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Selected Scholarly Contributions [Data Provided by Scopus]

Coppola, G., Zhang, D., Liu, K.  
A 6-DOF reconfigurable hybrid parallel manipulator  

Chi, Z., Zhang, D., Xia, L., Gao, Z.  
Multi-objective optimization of stiffness and workspace for a parallel kinematic machine  

Zhang, D., Su, X., Gao, Z., Qian, J.  
Design, analysis and fabrication of a novel three degrees of freedom parallel robotic manipulator with decoupled motions  

Coppola, G., Zhang, D., Liu, K., Gao, Z.  
Design of parallel mechanisms for flexible manufacturing with reconfigurable dynamics  

Zhang, D., Wang, L., Gao, Z., Su, X.  
On performance enhancement of parallel kinematic machine  

Zhang, D., Gao, Z., Malosio, M., Coppola, G.  
Analysis of the novel flexure parallel micromanipulators based on multi-level displacement amplifier with/without symmetrical design  

Coppola, G., Zhang, D., Liu, K., Gao, Z.  
Dynamic performance with control of a 2DOF parallel robot  

Liang, Q., Zhang, D., Wang, Y., Ge, Y.  
Design and analysis of a miniature 4-dimensional force/torque sensor  
Chi, Z., Zhang, D.
Multi-objective optimization of stiffness and workspace for a parallel kinematic machine

Hodgins, J., Zhang, D.
Improvement, optimization, and prototyping of a three translational degree of freedom parallel robot

Zhang, D., Gao, Z.
Multi-objective performance optimization of a parallel robotic machine tool

Zhang, D., Gao, Z.
Forward kinematics, performance analysis, and multi-objective optimization of a bio-inspired parallel manipulator

Zhang, D., Gao, Z.
Optimal kinematic calibration of parallel manipulators with pseudoerror theory and cooperative coevolutionary network

Yang, Y., Boots, K., Zhang, D.
A sustainable ethanol distillation system

Gao, Z., Zhang, D.
Flexure Parallel Mechanism: Configuration and Performance Improvement of a Compact Acceleration Sensor

Chi, Z., Zhang, D.
Stiffness optimization of a novel reconfigurable parallel kinematic manipulator

Zhang, S., Ding, Y., Hao, K., Zhang, D.
An efficient two-step solution for vision-based pose determination of a parallel manipulator
Liang, Q., Zhang, D., Wang, Y., Ge, Y.  
Development of a touch probe based on five-dimensional force/torque transducer for coordinate measuring machine (CMM)  

Zhang, D., Gao, Z., Su, X., Li, J.  
A comparison study of three degree-of-freedom parallel robotic machine tools with/without actuation redundancy  

Coppola, G., Zhang, D.  
Optimal trajectory tracking control with a 5R parallel robot  

Pan, M., Zhang, D.  
Analysis of a novel design of a three-degree of freedom hip exoskeleton based on biomimetic parallel structure  

Chi, Z., Pan, M., Zhang, D.  
Design of a three DOFs MEMS-based precision manipulator  

Zhang, D., Gao, Z.  
Simulation driven design of a novel compliant parallel mechanism for medical micromanipulation  

Zhang, D., Shi, Q.  
Novel design and analysis of a reconfigurable parallel manipulator using variable geometry approach  

Zhang, D., Zhang, F.  
Design and analysis of a 3-DOF spherical parallel manipulator - CORRECTED VERSION  
Zhang, D., Yang, Y., Pan, M., Gao, Z.
Toward a heat recovery Chimney
(2011) Sustainability, 3 (11), pp. 2115-2128.

Hodgins, J., Zhang, D.
Design and fabrication of an auto-reconfiguring modular micro mobile robot

Zhang, D., Zhang, F.
Design and analysis of a totally decoupled 3-DOF spherical parallel manipulator

Zhang, J., Yu, H., Gao, F., Zhang, D., Zhao, X., Ma, C.
A 6-DOF heavy-load parallel manipulator with RFTA and its application

Gao, Z., Zhang, D.
Workspace representation and optimization of a novel parallel mechanism with three-dimensions-of-freedom
(2011) Sustainability, 3 (11), pp. 2217-2228.

