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Selected Scholarly Contributions [Data Provided by Scopus]

Griffin, B., Yang, J.

[Design and analysis of a novel earpiece-less eyeglass frame](#)

(2013) Journal of Engineering, Design and Technology, 11 (2), pp. 158-177.

Zou, Q., Yang, J.

[Motion synthesis for a digital pregnantwoman multibody system](#)

(2013) International Journal of Robotics and Automation, 28 (2), pp. 192-202.

Gragg, J., Cloutier, A., Yang, J.

[Optimization-based posture reconstruction for digital human models](#)

(2013) Computers and Industrial Engineering, 66 (1), pp. 125-132.

Gragg, J., Yang, J.

[Digital human forward kinematic and dynamic reliabilities](#)

(2013) Journal of Mechanical Design, Transactions of the ASME, 135 (7), art. no. 071008, .

Kumbhar, P., Xu, P., Yang, J.

[Evaluation of human body response for different vehicle seats using a multibody biodynamic model](#)

(2013) SAE Technical Papers, 2, .

Lei, Z., Yang, J., Zhuang, Z., Roberge, R.

[Simulation and evaluation of respirator faceseal leaks using computational fluid dynamics and infrared imaging](#)

(2013) Annals of Occupational Hygiene, 57 (4), pp. 493-506.

Long, J., Yang, J., Lei, Z., Liang, D.

[Simulation-based assessment for construction helmets](#)

(2013) Computer Methods in Biomechanics and Biomedical Engineering, . Article in Press.

Yang, J., Lindsley, W.G., King, W.P., Thewlis, R.E., Reynolds, J.S., Panday, K., Cao, G., Szalajda, J.V.

[Letters to the editor](#)

(2013) Journal of Occupational and Environmental Hygiene, 10 (2), pp. D25.

Yang, G., Yang, J., Qiang, C., Ge, J., Chen, Q.

[Natural frequencies of a cantilever beam and block system with clearance while block staying on given position](#)

(2013) JVC/Journal of Vibration and Control, 19 (2), pp. 262-275.

Lei, Z., Yang, J.

[Layered pentahedral mesh generation for biomechanical geometries with unclosed surfaces](#)

(2013) Computer-Aided Design and Applications, 10 (2), pp. 231-245.

Howard, B., Yang, J., Yang, G.

[Prediction of supporting hand forces for common automotive assembly tasks based on optimization and stability techniques for given posture](#)

(2012) Proceedings of the ASME Design Engineering Technical Conference, 6, pp. 641-650.

Powelson, T., Yang, J.

[Finite element analysis of piezoelectric strips for modifying ankle torques in active prosthetic feet - A pilot study](#)

(2012) Proceedings of the ASME Design Engineering Technical Conference, 4 (PARTS A AND B), pp. 133-141.

George, R., Yang, J.

[Survey for methods of detecting aircraft vortices](#)

(2012) Proceedings of the ASME Design Engineering Technical Conference, 1 (PARTS A AND B), pp. 41-50.

Gragg, J., Yang, J., Yang, G.

[Probabilistic approach for digital human kinematic and dynamic reliabilities](#)

(2012) Proceedings of the ASME Design Engineering Technical Conference, 3 (PARTS A AND B), pp. 641-652.

Zou, Q., Zhang, Q., Yang, J., Cloutier, A., Pena-Pitarch, E.

[Nonlinear inverse optimization approach for determining the weights of objective function in standing reach tasks](#)

(2012) Computers and Industrial Engineering, 63 (4), pp. 791-801.

Cloutier, A., Gragg, J., Yang, J., Alemayehu, F.

[Sensitivity analysis of achieving a reach task within a vehicle considering joint angle variability](#)

(2012) SAE Technical Papers, .

Howard, B., Yang, J.

[A new stability criterion for human seated tasks with given postures](#)

(2012) International Journal of Humanoid Robotics, 9 (3), art. no. 1250015, .

Howard, B., Cloutier, A., Yang, J.

[Physics-based seated posture prediction for pregnant women and validation considering ground and seat pan contacts](#)

(2012) Journal of Biomechanical Engineering, 134 (7), art. no. 071004, .

