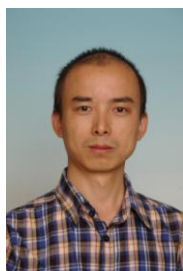


CURRICULUM VITA



PERSONAL

Name	Guocheng Zhu
Gender	Male
Birthday	Dec. 18, 1984
Birthplace	Huangjinwu County, Huangshi City, Hubei Province, P. R. China
Address	17.listopadu 584/2, Liberec xv-stary harcov
Mobile	+420 776109703
Email	guo.cheng.zhu@tul.cz; gchengzhu@gmail.com

DEGREES

Ph.D. Degree	in Textile Material engineering (02/2011- present), Technical University of Liberec, Liberec, Czech Republic
MSc. Degree	in Textile Material and Design (09/2007-06/2010), Wuhan Textile University, Wuhan, China
B.S. Degree	in Machinery Design, Manufacturing and Automation (09/2003-06/2007), Wuhan Textile University, Wuhan, China

OBJECTIVE

Looking for a position in:

1. Thermodynamic, fluid dynamic, and numerical simulation;
2. Cross-discipline subject of machinery and textile;
3. Data analysis.

AREAS OF EXPERTISE

1. Heat transfer and thermal comfort of textiles;

2. Air jet spinning;
3. Data analysis;
4. Good at Ansys, Fluent, Matlab, Solidworks, Autocad, TexGen, and Originlab

PROJECT EXPERIENCES

1. Modeling heat transfer through complex fibrous structures (01.03.2013 - 30.11.2013).

One device for evaluating the thermal property of fibrous structures materials by conjugating heat conduction and heat convection was constructed and the thermal property of fibrous structures materials were investigated under different testing standards. The analytical models and numerical simulation were studied and compared. In addition, the air permeability and the temperature change of textile during liquid adsorbing process (one real-time monitoring device was also designed and constructed) were investigated since these two aspects are also very important to thermal property of textiles.

Contract grant sponsor: Student Grant Scheme (SGS) by Technical University of Liberec, Czech Republic (Grant number: 48013)

2. Simulation and optimizing the jet nozzle of vortex spinning and modeling the relationship between the structure of vortex yarns and its properties

(01.03.2012 - 30.11.2012).

The jet nozzle was designed and constructed, the jet ring spun yarns were produced and evaluated, and the relationship between yarn property and technical parameters was described mathematically. Moreover, the numerical simulation work for investigating how does the air work in the jet nozzle was also studied.

Contract grant sponsor: Student Grant Scheme (SGS) by Technical University of Liberec, Czech Republic (Grant number: 4864)

3. Study on the bionics structure and the properties of small diameter vascular graft developed from silk powder and special polymer (09/2007- 12/2010).

Work I was taking: “Study on the Bionics Structure Vascular Grafts Fabrication and Radial Compliance Characterization”

Studied on the manufacture process and testing device's establishing of small diameter artificial vascular grafts and its relevant mechanical properties. One device was constructed for evaluating compliance by real-time monitoring in pressure-deformation relationship. The radial compliance, permeability and the mechanical properties of artificial vascular grafts were improved by changing the materials, compositions (polymer and silk superfine powder) and structure. Meanwhile, the relationship between mechanical properties of artificial vascular

grafts and the independent variables was obtained. And the designed optimal small diameter artificial vascular grafts with excellent comprehensive properties were used for clinical application.

Contract grant sponsor: state natural sciences fund (Grant number: 50873079) ; the National Major Fundamental Research Program of China (Grant number: 2009CB526402)

4. Study on fiber morphology and its Composition of Flexible Solar Cells (12/2007- 06/2009).

Work I was taking: “improving the photoelectric conversion rate of flexible solar cells by optimizing the experimental parameters”

A self-made plating device was constructed, and the experimental parameters such as solutions concentration, temperature, distances between electrodes, voltage, and duration time were studied. The photoelectric conversion rate of flexible solar cells reached to 10.4% under the optimal experimental parameters.

Contract grant sponsor: Zhejiang science and technology university (Grant number: 2006005)

WORK EXPERIENCES

1. Wuhan Boiler Steel Structure Company (15.06.2006 – 01.08. 2006)

Master the steel material processing and production process, familiar with production facilities and relevant technology

2. China Construction Third Engineering Bureau CO.LTD. (01.08.2006-01.09.2006)

Non-standard parts design and mechanical equipment maintenance

3. One semester teaching experience in mechanical drawing in Wuhan Textile University (01.09.2008-30.06.2009).

HONORS AND ACTIVITIES

1. Excellent Graduates of Wuhan Textile University in 2010

2. Three University Scholarship Awards during 2008-2009

3. The Bachelor Thesis titled “The Pinprick Structure Design of Nonwovens Needle Machine” was awarded the third prize in Hubei province in 2007

4. Instructed six undergraduates who accomplished their graduation thesis, and five of them were honored with distinguished paper.

