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## Publications

(not peer reviewed)

1. Pataky TC (2012). Plantar pressure distribution analysis and applications [in Japanese]. *Seitai Ohyoh Keisoku [Journal of Applied Bio-metrology]* 3: 1–10.
2. Crompton RH, Pataky TC (2009). Stepping out. *Science* 323: 1174:1175.

## Publications

(peer reviewed)

1. Pataky TC, Vanrenterghem J, Robinson MA (2015). Zero- vs. one-dimensional, parametric vs. non-parametric, and confidence interval vs. hypothesis testing procedures in one-dimensional biomechanical trajectory analysis. *Journal of Biomechanics*, in press.
2. Robinson MA, Vanrenterghem J, Pataky TC (2015). Statistical Parametric Mapping (SPM) for alpha-based statistical analyses of multi-muscle EMG time-series. *Journal of Electromyography and Kinesiology* 25(1): 14–19.
3. Pataky TC (2015). Correlation between maximum in-shoe plantar pressures and clubhead speed in amateur golfers. *Journal of Sports Sciences* 33(2): 192–197.
4. Pataky TC, Robinson MA, Vanrenterghem J (2015). Two-way ANOVA for scalar trajectories, with experimental evidence of nonphasic interactions. *Journal of Biomechanics* 48(1): 186–189.
5. Pataky TC, Robinson MA, Vanrenterghem J, Savage R, Bates KT, Crompton RH (2014). Vector field statistics for objective center-of-pressure trajectory analysis during gait, with evidence of scalar sensitivity to small coordinate system rotations. *Gait and Posture* 40(1): 255–258.
6. Phethean J, Pataky TC\*, Nester CJ, Findlow AH (2014). A cross-sectional study of age-related changes in plantar pressure distribution between 4-7 years: a comparison of regional and pixel-level analyses. *Gait and Posture* 39(1): 154–160. \*Corresponding author.
7. Pataky TC, Savage R, Bates KT, Sellers WI, Crompton RH (2013). Short-term step-to-step correlation in plantar pressure distributions during treadmill walking, and implications for trackway analysis. *Gait & Posture* 38(4): 1054–1057.
8. De Ridder R, Willems T, Vanrenterghem J, Robinson MA, Pataky TC, Roosen P (2013). Gait kinematics of subjects with ankle instability using a multi-segmented foot model. *Medicine & Science in Sports & Exercise* 45(11): 2129–2136.
9. Pataky TC, Slota GP, Latash ML, Zatsiorsky VM (2013). Is power grasping contact continuous or discrete? *Journal of Applied Biomechanics* 29(5):554–62.
10. Pataky TC, Robinson MA, Vanrenterghem J (2013). Vector field statistical analysis of kinematic and force trajectories. *Journal of Biomechanics* 46(14): 2394–2401.
11. Bates KT, Collins D, Savage R, Webster E, Pataky TC, McClymont J, D'Aout K, Sellers WI, Bennett MR, Crompton RH (2013). The evolution of compliance in the human lateral midfoot. *Proceedings of the Royal Society B - Biological Sciences* 280: 20131818.

