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Selected Scholarly Contributions [Data Provided by **Scopus**]

Lu, H.L., He, K., Li, J.H., Wei, S.G., Du, R.X.

[The design of a five-axis machine for water jet incremental sheet metal forming](#)

(2013) Applied Mechanics and Materials, 395-396, pp. 949-956.

Li, H., Li, J.H., He, K., Du, R.X.

[System and design of five-axis water jet incremental sheet metal forming machine tool](#)

(2013) Applied Mechanics and Materials, 365-366, pp. 926-931.

Mao, H., He, K., Luo, C.J., Du, R.X.

[Axial compression and energy absorption characteristics of reduction tubes using a die under impact load](#)

(2013) Advanced Materials Research, 712-715, pp. 1519-1526.

Yang, W., Yu, S., Sun, R., Du, R.

[A compact low-pass filter based on the Fe₃O₄@SiO₂-CCTO-epoxy composite film](#)

(2013) Integrated Ferroelectrics, 142 (1), pp. 61-72.

Li, Z., Du, R., Zhang, Y., Li, H.

[Robot fish with novel wire-driven continuum flapping propulsor](#)

(2013) Applied Mechanics and Materials, 300-301, pp. 510-514.

Xie, L., Du, R.

[On spiral spring in elastic deformation](#)

(2013) Applied Mechanics and Materials, 268 (PART 1), pp. 1105-1108.

Liao, B., Li, Z., Du, R.

[Robot tadpole with a novel biomimetic wire-driven propulsor](#)

(2012) 2012 IEEE International Conference on Robotics and Biomimetics, ROBIO 2012 - Conference Digest, art. no. 6491025, pp. 557-562.

Li, Z., Du, R.

[Design and analysis of a biomimetic wire-driven flapping propeller](#)

(2012) Proceedings of the IEEE RAS and EMBS International Conference on Biomedical Robotics and Biomechatronics, art. no. 6290774, pp. 276-281.

Mao, H., Luo, C., He, K., Du, R.

[Numerical and experimental investigations on the expansion tube energy absorber](#)

(2012) Applied Mechanics and Materials, 190-191, pp. 115-120.

Xie, L., Du, R.

[Harvesting human biomechanical energy to power portable electronics](#)

(2012) Advanced Materials Research, 516-517, pp. 1779-1784.

Zhang, D., Kong, T.C., Du, R.

[A class of second-order sliding mode controller for servo systems](#)

(2012) Journal of Control Theory and Applications, 10 (2), pp. 268-272.

Luo, Y., Du, R.

[An investigation on the impact noise of a six-bar linkage mechanical press](#)

(2012) Procedia Engineering, 29, pp. 1486-1491.

Xie, L., Du, R.

[Mechanics of hairspring in mechanical watch movement](#)

(2012) Applied Mechanics and Materials, 117-119, pp. 252-255.

Luo, Q., He, K., Mao, H., Li, J., Li, Q., Du, R.

[Numerical simulation of high velocity waterjet characteristics and impact pressure](#)

(2012) Applied Mechanics and Materials, 109, pp. 551-556.

Chen, S.-Q., Chen, J., Du, R.

[Fabrication of water treatment membrane using templating method - A critical review](#)

(2012) Advanced Materials Research, 343-344, pp. 130-141.

Zeng, X., Yu, S., Sun, R., Du, R.

[Microstructure, thermal and dielectric properties of homogeneous bismaleimide-triazine/barium titanate nanocomposite films](#)

(2011) Materials Chemistry and Physics, 131 (1-2), pp. 387-392.

Luo, Y., He, K., Du, R.

[Investigations on the formability of incremental punching process](#)

(2011) Journal of Advanced Mechanical Design, Systems and Manufacturing, 5 (4), pp. 227-239.

Li, Z., Du, R., Lei, M.C., Yuan, S.M.

[Design and analysis of a biomimetic wire-driven robot arm](#)

(2011) ASME 2011 International Mechanical Engineering Congress and Exposition, IMECE 2011, 7 (PARTS A AND B), pp. 191-198.

Yang, W., Yu, S., Sun, R., Ke, S., Huang, H., Du, R.

[Electrical modulus analysis on the Ni/CCTO/PVDF system near the percolation threshold](#)

(2011) Journal of Physics D: Applied Physics, 44 (47), art. no. 475305, .