PUBLICATIONS

1. **Guocheng Zhu**, Dana Kremenakova, Yan Wang, Jiri Militky, Study on air permeability and thermal resistance of textile under heat convection, Textile research journal. (accepted)
2. **Guocheng Zhu**, Dana Kremenakova, Yan Wang, Jiri Militky, Study on the thermal property of high porous nonwoven fabrics, industria textila. (accepted)
3. **Guocheng Zhu**, Dana Kremenakova, Yan Wang, Jiri Militky, Temperature change of cotton fabric during liquid adsorption process, International Journal of Clothing Science and Technology. (accepted)
4. **Guocheng Zhu**, Dana Kremenakova, Yan Wang, Jiri Militky, Air permeability of polyester nonwoven fabrics, Autex Research Journal. (accepted)
5. **Guocheng Zhu**, Dana Kremenakova, Yan Wang, Jiri Militky, Buyuk Mazari Funda, An analysis of effective thermal conductivity of heterogeneous materials, Autex Research Journal, vol 14(1), (2014), pp.14-21.
6. **Guocheng Zhu**, Jiri Militky, Yan Wang, Juan Huang, Dana Kremenakova, Comparison of Effective Thermal Conductivity of Hollow Fibers by Prediction Models and FE Method, *Applied Mechanics and Materials*, Vol 440, (2014), pp.3-8.
7. **Guocheng Zhu**, Sayed Ibrahim, Dana Kremenakova, Yan Wang, Simulation of airflow motion in jet nozzle with different geometric parameters, *Advanced Materials Research*, Vol 683 (2013), pp.869-876.
8. Jiri Militky, **Guocheng Zhu**, Dana Kremenakova, selected properties of functional materials (chapter 16), 1st ed, ops, czech republic, (2013), pp.207-215.
9. Yan Wang, Jacob Wiener, **Guocheng Zhu**, Langmuir isotherm models applied to the sorption of dyes from effluent onto polyamide nanofibers, AUTEX RJ, vol 13(6), (2013), pp.95-98.
10. **Guocheng Zhu**, Sayed Ibrahim, Dana Kremenakova, The optimization of experimental parameters for Jet-ring spinning, *Vlakna a Textil*, Vol 19 (2012), pp.60-67.
11. **Guocheng Zhu**, Sayed Ibrahim, Dana Kremenakova, Optimization application of air-jet nozzle in ring spinning system, *world journal of engineering*, Vol 9 (2012), pp.455-461.
12. Hongjun Yan, **Guocheng Zhu**, Weilin Xu, Influence of weft-knitted tubular fabric on radial mechanical property of coaxial three-layer small-diameter vascular graft. Journal of Biomedical Materials Research Part B-Applied Biomaterials, 2012. 100B(2): p. 342-349.
13. Hongjun Yan, **Guocheng Zhu**, Weilin Xu, The radial direction mechanical property of small-diameter vascular graft reinforced by polyester/spandex tubular fabric. 2010 International Forum on Biomedical Textile Materials Shanghai,

P.R.China 28th~29th May 2010:430-435.

14. Hongjun Yang, **Guocheng Zhu**, Weilin Xu, Influence of weft-knitted tubular fabric on radial mechanical property of coaxial three-layer small-diameter vascular graft, society for biomaterials, 2011, 2: 342-349.

15. **Guocheng Zhu**, Hongjun Yan, Weilin Xu, Study on compatible properties between silk powder and polyurethane. Academic Journal of Tianjin Polytechnic University, 2009, 28(3):14-18.

16. **Guocheng Zhu**, Hongjun Yan, Weilin Xu, Study on radial compliance of small diameter polyurethane artificial vascular. Medical Biomechanics, 2009, 24(3):216-222.

17. Peibo Ma, Weilin Xu, **Guocheng Zhu**, Research on the adherence property of PET fabric by corona discharge treatment. Textile technology progress, 2008, 2:33-34.

18. **Guocheng Zhu**, Dana Kremenakova, Yan Wang, Huang Juan, Mohanapriya Venkataraman, Jiri Militky, Evaluation of thermal conductivity of hollow fiber padding by experiment, TexSci 2013, Sept. 23-25, Liberec, Czech Republic. (ISBN 978-80-7372-989-9)

19. **Guocheng Zhu**, Jiri. Militky, Yan Wang, Lukasova V., Dana Kremenakova, Prediction of hollow fibers effective thermal conductivity, STRUTEX 19, December 2012, Liberec, Czech Republic. (ISBN 978-80-7372-913-4).

20. Guocheng Zhu, Dana Kremenakova, Jana Grabmullerova, Mazari Adnan Ahmed, Yan Wang, Thermal property of nonwoven fabrics from different testing methods, ICCE-22 July 13-19, 2014, Malta.

21. Guocheng Zhu, Jiri Militky, Yan Wang, Dana Kremenakova, Study on wicking property of cotton fabric, the fiber society spring, May 21-23, 2014, liberec.

22. Guocheng Zhu, Dana Kremenakova, Air permeability and thermal resistance of textile under heat convection, september 16-19, 2014, Světlanka.

23. Guocheng Zhu, Dana Kremenakova, Yan Wang, Jiri Militky, Numerical simulation of coupled fluid flow and heat transfer of fabric, December 1-2, 2014, Liberec.