Zhang, D., Gao, F., Hu, X., Gao, Z.
Static balancing and dynamic modeling of a three-degree-of-freedom parallel kinematic manipulator

Zhang, D., Zhang, F.
Erratum: Design and analysis of a totally decoupled 3-DOF spherical parallel manipulator (Robotica (2010) DOI: 10.1017/S0263574710000652)

Pan, M., Zhang, D., Chi, Z.
Novel design of a three DOFs MEMS-based precision manipulator
Zhang, F., Zhang, D.
Structural synthesis of decoupled spherical parallel mechanism based on driven-chain principle

Zhang, D., Li, J., Gao, Z., Gao, F.
Novel design and analysis of a 3-DOF parallel kinematic manipulator with actuator redundancy

Zhang, F., Zhang, D., Yang, J.
Kinematics analysis of RRR-UPRR-RPUR spherical parallel manipulator

Pan, M., Zhang, D., Gao, Z.
Novel design of a three degrees of freedom hip exoskeleton based on biomimetic parallel structure

Zhang, D., Fassi, I., Jiang, P.
Performance optimization for a 3-DOF micro-motion device

Zhang, D., Gao, Z., Jiang, P.
A novel calibration method of parallel kinematic manipulators based on multi-population coevolutionary neural network

Zhang, D., Gao, Z.
Hybrid head mechanism of the groundhog-like mine rescue robot

Zhang, D., Gao, Z., Fassi, I.
Design optimization of a spatial hybrid mechanism for micromanipulation
Liang, Q., Zhang, D., Ge, Y., Huang, X., Li, Z.
**Miniature robust five-dimensional fingertip force/torque sensor with high performance**

Zhang, D., Lei, J.
**Kinematic analysis of a novel 3-DOF actuation redundant parallel manipulator using artificial intelligence approach**

Liang, Q., Zhang, D., Chi, Z., Song, Q., Ge, Y., Ge, Y.
**Six-DOF micro-manipulator based on compliant parallel mechanism with integrated force sensor**

Wang, Y., Tong, M.M., Zhang, D., Gao, Z.
**Improving the performance of catalytic combustion type methane gas sensors using nanostructure elements doped with rare earth cocatalysts**

Zhang, D., Gao, Z., Qian, J.
**Portable multi-axis CNC: A 3-CRU decoupled parallel robotic manipulator**

Liang, Q., Zhang, D., Chi, Z., Ge, Y.
**Fingertip force/torque sensor with high isotropy and sensitivity for underwater manipulation**

Liang, Q., Zhang, D., Song, Q., Ge, Y., Cao, H., Ge, Yu.
**Design and fabrication of a six-dimensional wrist force/torque sensor based on E-type membranes compared to cross beams**

Chi, Z., Zhang, D., Liang, Q.
**Motion plan of a parallel kinematic machine based on stiffness control**
Zhang, D., Li, B., Yang, J., Song, Z.
Remote control of reconfigurable robotic system based on server client architecture

Gao, Z., Zhang, D.
Performance mapping and motion simulation of a 4UPS+PU redundantly actuated parallel manipulator

Yang, Y., Zhang, D.
Mathematical modeling of water-gas interfacial motions in a straight flow channel of PEMFCs

Liang, Q., Zhang, D., Song, Q., Ge, Y.
Micromanipulator with integrated force sensor based on compliant parallel mechanism

Liang, Q., Zhang, D., Song, Q., Ge, Y.
Design and evaluation of a novel flexible bio-robotic foot/ankle based on parallel kinematic mechanism

Zhang, D., Lei, J., Shi, Q., Song, Z.
A reconfigurable four degrees of freedom modular serial robot system: Design and analysis

Gao, Z., Zhang, D.
A multidimensional acceleration sensor based on 3rrprr decoupling parallel mechanism: Analysis and experiments

Liang, Q., Zhang, D., Chi, Z., Song, Q., Ge, Y.
A novel thin six-dimensional wrist force/moment sensor for underwater manipulators
Zhang, D., Shi, Q., Lei, J.
Solving the forward kinematics problem of a parallel kinematic machine using the neural network method

