (**
pdf
)

8. **D. Belter, P. Skrzypczyński, Precise self-localization of a walking robot on rough terrain using parallel tracking and mapping, Industrial Robot: An International Journal, Vol. 40, No. 3, pp. 229–237, 2013 (**
pdf
)

9. **D. Belter, Optimization-based approach for motion planning of a robot walking on rough terrain, Journal of Automation, Mobile Robotics & Intelligent Systems, Vol. 7, No. 4, pp. 34-41, 2013 (pdf)**

10. **P. Łabęcki, D. Belter, Sensory system calibration method for a walking robot, Journal of Automation, Mobile Robotics & Intelligent Systems, Vol. 7, No. 2, s. 39-45, 2013 (pdf)**

11. **D. Belter, P. Łabęcki, P. Skrzypczyński, An Exploration-based Approach to Terrain Traversability Assessment for a Walking Robot, 11th IEEE International Symposium on Safety Security and Rescue Robotics, Linköping, Sweden, pp. 1-6, 2013 (pdf)**

12. **B. Jaworski, D. Bilicki, D. Belter, Measurement Fusion Method for Indoor Localization of a Walking Robot, Pomiary Automatyka Robotyka, nr 2, pp. 68–73, 2013**

13. **F. Ponulak, D. Belter, A. Kasiński, Perspektywy zastosowań impulsowych sieci neuronowych w systemach maszynowego sprzęgania układu nerwowego, Inżynieria biomedyczna: podstawy i zastosowania, Tom 9 – Sieci neuronowe w inżynierii biomedycznej, W. Torbicz (Red. monografii), R. Tadeusiewicz, J. Korbicz, L. Rutkowski, W. Duch (Red. tomu), Akademicka Oficyna Wydawnicza Exit, pp. 531–554, 2013**

14. **D. Belter, P. Skrzypczyński, Posture Optimization Strategy for a Statically Stable Robot Traversing Rough Terrain, IEEE/RSJ 2012 International Conference on Intelligent Robots and Systems, Vilamoura, Portugal, pp. 2204-2209, 2012**

15. **D. Belter, Optimization-based approach for motion planning of a robot walking on rough terrain (in Polish), Zeszyty Naukowe Politechniki Warszawskiej. Problemy robotyki, K. Tchoń, C. Zieliński (Eds.), 2012**

16. **D. Belter, P. Łabęcki, P. Skrzypczyński, Estimating Terrain Elevation Maps from Sparse and Uncertain Multi-Sensor Data, IEEE 2012 International Conference on Robotics and Biomimetics, Guangzhou, China, pp. 715–722, 2012 (pdf)**

17. **D. Belter Gait Modification Strategy for a Six-legged Robot Walking on Rough Terrain, Adaptive Mobile Robotics, World Scientific, A. Azad et al. (Eds.), Singapore, pp. 367-374, 2012**

18. **D. Belter, P. Skrzypczyński, Precise self-localization of a walking robot on rough terrain using PTAM, Adaptive Mobile Robotics, World Scientific, A. Azad et al. (Eds.), Singapore, pp. 89-96, 2012 (Industrial Robot Innovation Award 2012)**

19. **P. Łabęcki, D. Belter, Sensory system calibration method for a walking robot, 1st workshop on Perception for Mobile Robots Autonomy 2012, Poznań, Poland, CD-ROM, 2012**

20. **P. Kaczmarek, D. Belter, Podstawy programowania w C/C++, Wydawnictwo Politechniki Poznańskiej, 2011**

21. **D. Belter, Perception-based motion planning for a walking robot in rugged terrain, In Lecture Notes in Control and Information Sciences: Robot Motion and Control (K. Kozłowski, Ed.), pp. 127-136, Springer, Berlin 2011 (pdf)**

22. **D. Belter, P. Łabęcki, P. Skrzypczyński, On-Board Perception and Motion Planning for Legged Locomotion over Rough Terrain, 5th European Conference on Mobile Robots , Örebro, Sweden, pp. 195-200, 2011 (pdf)**

23. **D. Belter, P. Skrzypczyński, Rough terrain mapping and classification for foothold selection in a walking robot , Journal of Field Robotics, vol. 28(4), pp. 497-528, 2011 (pdf)**

24. **D. Belter, P. Skrzypczyński, Integrated motion planning for a hexapod robot walking on rough terrain, 18th IFAC World Congress, Milan, Italy, pp. 6918-6923, 2011 (pdf)**

25. **K. Walas, D. Belter, Messor - Versatile walking robot for search and rescue missions, Journal of Automation, Mobile Robotics & Intelligent Systems, vol. 5(2), pp. 28-34, 2011 (pdf)**

26. **K. Walas, D. Belter, Supporting locomotive functions of a six-legged walking robot, International Journal of Applied Mathematics and Computer Science, vol. 21(2), pp. 363-377, 2011 (pdf)**