Howard, B., Yang, J.

[Calculating support reaction forces in physics-based seated posture prediction for pregnant women](#)

(2012) International Journal of Robotics and Automation, 27 (3), pp. 308-321.

Zou, Q., Zhang, Q., Yang, J., Gragg, J.

[An inverse optimization approach for determining weights of joint displacement objective function for upper body kinematic posture prediction](#)

(2012) Robotica, 30 (3), pp. 389-404.

Gragg, J., Yang, J., Howard, B.

[Hybrid method for driver accommodation using optimization-based digital human models](#)

(2012) CAD Computer Aided Design, 44 (1), pp. 29-39.

Lei, Z., Yang, J.

[Methodology for simulating air leakages of an N95 filtering facepiece respirator-A pilot study](#)

(2012) Computer-Aided Design and Applications, 9 (1), pp. 43-53.

Lei, Z., Yang, J., Zhuang, Z.

[Headform and N95 filtering facepiece respirator interaction: Contact pressure simulation and validation](#)

(2012) Journal of Occupational and Environmental Hygiene, 9 (1), pp. 46-58.

Howard, B., Yang, J.

[Formulation of human performance measures for full body pregnant women standing posture prediction](#)

(2011) SAE Technical Papers, .

Howard, B., Yang, J.

[Ground reaction forces for various standing tasks considering generic terrain](#)

(2011) Proceedings of the ASME Design Engineering Technical Conference, 6 (PARTS A AND B), pp. 1211-1219.

Howard, B., Yang, J.

[Optimization-based seated posture prediction considering contact with environment](#)

(2011) Proceedings of the ASME Design Engineering Technical Conference, 2 (PARTS A AND B), pp. 557-566.

Zou, Q., Yang, J.

[Pseudo standing, forward falling, and pulling simulation for pregnant women](#)

(2011) Proceedings of the ASME Design Engineering Technical Conference, 6 (PARTS A AND B), pp. 1221-1231.

Powelson, T., Yang, J.

[Prosthetics for transtibial amputees - A literature survey](#)

(2011) Proceedings of the ASME Design Engineering Technical Conference, 3 (PARTS A AND B), pp. 753-764.

Cloutier, A., Boothby, R., Yang, J.

[Motion capture experiments for validating optimization-based human models](#)

(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6777 LNCS, pp. 59-68.

Gragg, J., Yang, J., Boothby, R.

[Posture reconstruction method for mapping joint angles of motion capture experiments to simulation models](#)

(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6777 LNCS, pp. 69-78.

Lei, Z., Yang, J.

[Contact area determination between a N95 filtering facepiece respirator and a headform](#)

(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6777 LNCS, pp. 119-128.

Long, J., Burns, K., Yang, J.

[Cloth modeling and simulation: A literature survey](#)

(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6777 LNCS, pp. 312-320.

Howard, B., Yang, J.

[Predicting support reaction forces for standing and seated tasks with given postures - A preliminary study](#)

(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6777 LNCS, pp. 89-98.

Ozsoy, B., Yang, J.

[Planar vertical jumping simulation - A pilot study](#)

(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6777 LNCS, pp. 161-170.

Zou, Q., Zhang, Q., Yang, J., Boothby, R., Gragg, J., Cloutier, A.

[An alternative formulation for determining weights of joint displacement objective function in seated posture prediction](#)

(2011) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 6777 LNCS, pp. 231-242.

Howard, B., Yang, J.

Formulation of human performance measures for full body pregnant women standing posture prediction
(2011) SAE 2011 World Congress and Exhibition, .

Dai, J., Yang, J., Zhuang, Z.

Sensitivity analysis of important parameters affecting contact pressure between a respirator and a headform
(2011) International Journal of Industrial Ergonomics, 41 (3), pp. 268-279.

Gragg, J., Yang, J.

Effect of Obesity on Seated Posture Inside a Vehicle Based on Digital Human Models
(2011) SAE International Journal of Materials and Manufacturing, 4 (1), pp. 516-526.

Yang, J., Marler, T., Rahmatalla, S.

