

Dr Ketao Zhang
BSc, PhD, FHEA

School of Engineering and Materials Science
Queen Mary University of London
Mile End Road
London E1 4NS

tel: +44 (0)20 7882 5183
email: ketao.zhang@qmul.ac.uk web: www.sems.qmul.ac.uk/ketao.zhang

2021

A Suite of Robotic Solutions for Nuclear Waste Decommissioning.

Vitanov I, Farkhatdinov I, Denoun B, Palermo F, Otaran A, Brown J, Omarali B, Abrar T, Hansard M, Oh C, Poslad S, Liu C, Godaba H, Zhang K, Jamone L and Althoefer K. *Robotics vol. 10, (4) 112-112.*

3D printable and fringe electric field adhesion enabled variable stiffness artificial muscles for semi-active vibration attenuation.

Liu C, Li B, Li Z, Cao C, Gao X, Zhang K and Chen H. *Soft Matter. Royal Society of Chemistry.*

Design and Analysis of a Novel Reconfigurable Parallel Manipulator with Kirigami-inspired Bennett Plano-Spherical Linkages and Angular Pouch Motors.

Zhang K and Liu C. *Journal of Mechanisms and Robotics 1-23.*

2020

Kinematic Modeling and Optimization of a New Reconfigurable Parallel Mechanism.

Wei Y, Chai X and Zhang K. *Mechanism and Machine Theory. Elsevier.*

Stiffness Performance Evaluation of 2UPR-RPU Over-constrained Parallel Mechanism.

Yang C, Ye W, Zhang K, Huang F and Zhang W. *Nongye Jixie Xuebao/Transactions of The Chinese Society of Agricultural Machinery vol. 51, (2) 392-401. Chinese Society of Agricultural Machinery.*

2019

An Integrated Delta Manipulator for Aerial Repair: A New Aerial Robotic System.

Chernprayong P, ZHANG K, Xiao F and Kovac M. *Ieee Robotics and Automation Magazine. Institute of Electrical and Electronics Engineers.*

Kinematics and Performance Analysis of 2R2T Parallel Manipulator with Partially Decoupled Motion.

Ye W, Li Q and Zhang K. *Nongye Jixie Xuebao/Transactions of The Chinese Society For Agricultural Machinery vol. 50, (1) 374-382.*

Preface.

Althoefer K, Konstantinova J and Zhang K.

2018

Bioinspired design of a landing system with soft shock absorbers for autonomous aerial robots.

Zhang K, Chernprayong P, Tzoumanikas D, Li W, Grimm M, Smentoch M, Leutenegger S and Kovac M. *Journal of Field Robotics.*

Fully autonomous micro air vehicle flight and landing on a moving target using visual-inertial estimation and model-predictive control.

Tzoumanikas D, Li W, Grimm M, Zhang K, Kovac M and Leutenegger S. *Journal of Field Robotics.*

Configuration analysis of a reconfigurable Rubik's snake robot.

Liu J, Zhang X, ZHANG K, Dai JS, Li S and Sun Q. *Proceedings of The Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*.

Novel spherical-planar and Bennett-spherical 6R metamorphic linkages with reconfigurable motion branches.

Ma X, Zhang K and Dai JS. *Mechanism and Machine Theory* vol. 128, 628-647.

2017

Remote three-dimensional printing of polymer structures using drones.

Dams B, Sareh S, Zhang K, Shepherd P, Kovac M and Ball RJ. *Proceedings of The Institution of Civil Engineers - Construction Materials* 1-31.

2016

Mobility variation of a family of metamorphic parallel mechanisms with reconfigurable hybrid limbs.

Ye W, Fang Y, Zhang K and Guo S. *Robotics and Computer-Integrated Manufacturing* vol. 41, 145-162.

Geometric constraints and motion branch variations for reconfiguration of single-loop linkages with mobility one.

Zhang K and Dai JS. *Mechanism and Machine Theory* vol. 106, 16-29.

A Novel 4-DOF Origami Grasper With an SMA-Actuation System for Minimally Invasive Surgery.