27. **D. Belter, P. Skrzypczyński, Rough Terrain Mapping and Classification for Foothold Selection in a Walking Robot, IEEE International Workshop on Safety, Security & Rescue Robotics, Bremen, Germany, 2010 (pdf)**

28. **D. Belter, System planowania ruchu dla robota kroczącego po nierównym podłożu (Motion planning and execution for a hexapod robot walking on rough terrain), Zeszyty Naukowe Politechniki Warszawskiej, pp. 615-624, 2010**

29. **D. Belter, K. Walas, Strategia adaptacyjnego ruchu robota kroczacego po nierównym terenie (Behavioral locomotion of the robot walking on rough terrain), Zeszyty Naukowe Politechniki Warszawskiej, pp. 625-634, 2010**

30. **D. Belter, P. Labecki, P. Skrzypczynski, Task-Oriented Modelling of Rugged Terrain from Sparse Range Data, 8th European Workshop on Advanced Control and Diagnosis, 18-19 November 2010, Ferrara, Italy**

31. **D. Belter, P. Łabęcki, P. Skrzypczyński, Map-based Adaptive Foothold Planning for Unstructured Terrain Walking, 2010 IEEE International Conference on Robotics and Automation, May 3-8, Anchorage, Alaska, USA, pp. 5256-5261, 2010 (pdf)**

32. **D. Belter, P. Skrzypczyński, A Biologically Inspired Approach to Feasible Gait Learning for a**

Hexapod Robot, International Journal of Applied Mathematics and Computer Science, Vol. 20, No. 1, pp. 69-84, 2010 (pdf)

33. **D. Belter, P. Skrzypczyński, Efficient Gait Learning In Simulation: Crossing the Reality Gap by Evolutionay Model Identification, 12th International Conference on Climbing and Walking Robots CLAWAR 2009 , Istanbul, Turkey, Sep tember 9-11 2009**

34. **D. Belter, P. Skrzypczyński, Population Based Methods for Identification and Optimization of a Walking robot Model, Lectures Notes in Control and Information Sciences: Robot Motion and Control , K. R. Kozłowski (Ed.), pp. 185-195, 2009**

35. **D. Belter, Adaptive foothold selection for a hexapod robot walking on rough terrain, 7th Worksho p on Advanced Control and Diagnosis, Zielona Góra, CD-ROM, 2009**

36. **D. Belter, K. Walas, P. Skrzypczyński, Autonomiczny robot sześcionożny – rozwój konstrukcji i systemu sterowania (Autonomous Six Legged Walking Robot - Design and Control Architecture Development) (in Polish), Pomiary Automatyka Robotyka, 2 (CD-ROM), 2009**

37. **D. Belter, Parametryzowane wzorce ruchu dla sześcionożnych robotów kroczących, Studia z automatyki i informatyki(in Polish), tom 33
, pp. 45-58
, 2008**

38. **D. Belter, A. Kasinski, P. Skrzypczynski, Evolving Feasible Gaits for a Hexapod Robot by Reducing the Space of Possible Solutions, IEEE/RSJ 2008 International Conference on Intelligent Robots and Systems,
Nice, France, September 22-26, pp
.
2673-2678,
2008 (
pdf
)**

39. **D. Belter, System sterowania ruchem sześcionożnego robota kroczącego (Parameterized gait generation system for hexapod walking robot) (in Polish), Krajowa Konferencja Robotyki, September 3-6, pp. 565-574, 2008**

40. **K. Walas, D. Belter, A. Kasinski, Control and Environment Sensing System For a Six-Legged Robot, Journal of Automation, Mobile Robotics & Intelligent Systems, vol. 2 (3), pp. 26-31, 2008**

41. **D. Belter, K. Walas, A. Kasinski, Distributed control system of DC servomotors for six legged walking robot, EPE PEMC - 13th International Power Electronics and Motion Control Conference, Poznan, Poland, September 1-3 2008, CD-ROM**

42. **Filip Ponulak, Dominik Belter and Andrzej Kasiński. Adaptive Central Pattern Generator based on Spiking Neural Networks. Proc. of EPFL LATSIS Symposium 2006, Lausanne, Switzerland, pp.121-122, 2006**

Abstrakty

1. **F. Ponulak, D. Belter and S. Rotter, Adaptive Movement Control with Spiking Neural Networks Part I: Feedforward Control, Recent Advances in Neuro-Robotics Symposium: Sensorimotor Control, Freiburg, Germany, July 20-22, 2008**

2. **D. Belter, F. Ponulak and S. Rotter, Adaptive Movement Control with Spiking Neural Networks Part II: Composite Control, Recent Advances in Neuro-Robotics Symposium: Sensorimotor Control, Freiburg, Germany, July 20-22, 2008**

Rozprawa doktorska

view

Zainteresowania

wycieczki rowerowe, gitara, wędkarstwo

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