12. Bates KT, Savage R, Pataky TC, Morse SA, Webster E, Falkingham PL, Ren L, Collins D, Bennett MR, McClymont J, Crompton RH (2013). Does footprint depth correlate with foot motion and pressure? *Journal of the Royal Society Interface* 10(83): 2013.0009.
13. Vanrenterghem J, Venables E, Pataky TC, Robinson MA (2012). The effect of running speed on knee mechanical loading in females during side cutting. *Journal of Biomechanics* 45(14): 2444-2449.
14. Pataky TC (2012). Spatial resolution in plantar pressure measurement revisited. *Journal of Biomechanics* 45(12): 2116-2124.
15. Giacomozzi C, Keijsers N, Pataky T, Rosenbaum D (2012). International scientific consensus on medical plantar pressure measurement devices: technical requirements and performance. *Annali dell'Istituto Superiore di Sanità* 48(3): 259-271.
16. Cox PG, Rayfield EJ, Fagan MJ, Pataky TC, Jeffery N (2012). Functional evolution of the feeding system in rodents. *PLoS One* 7(4): e36299.
17. Panagiotopoulou O, Pataky TC, Hill Z, Hutchinson JR (2012). Statistical parametric mapping of the regional distribution and ontogenetic scaling of foot pressures during walking in Asian elephants (*Elephas maximus*). *Journal of Experimental Biology* 215(9): 1584-1593.
18. Pataky TC, Mu T, Bosch K, Rosenbaum D, Goulermas JY (2012). Gait recognition: highly unique plantar pressure patterns amongst 104 individuals. *Journal of the Royal Society Interface*. 9(69): 790-800.
19. Crompton RH, Pataky TC, Savage R, D'Août K, Bennett M, Day M, Bates K, Morse S, Sellers WI (2012). Human-like external function of the foot, and fully upright gait, confirmed in the 3.66 million year old Laetoli hominin footprints by topographic statistics, experimental footprint-formation and computer simulation. *Journal of the Royal Society Interface*. 9(69): 707-719.
20. Pataky TC (2012). One-dimensional statistical parametric mapping in Python. *Computer Methods in Biomechanics and Biomedical Engineering* 15(3): 295-301.
21. Pataky TC, Slota GP, Latash ML, Zatsiorsky VM (2012). Radial force distribution changes associated with tangential force production in cylindrical grasping, and the importance of anatomical registration. *Journal of Biomechanics* 45(2): 218-224.
22. Pataky TC, Maiwald C (2011). Spatiotemporal volumetric analysis of dynamic plantar pressure data. *Medicine & Science in Sports & Exercise*. 43(8): 1582-1589.
23. Pataky TC, Bosch K, Mu T, Keijsers NLW, Segers V, Rosenbaum D, Goulermas JY (2011). An anatomically unbiased foot template for inter-subject plantar pressure evaluation. *Gait & Posture* 33(3): 418-422.
24. Oliveira FPM, Pataky TC, Tavares JMRS (2010). Registration of pedobarographic image data in the frequency domain. *Computer Methods in Biomechanics and Biomedical Engineering* 13(6): 731-740.
25. Caravaggi P, Pataky TC, Gunther M, Savage R, Crompton R (2010). Dynamics of longitudinal arch support in relation to walking speed: contribution of the plantar aponeurosis. *Journal of Anatomy* 217(3): 254-261.
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27. Sellers WI, Pataky TC, Caravaggi P, Crompton RH (2010). Evolutionary robotic approaches in primate gait analysis. *International Journal of Primatology* 31(2): 321-338.
28. Mu T, Pataky TC, Findlow AH, Goulermas JY (2010). Automated nonlinear feature generation and classification of foot pressure lesions. *IEEE Transactions on Information Technology in BioMedicine* 14(2): 418-424.
29. Keijsers NLW, Stolwijk NM, Pataky TC (2010). Linear dependence of peak, mean, and pressure-time integral values in plantar pressure images. *Gait and Posture* 31(1): 140-142.
30. D'Août K, Pataky TC, De Clercq D, Aerts P (2009). The effects of habitual footwear use: foot shape and function in native barefoot walkers. *Footwear Science* 1(2): 81-94.
31. Oliveira FPM, Tavares JMRS, Pataky TC (2009). Rapid pedobarographic image registration based on contour curvature and optimization. *Journal of Biomechanics* 42(15): 2620-2623.
32. Caravaggi P, Pataky TC, Goulermas JY, Savage R, Crompton R (2009). An anatomically based inverse dynamic model of the windlass mechanism of the foot: evidence for early stance phase preloading of the plantar aponeurosis. *Journal of Experimental Biology* 212: 2491-2499.
33. Pataky TC, Keijsers NLW, Goulermas JY, Crompton RH (2009). Nonlinear spatial warping for between-subjects pedobarographic image registration. *Gait and Posture* 29(3): 477-482.
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35. Pataky TC, Caravaggi P, Savage R, Crompton RH (2008). Regional peak plantar pressures are highly sensitive to regional boundary definitions. *Journal of Biomechanics* 41(12): 2772-2775.
36. Pataky TC (2008). Assessing the significance of pedobarographic signals using random field theory. *Journal of Biomechanics* 41(11): 2465-2473.
37. Pataky TC, Goulermas JY (2008). Pedobarographic statistical parametric mapping: a pixel-level approach to foot pressure image analysis. *Journal of Biomechanics* 41(10): 2136-2143.
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41. Pataky TC, Latash ML, Zatsiorsky VM (2007). Finger interaction during maximal radial and ulnar deviation efforts: experimental data and linear neural network modeling. *Experimental Brain Research* 179(2):301-312.
42. Pataky TC (2005). Soft tissue strain energy minimization: a candidate control scheme for intra-finger normal-tangential force coordination. *Journal of Biomechanics* 38(8): 1723-1727.
43. Pataky TC, Latash ML, Zatsiorsky VM (2005). Viscoelastic response of the finger pad to incremental tangential displacements. *Journal of Biomechanics* 38(7): 1441-1449.

44. Jordan K, Pataky TC, Newell K (2005). Grip width and the organization of force output. *Journal of Motor Behavior* 37(4): 285-294.
45. Pataky TC, Latash ML, Zatsiorsky VM (2004). Prehension synergies during nonvertical grasping. II. Modeling and optimization. *Biological Cybernetics* 91(4): 231-242.
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48. Pataky TC, Zatsiorsky VM, Challis JC (2003). A simple method to determine body segment masses in vivo: reliability, accuracy, and sensitivity analysis. *Clinical Biomechanics* 18: 364-368.
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