Salerno M, Zhang K, Menciassi A and Dai JS. *Ieee Transactions On Robotics* vol. 32, (3) 484-498.

Repelling-screw based force analysis of origami mechanisms.

Qiu C, Zhang K and Dai JS. *Journal of Mechanisms and Robotics* vol. 8, (3).

An extensible continuum robot with integrated origami parallel modules.

Zhang K, Qiu C and Dai JS. *Journal of Mechanisms and Robotics* vol. 8, (3).

A novel reconfigurable 7R linkage with Multifurcation.

Zhang K, Müller A and Dai JS. *Mechanisms and Machine Science*.

Analysis of the motion mode change of a metamorphic 8R linkage.

Müller A, Zhang K and Dai JS.

2015

Guest editorial on reconfigurable and deployable mechanisms.

Liu J, Ding X, Jin Y, Zhang K and Hao G. *Advances in Mechanical Engineering* vol. 7, (8).

Screw-system-variation enabled reconfiguration of the bennett plano-spherical hybrid linkage and its evolved parallel mechanism.

Zhang K and Dai JS. *Journal of Mechanical Design, Transactions of The Asme* vol. 137, (6).

Helical kirigami-enabled centimeter-scale worm robot with shape-memory-alloy linear actuators.

Zhang K, Qiu C and Dai JS. *Journal of Mechanisms and Robotics* vol. 7, (2).

2014

Trifurcation of the Evolved Sarrus-Motion Linkage Based on Parametric Constraints.

Zhang K and Dai JS. *Advances in Robot Kinematics*.

A new family of reconfigurable parallel mechanisms with diamond kinematotropic chain.

Ye W, Fang Y, Zhang K and Guo S. *Mechanism and Machine Theory* vol. 74, 1-9.

A kirigami-inspired 8R linkage and its evolved overconstrained 6R linkages with the rotational symmetry of order two.

Zhang K and Dai JS. *Journal of Mechanisms and Robotics* vol. 6, (2).

2013

Kinematics and workspace analysis of a novel 3-DOF parallel manipulator with virtual symmetric plane.

Fang H, Fang Y and Zhang K. *Proceedings of The Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science* vol. 227, (3) 620-629.

Modelling and analysis of a rigid-compliant parallel mechanism.

Qin Y, Zhang K, Li J and Dai JS. *Robotics and Computer-Integrated Manufacturing* vol. 29, (4) 33-40.

Geometric constraint and mobility variation of Two 3SvPS v metamorphic parallel mechanisms.

Zhang K, Dai JS and Fang Y. *Journal of Mechanical Design, Transactions of The Asme* vol. 135, (1).

2012

Reciprocal screw theory based singularity analysis of a novel 3-DOF parallel manipulator.

Fang H, Fang Y and Zhang K. *Chinese Journal of Mechanical Engineering (English Edition)* vol. 25, (4) 647-653.

Kinematics of an overconstrained 6R linkage with 2-fold rotational symmetry.

Zhang K and Dai JS. *Latest Advances in Robot Kinematics*.

2010

Topology and constraint analysis of phase change in the metamorphic chain and its evolved mechanism.

Zhang K, Dai JS and Fang Y. *Journal of Mechanical Design, Transactions of The Asme* vol. 132, (12).

Geometry and constraint analysis of the three-spherical kinematic chain based parallel mechanism.

Zhang K, Fang Y, Fang H and Dai JS. *Journal of Mechanisms and Robotics* vol. 2, (3).

Overview and prospects of metamorphic mechanism.

Li D, Zhang Z, Dai J and Zhang K. *Jixie Gongcheng Xuebao/Journal of Mechanical Engineering* vol. 46, (13) 14-21.

2009

Design and analyses of a novel 3-DOF parallel mechanism.

Zhang K, Fang Y and Guo S. *Jixie Gongcheng Xuebao/Journal of Mechanical Engineering* vol. 45, (1) 68-72.

2007

Design and analysis of a rover mechanism based on the metamorphic principle.

Zhang K, Fang Y and Fang H. *Beijing Hangkong Hangtian Daxue Xuebao/Journal of Beijing University of Aeronautics and Astronautics* vol. 33, (7) 838-841.