Zeng, X., Yu, S., Sun, R., Du, R.

[High thermal conductive BT resin/silicon nitride composites](#)

(2011) ICEPT-HDP 2011 Proceedings - 2011 International Conference on Electronic Packaging Technology and High Density Packaging, art. no. 6066849, pp. 346-348.

Yang, W., Yu, S., Sun, R., Du, R.

[Magnetic-dielectric property of FeAlSi-CCTO-Epoxy composite for antennas miniaturization and embedded inductor-capacitor application](#)

(2011) ICEPT-HDP 2011 Proceedings - 2011 International Conference on Electronic Packaging Technology and High Density Packaging, art. no. 6066857, pp. 379-382.

Ou, X., He, K., Liu, P., Du, R.

[Float state and static stability analysis of the biomimetic robotic dolphin designed on the change of the barycenter](#)

(2011) 2011 2nd International Conference on Mechanic Automation and Control Engineering, MACE 2011 - Proceedings, art. no. 5987902, pp. 4092-4095.

Zhao, Z., He, K., Du, R.

[The simulation of SCARA robot based on OpenGL and STL](#)

(2011) 2011 2nd International Conference on Mechanic Automation and Control Engineering, MACE 2011 - Proceedings, art. no. 5988251, pp. 5429-5432.

Xun, D., Luo, C., He, K., Du, R.

[Design and analysis of 7-DOF fiber placement machine](#)

(2011) Advanced Materials Research, 339 (1), pp. 271-275.

Li, G., Zhu, G., Luo, C., He, K., Du, R.

[Design of gold bead chain machine based on modern design methodology](#)

(2011) Advanced Materials Research, 337, pp. 16-22.

Wang, D., He, K., Du, R.

[Constraint design of a leveling mechanism via a screw theory approach for constraint pattern analysis](#)

(2011) Jixie Gongcheng Xuebao/Journal of Mechanical Engineering, 47 (19), pp. 49-58.

Li, Q., He, K., Du, R.

[Fatigue analysis of pure waterjet nozzle-a CFD and FEA approach](#)

(2011) Advanced Materials Research, 328-330, pp. 1359-1364.

Xie, L., Du, R.

[Design and analysis of a mechanical device to harvest energy from human footstep motion](#)

(2011) Chinese Journal of Mechanical Engineering (English Edition), 24 (5), pp. 738-743.

Xu, S.M., Huang, X.D., Du, R.

[An investigation of the solar powered absorption refrigeration system with advanced energy storage technology](#)

(2011) Solar Energy, 85 (9), pp. 1794-1804.

Liu, P., He, K., Ou, X., Du, R.

[Mechanical design, kinematic modeling and simulation of a robotic dolphin](#)

(2011) 2011 IEEE International Conference on Information and Automation, ICIA 2011, art. no. 5949091, pp. 738-743.

Mao, H., He, K., Luo, Q., Du, R.

[Theoretical and experimental analysis on deformation of sheet metal under waterjet impact loading](#)

(2011) 2011 IEEE International Conference on Information and Automation, ICIA 2011, art. no. 5949005, pp. 295-300.

Tang, X., Luo, C., He, K., Du, R.

[Digital design of low-cost 3-DOF prosthetic hand](#)

(2011) 2011 IEEE International Conference on Information and Automation, ICIA 2011, art. no. 5949007, pp. 309-314.

Xie, X., Zhao, C., Du, R., Yu, X., Zhang, Y.

[Virtual reality based auxiliary robot system for liver](#)

(2011) Advanced Materials Research, 291-294, pp. 2682-2685.

Wang, D.-Z., He, K., Du, R.-X.

[Design of exact constraint micro-motion angle displacement mechanism with two degrees of freedom](#)

(2011) Guangxue Jingmi Gongcheng/Optics and Precision Engineering, 19 (8), pp. 1874-1882.

Yang, W., Yu, S., Sun, R., Du, R.

[Nano- and microsize effect of CCTO fillers on the dielectric behavior of CCTO/PVDF composites](#)

(2011) Acta Materialia, 59 (14), pp. 5593-5602.

Xu, G., Ko, P.H., Du, R.