Liang, Q.-K., Song, Q.-J., Zhang, D., Ge, Y.-J., Zhang, G.-B., Cao, H.-B., Ge, Y.
Design of a novel six-dimensional force/torque sensor and its calibration based on NN

Zhang, D., Wang, L., Gao, Z.
An integrated approach for remote manipulation of a high-performance reconfigurable parallel kinematic machine

Gao, Z., Zhang, D.
Design, analysis and fabrication of a multidimensional acceleration sensor based on fully decoupled compliant parallel mechanism

Zhang, D., Reddy, B.
Guest editorial

Liang, Q., Zhang, D., Song, Q., Ge, Y.
Design of a compliant XY stage with embedded force sensor for micro-scale positioning

Zhang, D., Shi, Q., Tao, Y.
Novel design of polysilicon microphone with corrugated diaphragm

Zhang, D., Li, B., Yang, J., Gao, Z.
Conceptual design and kinematic analysis of a compliant parallel mechanism for micro/nano scale manipulation
Zhang, D., Zhang, F.
**Novel design and analysis of a fully decoupled 3-DOF spherical parallel robot**

Zhu, D., Li, B., Pang, J., Yang, J., Zhang, D.
**Temperature measurement in high speed cylindrical-plunge grinding using thermocouple**

Liang, Q., Zhang, D., Song, Q., Ge, Y.
**A potential 4-D fingertip force sensor for an underwater robot manipulator**

Zhang, D., Gaob, Z., Lic, B.
**Optimal design of a 3-DOF parallel micromanipulator**

Gao, Z., Zhang, D., Hu, X., Ge, Y.
**Design, analysis, and stiffness optimization of a three degree of freedom parallel manipulator**

Gao, Z., Zhang, D., Ge, Y.
**Design optimization of a spatial six degree-of-freedom parallel manipulator based on artificial intelligence approaches**

Zhang, D., Gao, Z., Li, B.
**Optimal design of a 3-DOF parallel micromanipulator**

Zhang, D.
**Global stiffness modeling and optimization of a 5-DOF parallel mechanism**
Zhang, D., Gao, Z., Song, B., Ge, Y.
Configuration design and performance analysis of a multidimensional acceleration sensor based on 3RRPRR decoupling parallel mechanism

Zhang, D., Gao, Z.
Optimization design of a spatial six-degree-of-freedom parallel manipulator based on genetic algorithms and neural networks

Zhang, D., Gao, Z., Hu, X., Parise, J.
Novel design of a 3-DOF parallel manipulator for materials handling

Zhang, D., Reed, M., Li, B., Gao, Z., Ge, Y.
Design optimization of a geneva mechanism for internal combustion engine application

Zhang, D., Lei, J., Li, B., Lau, D., Cameron, C.
Design and analysis of a piano playing robot

Zhang, D., Bi, Z., Li, B.
Design and kinetostatic analysis of a new parallel manipulator

Zhang, D., Gao, Z.
Optimization design of a spatial six-degree-of-freedom parallel manipulator based on genetic algorithms and neural networks

Zhang, D., Gao, Z., Hu, X.L., Parise, J.
Novel design of a 3-DOF parallel manipulator for materials handling
Zhang, D., Patel, S., Gao, Z., Ge, Y.
**Stiffness control for a 3-dof parallel robot based machine tools**

Zhang, D., Viegas, K., Gao, Z., Ge, Y.
**Modeling and analysis of an enhanced compliant parallel mechanism for high accuracy micro motion**

Zhang, F., Yang, J., Li, B., Zhang, D.
**Full-isotropic spherical three-DOF parallel mechanism**

Zhang, D., Bi, Z., Ge, Y.
**Theoretical design and control analysis of reconfigurable parallel kinematic machine tools**

Zhang, D., Wang, L., Bi, Z.
**Kinematic, dynamic modeling and remote control of a robotic machine**

Staicu, S., Zhang, D.
**Dynamic modelling of a 4-DOF parallel kinematic machine with revolute actuators**