

Cover Letter

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To Whom It May Concerned,

Having some achievements in my research work on nonlinear microstructure mechanics, electric field simulation of micro scanning probe and parallel plates, dynamic modeling, field analysis of permanent magnetic blocks, and design of inertial microsensors and microactuators, I would like to expand my professional horizons by seeking challenges in the area of low energy consumption microsystems, analysis of electrostatic sensors, the coupling of multiple energy domains and dynamic design methods of sensors in optical and biomedical MEMS. I am interested in a postdoctoral position with your group and so I email you my CV which provides a brief description of my research accomplishment for your review and consideration.

As you will see in my CV, my research in nonlinear mechanics and design of microsensors is extensively interdisciplinary. For example, during working on one special subject supported by the Ministry of Education, I have systematically analyzed the nonlinear mechanics of several bistable microstructures, designed a series of threshold accelerometers and a linear drug micro-feeding system by utilizing bistable structures and permanent magnetic blocks, and established the dynamic models of the nonlinear systems accordingly. I am now working on nonlinear analysis of microstructures such as bistable beams, magnetic structures and electrostatically driven structures, application of bistable microstructures as microsensors and microactuators used in low energy consumption microsystems, and the analytical method in structural reliability. And then a series of prospective research results are to be published in the forthcoming journals. In addition, in the 2006 IEEE/ASME International Conference on Mechatronics and Embedded Systems and Applications, Beijing, China, it gave me great honor to be the co-chair of the MEMS and Devices Session.

If I have the chance to become a member of your group, I will show to you:

- Great enthusiasm in a highly interdisciplinary and collaborative working environment.
- Maturity, honesty, ability to look at great challenges as great opportunities.
- Ability to develop and lead a team.

I would be very grateful if you are able to take the time to examine my CV attached and advise me as to my possible acceptance for admission to your program. I can come to you in the spring or fall of 2008. Please find in the attached files the reprints of my representative research articles, ongoing research programs and future research proposals.

With kind regards!

Sincerely yours,

Jian Zhao