[A study on the precision of mechanical watch movement with Tourbillon](#)

(2011) Journal of Sound and Vibration, 330 (16), pp. 4019-4028.

Xie, X., Ma, C., Sun, Q., Luo, C., Du, R.

[Energy wave transmission and control analysis in force reflection Teleoperation based on interconnected power line](#)

(2011) Applied Mechanics and Materials, 58-60, pp. 1306-1310.

Xie, X., Sun, Q., Yu, X., Du, R.

[Research on coordinated simulation of medical robot arm based on Simulink and RecurDyn](#)

(2011) Applied Mechanics and Materials, 58-60, pp. 1300-1305.

Xie, X., Ma, C., Yu, X., Du, R.

[Liver image segmentation using improved watershed method](#)

(2011) Applied Mechanics and Materials, 58-60, pp. 1311-1316.

Di, S., Lin, H., Du, R.

[Erratum: Two-dimensional \(2D\) displacement measurement of moving objects using a new MEMS binocular vision system \(Journal of Modern Optics \(2011\) 58:8 \(694-699\)\)](#)
(2011) Journal of Modern Optics, 58 (10), p. 903.

Di, S., Lin, H., Du, R.

[Two-dimensional \(2D\) displacement measurement of moving objects using a new MEMS binocular vision system](#)
(2011) Journal of Modern Optics, 58 (8), pp. 694-699.

Wu, X.-L., Sun, R., Zhu, P.-L., Du, R.-X.

[Near infrared spectrum analysis of organic/inorganic composite microcapsule phase change materials](#)
(2011) Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 27 (5), pp. 1039-1044.

Xiao, P., Li, W.J., Du, R.

[Microbubble generation using carbon nanotubes heating elements](#)
(2011) IEEE Transactions on Nanotechnology, 10 (3), art. no. 5464279, pp. 520-527.

Xie, X.H., Sun, Q., Zhao, C.C., Ma, C., Du, R.X.

[Mechatronic cooperative design and simulation of a multi-axis bar tacking machine](#)
(2011) Advanced Materials Research, 201-203, pp. 2291-2294.

Kai, H., Li, J.H., Luo, Q., Mao, H., Du, R.X.

[A study on dieless incremental sheet metal forming using water jet technology](#)
(2011) Advanced Materials Research, 189-193, pp. 795-800.

Wu, X., Wang, Y., Zhu, P., Sun, R., Yu, S., Du, R.

[Using UV-vis spectrum to investigate the phase transition process of PMMA-SiO₂@paraffin microcapsules with copper-chelating as the ion probe](#)
(2011) Materials Letters, 65 (4), pp. 705-707.

Zhang, P., Du, R.

[Using multicell Kelvin structure for pressure vessel](#)
(2011) Journal of Pressure Vessel Technology, Transactions of the ASME, 133 (1), art. no. 015001, .

Wu, Z., Du, R.

[Design and experimental study of a miniature vapor compression refrigeration system for electronics cooling](#)
(2011) Applied Thermal Engineering, 31 (2-3), pp. 385-390.

Chen, Y.P., Du, R.

[New method for finding initial guess of original blank in inverse finite element of sheet metal forming](#)
(2011) Materials Research Innovations, 15 (SUPPL. 1), pp. S217-S220.

Luo, Y.X., Du, R.X.

[Study on formability of incremental forming based on modified M-K method](#)

(2011) Materials Research Innovations, 15 (SUPPL. 1), pp. S373-S376.

Zhang, L., Lin, H., Du, R.

[A novel sampling method for CCD signal processing](#)

(2010) Proceedings - 2010 3rd International Congress on Image and Signal Processing, CISP 2010, 8, art. no. 5647829, pp. 3985-3987.

Xie, X., Zhang, L., Yang, G., Yu, X., Du, R.

[Virtual interventional treatment planning on liver tumor using VTK and ITK](#)

(2010) Proceedings - 2010 2nd WRI World Congress on Software Engineering, WCSE 2010, 1, art. no. 5718262, pp. 59-62.

Qi, Q., Du, R.

[A vision based micro-assembly system for assembling components in mechanical watch movements](#)

(2010) 2010 International Symposium on Optomechatronic Technologies, ISOT 2010, art. no. 5687332, .

He, K., Li, J., Ou, X., Du, R.

