

RESUME

Last Name: Zhao
First Name: Jian-cai
Gender: Male
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Education

Ph. D., Shanghai Jiaotong University, China, 2002
M. S., Shandong University, China, 1999
B.S., College of Shandong Jianzhu, China, 1987

Background

Dr. Zhao started at SJTU in December 2004 as a Lecturer. Prior to that, he was a Postdoctoral Fellow at the Post-doctoral Mobile Station of Materials Science & Engineering, SJTU, in 2002, and an Engineer in Jinan Huaneng Pneumatic Co. Ltd, Shandong, China, in 1987.

Research Interests

Computer-aided Engineering and Design; Material deformation and damage, constitutive laws, and metal processing.

Modeling, monitoring, and control of advanced manufacturing processes.

Application of Finite Element Method in the fields of Mechanical Engineering, Biomedical Engineering, Automobile engineering, and so on.

Selected Research Projects

1. Participated in the project “The Study of Chemical Rheology & Feeding Process during Extrusion”, supported by National Natural Science Foundation of China in 2002.
2. Participated in the project “The Development of High-speed Maglev: FEA of the Structure of the Carriage”, which is the National High-Tech Research and Development Program (“863” Program), supported the Chinese Ministry of Science and Technology in 2004.
3. In charge of the project “The Simulation Study of the Extrusion of the Weatherstrip of the car” supported by Shanghai Automotive Industry Science & Technology Development Foundation, China, in 2003.
4. Participated in the project “The Development of Micro-positioning System for NC Roll Grinding Machine” supported by Shanghai Science & Technology Committee, China, in 2005.

5. In charge of the project “The Application of MSC.Marc Software” supported by Ningbo Xintai Machinery Co. Ltd., China, in 2006.
6. In charge of the project “The Simulation and Experimental Analysis of Forming Force of Pits on the Surface of Satellite Parts” supported by Shanghai Institute of Satellite Engineering, China, in 2006.
7. In charge of the project “The Development of Rubber Seals for Cars with CAD/CAE” supported by Ninghai Jianxin Rubber & Plastics Co., Ltd, Zhejiang, China., in 2007.
8. In charge of the project “Structural Analysis of the 1.5MW virtual aerodynamic wind tunnel” supported by Haiyou Shuanfan (Beijing) Science & Technology Co., Ltd, China., in 2008.
9. In charge of the project “FEA of strength and stiffness for Truss of KONE TransitMaster140 Escalator” supported by KONE Elevator (Kunshan) Co., Ltd, China., in 2009.

Selected Publications

All publications in English unless otherwise stated.

1. Qian Li, **Jiancai Zhao**, Bo Zhao, et al. Parameter Optimization of Rubber Mounts Based on Finite Element Analysis and Genetic Neural Network. *Journal of Macromolecular Science, PAC*. 2009, 46 (2): 186-192
2. **J.-C. Zhao**, Q. Li. Experimental Study on the Vibration Isolation Characteristics of Hydraulic Engine Mounts. *Experimental techniques*. (accepted)
3. **Jiancai Zhao**, Qian Li, Xiaoyan Shen. Finite Element Analysis and Structure Optimization for Improving the Fatigue Life of Rubber Mounts, *Journal of Macromolecular Science, Part A*, 2008, 45 (7): 542 - 547
4. **Zhao Jian-Cai**, Li Qian, Yao Zhen-Qiang etc. Simulation of Energy Method of Decoupling of Engine Mounting Systems. *Journal of Shanghai Jiaotong University*, 2008, 42 (6): 878-881. (in Chinese)
5. **ZHAO Jian-cai**, LI Qian, YAO Zhen-qiang. Optimal Design Method for Structural Parameters of a Rubber Mount, *Journal of Vibration and Shock*, 2008, 27 (1): 16-18. (in Chinese)
6. **ZHAO Jian-Cai**, YAO Zhen-Qiang. Numerical Simulation of Compression Deformation of Santana 2000 Seal. *Journal of Shanghai Jiaotong University*, 2006, 40 (10): 1806-1808. (in Chinese)
7. **Zhao Jiancai**, Yao Zhengqiang. Optimum Design Method of Structural Parameters of the Seal. *China Mechanical Engineering*, 2006, 17(12):1242-1244, (in Chinese)
8. **Zhao, J.C.**, Hao W.S. The Experimental Analysis for Force-compression Performance of the Door Seal during Door Closing, *Experimental Techniques*, 2006, 30 (2): 46-51.
9. **ZHAO Jian-cai**, YAO Zhen-qiang, WANG Gang, et al. Numerical Simulation of Seal Extrusion, *Computer Simulation*, 2006, 23 (3): 275-277, 287 (in Chinese)
10. **Zhao Jiancai**, Yao Zhenqiang, Wang Wei. Nonlinear Analysis and Optimization Design of Seal Structure, *China Synthetic Rubber Industry*, 2005, 28 (6): 421-424 (in Chinese)
11. **ZHAO Jian-cai**, HAO Wang-shen, YAO Zhen-qiang, et al. Study on Contact Characteristics between Seal and Door Based on Direct Restriction, *China Elastomerics*, 2005, 15 (3): 17-20 (in Chinese)

12. **ZHAO Jian-cai**, ZHU Xun-sheng, ZHOU Chi-xing. Nonlinear Finite Element Analysis of the Structure of Door Seals, Journal of Dong Hua University (English Edition), 2005, 22 (2): 62-65
13. **ZHAO Jian-cai**, ZHOU Chi-xing. A Hyperelastic Constitutive Model for Sponge Rubber, China Elastomerics, 2004, 14 (6): 26-30 (in Chinese)
14. **Zhao Jiancai**, Zhu Xunsheng, Zhou Chixing. Application of CAE Technology to Structure Optimization of Door Weather Strips of Passenger Cars, Automobile Technology, 2004, 348 (9): 32-34 (in Chinese)
15. **Jian-cai Zhao**, Chi-xing Zhou, Xunsheng Zhu. Analysis of the Influence of the Seal Structure on Door Closing Force for SANTANA, SAE Technical Papers, Document Number: 2004-01-1348, SP-1858, SAE 2004 World Congress & Exhibition, March 2004, Detroit, MI, USA.
16. **ZHAO Jian-cai**, ZHU Xun-sheng, WAN De'an. Development of Experimental Device for Compression Load Deflection of Car Door Seals, Journal of Donghua University (English Edition), 2003, 20 (2): 116-121.
17. **Zhao, J.-C.**, Zhu, X.-S., Huang, S.-J., Wan, D. The Experimental Analysis for Compression Deformation of Automotive Door Seals, Experimental Techniques, 2003, 27 (1): 27-31.
18. **Jiancai Zhao**, Xunsheng Zhu, De'an Wan. Theoretic Analysis of Factor to Affect Door Closing Force by Positioning Error of Assembly Fixture, SAE Technical Papers, Document Number: 2002-01-0769, SAE 2002 World Congress & Exhibition, March 2002, Detroit, MI, USA.
19. **Jiancai Zhao**, Xunsheng Zhu, De'an Wan. The Development of Testing Device for Compression Deformation of the Automobile Door Weatherstrip Seals, SAE Technical Papers, Document Number: 2002-01-0803, SAE 2002 World Congress & Exhibition, March 2002, Detroit, MI, USA.