Multi-objective optimization-based method for kinematic posture prediction: Development and validation
(2011) Robotica, 29 (2), pp. 245-253.

Mi, Z., Yang, J., Kim, J.H., Abdel-Malek, K.

Determining the initial configuration of uninterrupted redundant manipulator trajectories in a manufacturing environment

(2011) Robotics and Computer-Integrated Manufacturing, 27 (1), pp. 22-32.

Gragg, J., Yang, J., Long, J.D.

Optimisation-based approach for determining driver seat adjustment range for vehicles
(2011) International Journal of Vehicle Design, 57 (2-3), pp. 148-161.

Yang, J., Zou, Q.

Prediction of on-stride walking for pregnant women

(2010) ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 2, pp. 555-563.

Gragg, J., Yang, J., Long, J.D.

Digital human model for driver seat adjustment range determination

(2010) SAE Technical Papers, .

Kim, J.H., Abdel-Malek, K., Xiang, Y., Yang, J., Arora, J.S.

Motion planning under external constraints for redundant dynamic systems

(2010) ASME 2010 Dynamic Systems and Control Conference, DSAC2010, 2, pp. 263-270.

Kim, J.H., Abdel-Malek, K., Xiang, Y., Yang, J., Arora, J.S.

[Dynamic motion generation for redundant systems under external constraints](#)

(2010) Proceedings of the ASME Design Engineering Technical Conference, 2 (PARTS A AND B), pp. 1539-1546.

Lei, Z., Yang, J., Zhuang, Z.

[Contact pressure study of N95 filtering face-piece respirators using finite element method](#)

(2010) Computer-Aided Design and Applications, 7 (6), pp. 847-861.

Yang, J., Kim, J.H.

[Static joint torque determination of a human model for standing and seating tasks considering balance](#)

(2010) Journal of Mechanisms and Robotics, 2 (3), .

Kim, J.H., Xiang, Y., Yang, J., Abdel-Malek, K., Arora, J.S.

[Optimal throwing motion planning for a biped human mechanism](#)

(2010) Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference 2009, DETC2009, 7 (PART B), pp. 929-936.

Yang, J., Kim, J., Xiang, Y.

[Determining the static joint torques of a digital human model considering balance](#)

(2010) Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference 2009, DETC2009, 7 (PART A), pp. 399-409.

Kim, J.H., Xiang, Y., Yang, J., Arora, J.S., Abdel-Malek, K.

[Dynamic motion planning of overarm throw for a biped human multibody system](#)

(2010) Multibody System Dynamics, 24 (1), pp. 1-24.

Tian, Q., Zhang, Y., Chen, L., Yang, J.

[Simulation of planar flexible multibody systems with clearance and lubricated revolute joints](#)

(2010) Nonlinear Dynamics, 60 (4), pp. 489-511.

Yang, J., Dai, J.

[Simulation-based assessment of rear effect to ballistic helmet impact](#)

(2010) Computer-Aided Design and Applications, 7 (1), pp. 59-73.

Xiang, Y., Chung, H.-J., Kim, J.H., Bhatt, R., Rahmatalla, S., Yang, J., Marler, T., Arora, J.S., Abdel-Malek, K.

[Predictive dynamics: An optimization-based novel approach for human motion simulation](#)

(2010) Structural and Multidisciplinary Optimization, 41 (3), pp. 465-479.

Zhao, Y.-S., Liu, Z.-F., Cai, L.-G., Yang, W.-T., Yang, J., Luo, Z.

[Study of control for the automated clutch of an automated manual transmission vehicle based on rapid control prototyping](#)

(2010) Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 224 (4), pp. 475-487.

Yang, J., Dai, J., Zhuang, Z.

[Simulating the interaction between a respirator and a headform using LS-DYNA](#)

(2009) Computer-Aided Design and Applications, 6 (4), pp. 539-551.

Yang, J., Xiang, Y., Kim, J.

[Determining the static joint torques of a digital human model considering balance](#)

(2009) Proceedings of the ASME Design Engineering Technical Conference, 7 (PARTS A AND B), pp. 399-409.