[A new type of servo direct drive turret punch press](#)

(2010) Advanced Materials Research, 139-141, pp. 752-757.

Lei, M.-C., Du, R.

[A study on the bending mechanism of the flexible ureteroscope](#)

(2010) ICCAS 2010 - International Conference on Control, Automation and Systems, art. no. 5669756, pp. 2019-2023.

Cheong Lei, M., Xie, L., Du, R.

[Kinematic analysis of an auto-winding system with the pawl-lever mechanism and its application in energy harvesting](#)

(2010) International Journal of Mechanical Sciences, 52 (12), pp. 1605-1612.

Ma, C., Xie, X., Sun, Q., Du, R.

[Software implementation of bar tacker control system](#)

(2010) Proceedings - 2010 2nd WRI Global Congress on Intelligent Systems, GCIS 2010, 3, art. no. 5709313, pp. 17-20.

Yu, H., Du, R., Guo, Y., Wang, Y., Di, S.

[Fabrication of taper hollow metallic microneedle array for portable drug delivery system](#)

(2010) 2010 IEEE 5th International Conference on Nano/Micro Engineered and Molecular Systems, NEMS 2010, art. no. 5592495, pp. 676-679.

Ko, P.-H., Du, R.

[Adaptive node placement for optimal control on system of multi-degree of freedom](#)

(2010) Proceedings of the SICE Annual Conference, art. no. 5602290, pp. 2399-2404.

He, G., Zhao, T., Sun, R., Yu, S., Du, R.

[Dielectric properties of Ni/Poly\(vinylidene fluoride\) composites at high frequencies](#)

(2010) Proceedings - 2010 11th International Conference on Electronic Packaging Technology and High Density Packaging, ICEPT-HDP 2010, art. no. 5583809, pp. 452-455.

Yang, W., Yu, S., Sun, R., Du, R.

[Dielectric property of nickel/calcium copper titanate/Polyvinylidene Fluoride composite](#)

(2010) Proceedings - 2010 11th International Conference on Electronic Packaging Technology and High Density Packaging, ICEPT-HDP 2010, art. no. 5583799, pp. 460-463.

Luo, Y., He, K., Du, R.

[A new sheet metal forming system based on the incremental punching, part 1: Modeling and simulation](#)

(2010) International Journal of Advanced Manufacturing Technology, 51 (5-8), pp. 481-491.

Luo, Y., He, K., Du, R.

[A new sheet metal forming system based on incremental punching, part 2: Machine building and experiment results](#)

(2010) International Journal of Advanced Manufacturing Technology, 51 (5-8), pp. 493-506.

Xie, L., Du, R.

[Develop a model for harvesting energy from human foot strike](#)

(2010) Computer-Aided Design and Applications, 7 (2), pp. 195-202.

Fan, Y., Yu, S., Sun, R., Li, L., Yin, Y., Wong, K.-W., Du, R.

[Microstructure and electrical properties of Mn-doped barium strontium titanate thin films prepared on copper foils](#)

(2010) Applied Surface Science, 256 (22), pp. 6531-6535.

Zhao, T., Sun, R., Yu, S., Zhang, Z., Zhou, L., Huang, H., Du, R.

[Size-controlled preparation of silver nanoparticles by a modified polyol method](#)

(2010) Colloids and Surfaces A: Physicochemical and Engineering Aspects, 366 (1-3), pp. 197-202.

Qi, D., He, K., Du, R., Zhang, Y.

[Asymptotic solution for coupled heat and mass transfer during the solidification of high water content materials](#)

(2010) Transactions of Tianjin University, 16 (4), pp. 239-243.

Xie, X., Zhang, L., Yu, X., Du, R.

[An interventional treatment plan system design on liver tumor](#)

(2010) IASP 10 - 2010 International Conference on Image Analysis and Signal Processing, art. no. 5476121, pp. 248-253.

Xie, L., Du, R.

[Modeling and simulation of the generator for harvesting human's kinetic energy](#)

(2010) Proceedings of the 2010 International Conference on Mechanical, Industrial, and Manufacturing Technologies, MIMT 2010, pp. 7-12.

Fan, Y., Yu, S., Sun, R., Li, L., Yin, Y., Du, R.

