

Stanford



Ken Waldron

Professor (Research) of Mechanical Engineering, Emeritus

 Curriculum Vitae available Online

Bio

BIO

Kenneth J. Waldron is Professor of Mechanical and Mechatronic Engineering at UTS. He is also Professor Emeritus from the Design Group in the Department of Mechanical Engineering of Stanford University. He holds bachelors and masters degrees from the University of Sydney, and PhD from Stanford. He works in machine design, and design methodology with a particular focus on robotic and mechatronic systems.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Mechanical Engineering
- Member, Bio-X

Publications

PUBLICATIONS

- **Professional interactions with Professor Erskine Crossley** *MECHANISM AND MACHINE THEORY*
Waldron, K. J., Jacobs, D. A.
2015; 89: 72-74
- **Modeling Inelastic Collisions With the Hunt-Crossley Model Using the Energetic Coefficient of Restitution** *JOURNAL OF COMPUTATIONAL AND NONLINEAR DYNAMICS*
Jacobs, D. A., Waldron, K. J.
2015; 10 (2)
- **AN ACTUATED CONTINUOUS SPRING LOADED INVERTED PENDULUM (SLIP) MODEL FOR THE ANALYSIS OF BOUNCING GAITS** *Conference on Climbing and Walking Robots (CLAWAR)*
Jacobs, D. A., Park, L. J., Waldron, K. J.
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- **Heuristic control of bipedal running: steady-state and accelerated** *ROBOTICA*
Perkins, A. D., Waldron, K. J., Csonka, P. J.
2011; 29: 939-947
- **Characterization of an Electric-Pneumatic Hybrid Prismatic Actuator** *JOURNAL OF MECHANISMS AND ROBOTICS-TRANSACTIONS OF THE ASME*
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- **Control of Bipedal Turning While Running** *12th International Symposium on Advances in Robot Kinematics (ARK 2010)*
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- **Passively Stable Hopping of an Articulated Leg with a Tendon-Coupled Ankle** *IEEE/RSJ International Conference on Intelligent Robots and Systems*

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- Csonka, P. J., Perkins, A. D., Waldron, K. J.
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- **Static and Dynamic Maneuvers With a Tendon-Coupled Biped Robot** *18th CISM-IFTOMM Symposium on Robot Design, Dynamics and Control*
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 - **The mechanics of biped running and a stable control strategy** *ROBOTICA*
Abdallah, M. E., Waldron, K. J.
2009; 27: 789-799
 - **In memoriam: Kosuke Ishii** *RESEARCH IN ENGINEERING DESIGN*
Waldron, K. J.
2009; 20 (2): 143-144
 - **Analyzing Bounding and Galloping Using Simple Models** *JOURNAL OF MECHANISMS AND ROBOTICS-TRANSACTIONS OF THE ASME*
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 - **The state of the art of climbing and walking robots** *INDUSTRIAL ROBOT-AN INTERNATIONAL JOURNAL*
Waldron, K. J.
2009; 36 (4): 313-313
 - **Thrust control, stabilization and energetics of a quadruped running robot** *INTERNATIONAL JOURNAL OF ROBOTICS RESEARCH*
Estremera, J., Waldron, K. J.
2008; 27 (10): 1135-1151
 - **Configuration Design of a Robotic Vehicle for Rough Terrain Mobility** *15th International Conference on Mechatronics and Machine Vision in Practice*
Waldron, K. J., Hung, T. T., Madadnia, J.
IEEE.2008: 476–481
 - **A Subgoal-Guided Force Field Method for Robot Navigation** *IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications*
Wang, D., Liu, D. K., Kwok, N. M., Waldron, K. J.
IEEE.2008: 488–493
 - **A Unified Method for Multi-Body Systems Subject to Stick-Slip Friction and Intermittent Contact** *IEEE/RSJ International Conference on Intelligent Robots and Systems*
Perkins, A. D., Abdallah, M. E., Mitiguy, P., Waldron, K. J.
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 - **An optimal traction control scheme for off-road operation of robotic vehicles** *IEEE-ASME TRANSACTIONS ON MECHATRONICS*
Waldron, K. J., Abdallah, M. E.
2007; 12 (2): 126-133
 - **A hybrid motion model for aiding state estimation in dynamic quadrupedal locomotion** *IEEE International Conference on Robotics and Automation*
Singh, S. P., Waldron, K. J.
IEEE.2007: 4337–4342
 - **THINKING ABOUT BOUNDING AND GALLOPING USING SIMPLE MODELS** *10th International Conference on Climbing and Walking Robots (CLAWAR 2007)*
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 - **Robotic harness for the field assessment of galloping gaits** *IEEE/RSJ International Conference on Intelligent Robots and Systems*
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 - **A physical model and control strategy for biped running** *IEEE International Conference on Robotics and Automation*
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- **Towards high-fidelity on-board attitude estimation for legged locomotion via a hybrid range and inertial approach** *9th International Symposium on Experimental Robotics (ISER)*
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- **Stiffness and Texture Perception for Teledermatology** *13th Conference on Medicine Meets Virtual Reality*
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- **System design of a quadrupedal galloping machine** *5th International Conference on Climbing and Walking Robots (CLAWAR 2002)*
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CHINA MACHINE PRESS.2004: 87–91
- **Design and evaluation of an integrated planar localization method for desktop robotics** *IEEE International Conference on Robotics and Automation*
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- **Intelligent control of quadruped gallops** *IEEE-ASME TRANSACTIONS ON MECHATRONICS*
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- **Proprioceptive control for a robotic vehicle over geometric obstacles** *20th IEEE International Conference on Robotics and Automation (ICRA)*
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- **Intelligent control of an experimental articulated leg for a galloping machine** *20th IEEE International Conference on Robotics and Automation (ICRA)*
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- **TECHNICAL DESCRIPTION OF THE ADAPTIVE SUSPENSION VEHICLE** *INTERNATIONAL JOURNAL OF ROBOTICS RESEARCH*
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