Liu, Q., Marler, T., Yang, J.J., Kim, J.H.

[Posture prediction with external loads - a pilot study](#)

(2009) SAE International Journal of Passenger Cars - Mechanical Systems, 2 (1), pp. 1014-1023.

Kim, J.H., Xiang, Y., Yang, J., Abdel-Malek, K., Arora, J.S.

[Optimal throwing motion planning for a biped human mechanism](#)

(2009) Proceedings of the ASME Design Engineering Technical Conference, 7 (PARTS A AND B), pp. 929-936.

Zhang, Y., Tang, C., Chen, W., Chen, L., Yang, J.

[Robust optimal design for enhancing vehicle handling performance](#)

(2009) SAE International Journal of Passenger Cars - Electronic and Electrical Systems, 1 (1), pp. 536-544.

Tian, Q., Zhang, Y.-Q., Chen, L.-P., Yang, J.

[Two-link flexible manipulator modelling and tip trajectory tracking based on the absolute nodal coordinate method](#)

(2009) International Journal of Robotics and Automation, 24 (2), pp. 103-114.

Dai, J., Yang, J., Zhuang, Z.

[Finite element analysis for the interface of a respirator and the human face -a pilot study](#)

(2009) SAE Technical Papers, .

Kim, J.H., Xiang, Y., Bhatt, R.M., Yang, J., Chung, H.-J., Arora, J.S., Abdel-Malek, K.

[Generating effective whole-body motions of a human-like mechanism with efficient ZMP formulation](#)

(2009) International Journal of Robotics and Automation, 24 (2), pp. 125-136.

Yang, J., Kim, J., Pitarch, E.P., Abdel-Malek, K.

[Optimal trajectory planning for redundant manipulators based on minimum jerk](#)

(2009) 2008 Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, DETC 2008, 2 (PART B), pp. 1141-1150.

Kim, J.H., Xiang, Y., Bhatt, R., Yang, J., Chung, H.-J., Patrick, A., Arora, J.S., Abdel-Malek, K.

[Efficient zmp formulation and effective whole-body motion generation for a human-like mechanism](#)

(2009) 2008 Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, DETC 2008, 2 (PART B), pp. 1073-1084.

Yang, J., Dai, J., Zhuang, Z.

[Human Head Modeling and Personal Head Protective Equipment: A Literature Review](#)

(2009) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 5620 LNCS, pp. 661-670.

Peña-Pitarch, E., Yang, J., Abdel-Malek, K.

[Virtual human hand: Grasping and simulation](#)

(2009) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 5620 LNCS, pp. 140-149.

Yang, J., Feng, X., Kim, J.H., Xiang, Y., Rajulu, S.

[Joint Coupling for Human Shoulder Complex](#)

(2009) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 5620 LNCS, pp. 72-81.

Marler, R.T., Arora, J.S., Yang, J., Kim, H.-J., Abdel-Malek, K.

[Use of multi-objective optimization for digital human posture prediction](#)

(2009) Engineering Optimization, 41 (10), pp. 925-943.

Kim, J.H., Yang, J., Abdel-Malek, K.

[Planning load-effective dynamic motions of highly articulated human model for generic tasks](#)

(2009) Robotica, 27 (5), pp. 739-747.

Yang, J.(J.), Feng, X., Xiang, Y., Kim, J.H., Rajulu, S.

[Determining the three-dimensional relation between the skeletal elements of the human shoulder complex](#)

(2009) Journal of Biomechanics, 42 (11), pp. 1762-1767.

Yang, J.

[Workspace of digital human lower extremities](#)

(2009) International Journal of Humanoid Robotics, 6 (2), pp. 291-306.

Kim, J.H., Yang, J., Abdel-Malek, K.

[Multi-objective optimisation approach for predicting seated posture considering balance](#)

(2009) International Journal of Vehicle Design, 51 (3-4), pp. 278-291.

Abdel-Malek, K., Arora, J., Yang, J., Marler, T., Beck, S., Swan, C., Frey-Law, L., Kim, J., Bhatt, R., Mathai, A., Murphy, C., Rahmatalla, S., Patrick, A., Obusek, J.