[Microstructure and electrical properties of Ba_{0.7}Sr_{0.3}\(Ti_{1-x}Zr_x\)O₃ thin films prepared on copper foils with sol-gel method](#)

(2010) Thin Solid Films, 518 (14), pp. 3610-3614.

Zhang, P., Du, R.X.

[A new energy harvesting method based on Knudsen compressor](#)

(2010) AIP Conference Proceedings, 1207, pp. 551-556.

Ma, C., Peng, Z.X., Xu, H.K., Du, R.

[On-line monitoring of pharmaceutical production processes by means of near infrared spectrum with hidden Markov model](#)

(2010) Control and Intelligent Systems, 38 (1), pp. 8-15.

Di, S., Du, R.-X.

[Optimal design of single-layer spherical compound eye imaging system](#)

(2010) Guangdian Gongcheng/Opto-Electronic Engineering, 37 (2), pp. 27-31.

Ching, H., Ko, P.-H., Kong, C., Du, R.

[Adaptive node placement for optimal control](#)

(2009) ICCAS-SICE 2009 - ICROS-SICE International Joint Conference 2009, Proceedings, art. no. 5335255, pp. 1342-1346.

Wu, X., Wang, Y., Sun, R., Lai, M., Du, R., Zhang, Z.

[The anti-supercooling effect of surface-modified nano-scaled SiO₂ in hydrated salts phase transition system](#)

(2009) Journal of Physics: Conference Series, 188, art. no. 012046, .

Mao, J., Cao, Y., Ching, H., Du, R.

[Fuzzy tolerancing based on available manufacturing resources](#)

(2009) Computer-Aided Design and Applications, 6 (2), pp. 253-261.

Xie, L., Du, R.

[A novel device to harvest kinetic energy from human body motion](#)

(2009) Transactions Hong Kong Institution of Engineers, 16 (4), pp. 79-82.

Zhang, P., Du, R.

[Design and analysis of a new energy harvesting device based on Knudsen effect](#)

(2009) Technical Proceedings of the 2009 NSTI Nanotechnology Conference and Expo, NSTI-Nanotech 2009, 3, pp. 165-168.

Di, S., Lin, H., Du, R.

[An artificial compound eyes imaging system based on MEMS technology](#)

(2009) 2009 IEEE International Conference on Robotics and Biomimetics, ROBIO 2009, art. no. 5420831, pp. 13-18.

Liu, S., Chan, S., Ching, H., Kong, T.C., Du, R.

[Development of a PC-based millimeter scale CNC turning centre with gear hobbing capability](#)

(2009) Proceedings of the ASME International Manufacturing Science and Engineering Conference, MSEC2008, 2, pp. 265-272.

Di, S., Du, R.-X.

[The controlling of microlens contour by adjusting developing time in thermal reflow method](#)

(2009) Proceedings of SPIE - The International Society for Optical Engineering, 7381, art. no. 73811D, .

Xiao, P., Li, W.J., Du, R.

[Experimental investigation of cnt-based micro bubble generation inside microchannels](#)

(2009) 4th IEEE International Conference on Nano/Micro Engineered and Molecular Systems, NEMS 2009, art. no. 5068752, pp. 1043-1047.

He, Q., Du, R.

[Mechanical watch signature analysis based on wavelet decomposition](#)

(2009) International Journal of Wavelets, Multiresolution and Information Processing, 7 (4), pp. 491-512.

Yan, R., Du, R., Wang, W.

[Preface](#)

(2009) International Journal of Wavelets, Multiresolution and Information Processing, 7 (4), pp. v-vi.

He, K., Luo, Y., Kong, C.T., Du, R.

[Trajectory planning, optimization and control of a hybrid mechanical press](#)

(2009) WSEAS Transactions on Systems, 8 (5), pp. 614-627.

Fan, Y., Yu, S., Sun, R., Li, L., Du, R., Yin, Y.

[Microstructure and electrical properties of Ba_{0.5}Sr_{0.5}TiO₃ thin films prepared on copper foils with La₂O₃ buffer layers](#)

(2009) Applied Surface Science, 255 (20), pp. 8319-8323.

Xie, L., Menet, C.G., Ching, H., Du, R.

[The automatic winding device of a mechanical watch movement and its application in energy harvesting](#)

(2009) Journal of Mechanical Design, Transactions of the ASME, 131 (7), pp. 0710051-0710057.