Curriculum Vitae

<table>
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<tr><td>College</td><td colspan="3">Beijing University of Technology</td></tr>
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Educational Background	Ph.D., The School of Mechanical Science and Engineering, HuaZhong University of Science and Technology, 2009 M.S., Mechanical and Electrical Engineering School, Qingdao University, Qingdao, Master, Vehicle Engineering, 2005 B.S., Mechanical and Electrical Engineering School, Qingdao University, Qingdao, Bachelor, Mechanical Engineering, 2002
Working Experience	Lecturer, College of Mechanical Engineering and Applied Electronics Technology ,Beijing University of Technology, 2009 Associate professor, College of Mechanical Engineering and Applied Electronics Technology ,Beijing University of Technology, 2013 Professor, College of Mechanical Engineering and Applied Electronics Technology ,Beijing University of Technology, 2018
Research Interests	Reliability design and precision retention design of CNC machine tool, state monitoring technology for high-end manufacturing equipment, intelligent manufacturing production line planning, design method of complex product and system.
Major Publications*	[1] **Qiang Cheng** [#], Hongwei Zhao, Yongsheng Zhao[*], Bingwei Sun, Peihua Gu, "Machining accuracy reliability analysis of multi-axis machine tool based on Monte Carlo simulation", Journal of Intelligent Manufacturing, Vol.29, 2018, pp. 191-209. [2] **Qiang Cheng** [#], Ziling Zhang, Guojun Zhang[*], Peihua Guand Ligang Cai, "Geometric accuracy allocation for multi-axis CNC machine tools based on sensitivity analysis and reliability theory", Journal of Mechanical Engineering Science, Vol. 229, No. 6,2015, pp. 1134-1149. [3] **Cheng Q** [#], Wang H, Liu ZF[*], Zhang CX, Sun DY, Qi BB. "Reliability allocation method based on maximum entropy ordered weighted average and hesitant fuzzy Linguistic term set", Journal of intelligent & fuzzy systems. Vol. 37, No. 6, 2019, pp. 7991-8004. [4] **Qiang Cheng** [#],Bingwei Sun,Yongsheng Zhao[*],Peihua Gu. "A method to analyze the machining accuracy reliability sensitivity of machine tools based on Fast Markov Chain

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[12] **Qiang Cheng** [#] , Chenfei Liu,Hongyan Chu , Zhifeng Liu, Wei Zhang , Junjie Pan. "A New Multi-Objective Hybrid Flow Shop Scheduling Method to Fully Utilize the Residual Forging Heat", IEEE Access, Vol.8, 2020, pp. 151180-151194.

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[14] **Qiang Cheng** [#] , Hongwei Zhao, Guojun Zhang[*] ,Peihua Gu, Ligang Cai, "An analytical approach for crucial geometric errors identification of multi-axis machine tool based on global sensitivity analysis", International journal of advanced manufacturing technology, Vol.75, 2014, pp. 107–121.

[15] **Qiang Cheng** [#] , Zhuo Qi, Guojun Zhang[*], Yongsheng Zhao, Bingwei Sun, Peihua Gu, "Robust modelling and prediction of thermally induced positional error based on grey rough set theory and neural networks", International journal of advanced manufacturing technology, Vol. 83, 2016, pp. 753–764.

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[17] **Qiang Cheng** [#] , Bingwei Sun, Zhifeng Liu[*], Jiaying Li, Xiangmin Dong, Peihua Gu, " Key geometric error extraction of machine tool based on extended Fourier amplitude

	sensitivity test method", International Journal of Advanced Manufacturing Technology, Vol. 90, 2017, pp. 3369–3385. [18] **Qiang Cheng** [#] **,** Bingwei Sun, Zhifeng Liu[*], Qiunan Feng and Peihua Gu. "Geometric error compensation method based on Floyd algorithm and product of exponential screw theory", Journal of Engineering Manufacture, Vol. 232, No. 7, 2018, pp. 1156-1171. [19] **Qiang Cheng** [#] **,** Yiliang Guo, Zhifeng Liu[*], Guojun Zhang and Peihua Gu. "A new modularization method of heavy-duty machine tool for green remanufacturing", "Journal of Mechanical Engineering Science, Vol. 232, No. 23, 2018, pp. 4237-4254. [20] **Qiang Cheng** [#] **,** Lifang Dong, Zhifeng Liu[*], Jiaying Li, Peihua Gu. "A new geometric error budget method of multi-axis machine tool based on improved value analysis", Journal of Mechanical Engineering Science, Vol. 232, No. 22, 2018, pp. 4064-4083.
Research Projects*	[1] Balanced design of positioning accuracy and transmission efficiency of ball screw mechanism under stochastic wear caused by internal and external fluctuation, National Natural Science Foundation of China(519075012) [2] Early fault test and fault analysis of CNC spiral bevel gear milling machine, National Science and Technology Major Special Projects(2019ZX04012001-003) [3] Demonstration application of high precision horizontal machining center in boring level finish machining of key box coordinates of machine tool, National Science and Technology Major Special Projects(2018ZX04033001) [4] Research and development of intelligent precision robot for dental medical imaging, Beijing Nova Cross Program (Z191100001119010)
Professional Membership	[1] Member of Medical Industry Integration Branch, China Medical and Health Cultural Association [2] Senior member of China Society of Mechanical Engineering [3] Guest Editor of Advances in mechanical engineering [4] Guest Editor of The Scientific World Journal
Potential Research Projects**	National Natural Science Foundation of China and National Science Center of Poland

* Please list achievements of recent 5 years

** This CV is intended to match Chinese and Polish Scientists within SPUC member universities, and Potential Research Projects is intended to apply for

Sino-Polish or EU scientific cooperation projects.