[A physics-based digital human model](#)

(2009) International Journal of Vehicle Design, 51 (3-4), pp. 324-340.

Mi, Z., Yang, J., Abdel-Malek, K.

[Optimization-based posture prediction for human upper body](#)

(2009) Robotica, 27 (4), pp. 607-620.

Yang, J., Abdel-Malek, K.

[Human reach envelope and zone differentiation for ergonomic design](#)

(2009) Human Factors and Ergonomics In Manufacturing, 19 (1), pp. 15-34.

Zhang, Y., Tian, Q., Chen, L., Yang, J.

[Simulation of a viscoelastic flexible multibody system using absolute nodal coordinate and fractional derivative methods](#)

(2009) Multibody System Dynamics, 21 (3), pp. 281-303.

Zhang, Y., Tian, Q., Chen, L., Yang, J.

[Simulation of a viscoelastic flexible multibody system using absolute nodal coordinate and fractional derivative methods \(Multibody System Dynamics DOI: 10.1007/s11044-008-9139-x\)](#)

(2009) Multibody System Dynamics, 21 (3), p. 305.

Yang, J.(J.), Yu, W., Kim, J., Abdel-Malek, K.

[On the placement of open-loop robotic manipulators for reachability](#)

(2009) Mechanism and Machine Theory, 44 (4), pp. 671-684.

Tian, Q., Chen, L.P., Zhang, Y.Q., Yang, J.

[An efficient hybrid method for multibody dynamics simulation based on absolute nodal coordinate formulation](#)

(2009) Journal of Computational and Nonlinear Dynamics, 4 (2), pp. 1-14.

Hu, S.-B., Chen, L.-P., Zhang, Y.-Q., Yang, J., Wang, S.-T.

[A crossing sensitivity filter for structural topology optimization with chamfering, rounding, and checkerboard-free patterns](#)

(2009) Structural and Multidisciplinary Optimization, 37 (5), pp. 529-540.

Yang, J.(J.), Verma, U., Marler, T., Beck, S., Rahmatalla, S., Harrison, C.
[Workspace zone differentiation tool for visualization of seated postural comfort](#)
(2009) International Journal of Industrial Ergonomics, 39 (1), pp. 267-276.

Chen, W., Zhang, Y., Liang, Y., Chen, L., Yang, J.
[Multi-objective optimisation of parallel hybrid electric vehicles based on fuzzy logic control](#)
(2008) International Journal of Vehicle Autonomous Systems, 6 (3-4), pp. 236-250.

Yang, J., Kim, J., Pitarch, E.P., Abdel-Malek, K.
[Optimal trajectory planning for redundant manipulators based on minimum jerk](#)
(2008) Proceedings of the ASME Design Engineering Technical Conference, 2 (PARTS A AND B), pp. 1141-1150.

Zhi, L., Zhang, Y., Chen, L., Yang, J.
[Fractional PI \$\lambda\$ D \$\mu\$ control and optimisation for vehicle active suspension](#)
(2008) International Journal of Vehicle Autonomous Systems, 6 (3-4), pp. 276-287.

Kim, J.H., Xiang, Y., Bhatt, R., Yang, J., Chung, H.-J., Patrick, A., Arora, J.S., Abdel-Malek, K.
[Efficient ZMP formulation and effective whole-body motion generation for a human-like mechanism](#)
(2008) Proceedings of the ASME Design Engineering Technical Conference, 2 (PARTS A AND B), pp. 1073-1084.

Kim, J.H., Xiang, Y., Bhatt, R., Yang, J., Arora, J.S., Abdel-Malek, K.
[Throwing motion generation of a biped human model](#)
(2008) Proceedings of the 2nd Biennial IEEE/RAS-EMBS International Conference on Biomedical Robotics and Biomechatronics, BioRob 2008, art. no. 4762900, pp. 587-592.

Zhang, Y., Gao, S., Li, L., Chen, L., Yang, J., Abdel-Malek, K.
[A fuzzy synthesis control scheme and optimization for vehicle dynamic stability system](#)
(2008) 2007 Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, DETC2007, 5 PART C, pp. 1959-1965.