**Guanglei Wu**

**Department of Mechanical and Manufacturing Engineering**

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**Educational Background**

* Ph.D student, Major in Mechanical Engineering, Aalborg University, Aalborg, Denmark, March 2010 – June 2013 (expected).
* PhD study abroad, Institut de Recherche en Communications et Cybernétique de Nantes, University of Nantes, Nantes, France, June 2012.
* M. Eng., Major in Machinery Manufacturing and Automation, Northeastern University, Shenyang, China, Sept. 2007 - July 2009.
* Bachelor in Machine Design & Manufacturing and Their Automation degree, Yantai University, Yantai, China, Sept. 2003 - July 2007.

**Research Interests**

* Robot: Parallel Manipulator /Robot, robot modeling /design /optimization (geometry, kinematics, dynamics, statics)
* Ph.D Thesis: Error Modeling and Design Optimization of Parallel Manipulators
* Master’s research project: “Research on a Series-parallel Machine Tool based on the Tripod Parallel Universal Wrist”

**Skills**

Matlab/Maple/Adams/Ansys, 3D Modeling/Mathematical Modeling, Optimizations, Finite Element Analysis, Simulations, Kinematics/Dynamics, Geometric Modeling

**Honors**

* Funded by Chinese government scholarship from China Scholarship Council (CSC) study abroad for the Project of Europe
* Exchange study scholarship from doctoral school of Aalborg University
* PhD Tuition Wavier Scholarship from the Faculty of Engineering, Science and Medicine at Aalborg University
* Danish funds for funding of conference fees and travel expenses
* Excellent Study Awards, Yantai University, China, 2004/2005/2006

**Publications**

1. Wu, G.. Multiobjective Design Optimization of a 3-DOF Spherical Parallel Manipulator, submitted to *Robotics and Computer-Integrated Manufacturing.*
2. Wu, G., 2012. Multiobjective Optimum Design of a 3-RRR Spherical Parallel Manipulator with Kinematic and Dynamic Dexterities, *Modeling, Identification and Control*, 33(3), 111-122.
3. [Wu, G.](http://vbn.aau.dk/en/persons/guanglei-wu%28c084e6c1-33fa-475a-a583-831925fb9450%29.html)[, Bai, S.](http://vbn.aau.dk/en/persons/shaoping-bai%280e2ec675-1f4c-4ba5-869a-88b15d88b9c4%29.html)[, Kepler, J.A.](http://vbn.aau.dk/en/persons/joergen-asboel-kepler%28f9e07740-316a-44f9-8af1-d6536e0e5b0a%29.html), Caro, S., 2012. [Error Modelling and Experimental Validation of a Planar 3-PPR Parallel Manipulator with Joint Clearances](http://vbn.aau.dk/en/publications/error-modelling-and-experimental-validation-of-a-planar-3ppr-parallel-manipulator-with-joint-clearances%28f03150ea-a440-48aa-9e20-8610618c12d2%29.html). *ASME* [*Journal of Mechanisms and Robotics*](http://vbn.aau.dk/en/journals/journal-of-mechanisms-and-robotics%2881e30475-cbb0-481c-b770-e090ee3e36c1%29.html), 4(4), 041008 (1-12).
4. [Wu, G.](http://vbn.aau.dk/en/persons/guanglei-wu%28c084e6c1-33fa-475a-a583-831925fb9450%29.html), [Bai, S.,](http://vbn.aau.dk/en/persons/shaoping-bai%280e2ec675-1f4c-4ba5-869a-88b15d88b9c4%29.html) [Kepler, J.A](http://vbn.aau.dk/en/persons/joergen-asboel-kepler%28f9e07740-316a-44f9-8af1-d6536e0e5b0a%29.html).. Stiffness Modeling and Analysis of an Unlimited-Roll Spherical Parallel Manipulator, submitted to *Mechanism and Machine Theory*.
5. Wu, G.. Stiffness analysis of a special spherical parallel manipulator with unlimited rolling motion, *1st Joint Workshop of Center for Robotics Research*, Aalborg University, November 2012, Aalborg, Denmark.
6. [Wu, G.](http://vbn.aau.dk/en/persons/guanglei-wu%28c084e6c1-33fa-475a-a583-831925fb9450%29.html). Elastostatic Modeling and Shape Optimization of a 3-RRR Spherical Parallel Manipulator for Active Spherical Joint, submitted to *Proc. of the Institution of Mechanical Engineers, Part C, Journal of Mechanical Engineering Science*.
7. [Wu, G.](http://vbn.aau.dk/en/persons/guanglei-wu%28c084e6c1-33fa-475a-a583-831925fb9450%29.html), [Bai, S.,](http://vbn.aau.dk/en/persons/shaoping-bai%280e2ec675-1f4c-4ba5-869a-88b15d88b9c4%29.html) [Kepler, J.A](http://vbn.aau.dk/en/persons/joergen-asboel-kepler%28f9e07740-316a-44f9-8af1-d6536e0e5b0a%29.html).. Stiffness Analysis and Comparison of 3-PPR Planar Parallel Manipulators with Actuation Compliance*.* *Proceedings of ASME 2012 11th Biennial Conference on Engineering Systems Design and Analysis (ESDA2012)*, 3: 255-264, July 2-4, 2012, Nantes, France.

1. [Wu, G.](http://vbn.aau.dk/en/persons/guanglei-wu%28c084e6c1-33fa-475a-a583-831925fb9450%29.html), [Bai, S.,](http://vbn.aau.dk/en/persons/shaoping-bai%280e2ec675-1f4c-4ba5-869a-88b15d88b9c4%29.html) [Kepler, J.A](http://vbn.aau.dk/en/persons/joergen-asboel-kepler%28f9e07740-316a-44f9-8af1-d6536e0e5b0a%29.html).. [Error Modelling and Experimental Validation for a Planar 3-PPR Parallel Manipulator.](http://vbn.aau.dk/en/publications/error-modelling-and-experimental-validation-for-a-planar-3ppr-parallel-manipulator%28004399c3-13fa-4a51-b477-4d10f9621220%29.html) *IEEE The 15th International Conference on Advanced Robotics*, 259-264, June 2011, Tallinn, Estonia.
2. Wu, G., Bai, S., Kepler, J.A.. Error Analyses of a 3-PPR Planar Parallel Robot. Poster presentation on *Proc. of 13th Internal DCAMM Symposium*, March 2011, Vejle, Denmark.
3. Wu, G., Zou, P., Yi, X., 2009. Dynamic Simulation of the Drill Grinder Based on the Tripod Parallel Universal Wrist. *Applied Mechanics and Materials*, Vols. 16-19: 1033-1037.
4. Zou, P., Wu, G., Yang, X., 2009. Kinematics Simulation of a Tripod Parallel Universal Wrist. *Key Engineering Materials: Progress of Machining Technology*, Vols. 407-408: 146-149.