



Li Han

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Research Interests

- Computer modeling and simulation, software engineering, and information technology
- Computational sciences, robotics, bio-informatics, and medical-informatics
- Computer animation, visualization, and virtual reality

Education

- **Ph.D. in Computer Science**, Texas A&M University, College Station, TX, August 2000
 - Thesis: The Planning and Control of Robot Dexterous Manipulation
 - Advisor: Prof. Jeff Trinkle
 - Committee: Profs. Nancy Amato, Richard Volz, Peter Stiller (Math Dept., TAMU)
 - GPA: 4.0/4.0
- **M.S. in Biomedical Engineering**, Xi'an Jiaotong University, Xi'an, China, June 1992
- **B.S. in Biomedical Engineering**, Xi'an Jiaotong University, Xi'an, China, July 1989

Professional Experience

- **Postdoctoral Fellow**, Dept. of Electrical and Computer Engineering, Carnegie Mellon University (Supervisors: Prof. Pradeep Khosla and Dr. Chris Paredis), July 2000 -- Present
 - “Product Models to Support Design Interaction”, **Pennsylvania Infrastructure Technology Alliance**, C.J.J. Paredis, and L. Han, 11/01--12/02
 - “Networked Engineering”, **National Science Foundation**, T. Hewett, B. Khoshnevis, P.K. Khosla, R. Krishna, S. C-Y. Lu, and W.C. Regli, 10/98--9/02
- **Teaching Assistant**, Department of Computer Science, Texas A&M University, Spring 2000
 - “Software Engineering”, senior undergraduate course

- **Research Assistant**, Department of Computer Science, Texas A&M University, Fall 1995 -- Fall 1999
 - “Manipulation Planning with Contact Under Uncertainty”, **National Science Foundation**, N.M. Amato, J.C. Trinkle and J.S. Pang, 8/97--7/00
 - “ERCam Enhancements (EVA Robot Camera Control)”, **NASA Johnson Space Center**, R.A. Volz, and J.C. Trinkle, 9/96-6/98
 - “A Two-Stage Geometric Approach to Planning Robotic Tasks Involving Sliding and Rolling Contacts in Uncertain Environments”, **National Science Foundation**, J.C. Trinkle and P.F. Stiller, 8/93--7/96
- **R&D Engineer**, Shenzhen Zhonghang Computer Corp., China, July 1992 -- July 1995
- **Research Assistant**, Image Processing Research Center, Xi'an Jiaotong University, Fall 1989 -- Spring 1992
 - Worked on several medical image processing and computer vision projects
- **Teaching Assistant**, Department of Information and Control Engineering, Xi'an Jiaotong University, Spring 1990
 - “Image Processing”, senior undergraduate course

Honors and Awards

- Member of the Honor Society of Phi Kappa Phi, 1999 – present.
- Graduate Student Research Excellence Award, Department of Computer Science, Texas A&M University, April 2000.
- Exceptional admission to graduate school of Xi'an Jiaotong University, exempt from entrance exam due to distinguished undergraduate record, August 1989.
- Student in Top Class at Xi'an Jiaotong University, (the **only** special engineering student class supervised by the Department of Education, China, that allowed students to receive B.S. in three years upon competent performance in undergraduate study) September 1986 - July 1989.

Grants

- Co-PI: Pennsylvania Infrastructure Technology Alliance, “Product Models to Support Design Interaction,” 11/01 -- 12/02.

Publications

Refereed Journal Articles and Book Contributions:

1. L. Han, J.C. Trinkle, and Z. Li, “Grasp Analysis as Linear Matrix Inequality Problems”, *IEEE Transactions on Robotics and Automation*, 16(6), December 2000, pp. 663-674.
2. L. Han and N.M. Amato, “A Kinematics-Based Probabilistic Roadmap Method for Closed Chain Systems”, *Algorithmic and Computational Robotics - New Directions (2000 WAFR)*, eds. B. Donald, K. Lynch and D. Rus, June 2000, pp. 233-246.

Refereed Conference Papers:

3. L. Han, and C.J.J. Paredis, "Meta-Models for Composable Simulation and Design", accepted for *Proceedings of the 2002 Advanced Simulation Technology Conference*, April 2002, to appear.
4. L. Han, C.J. J. Paredis and P.K. Khosla, "Object-Oriented Libraries of Physical Components in Simulation and Design", *Proceedings of the 2001 Summer Computer Simulation Conference*, July 2001, pp. 1-8.
5. L. Han, Z. Li, J.C. Trinkle, Z. Qin and S. Jiang, "The Planning and Control of Robot Dexterous Manipulation", *Proceedings of the 2000 IEEE International Conference on Robotics and Automation (ICRA '00)*, April 2000, pp. 263-269.
6. L. Han, J.C. Trinkle, and Z. Li, "Grasp Analysis as Linear Matrix Inequality Problems", *Proceedings of the 1999 IEEE International Conference on Robotics and Automation (ICRA '99)*, May 1999, pp. 1261-1268.
7. L. Han, and J.C. Trinkle, "Dexterous Manipulation by Rolling and Finger Gaiting", *Proceedings of the 1998 IEEE International Conference on Robotics and Automation (ICRA '98)*, May 1998, pp. 730-735.
8. L. Han, and J.C. Trinkle, "The Instantaneous Kinematics of Manipulation", *Proceedings of the 1998 IEEE International Conference on Robotics and Automation (ICRA '98)*, May 1998, pp. 1944-1949.
9. Z. Li, Z. Qin, S. Jiang, and L. Han, "Coordinated Motion Generation and Real-time Grasping Force Control for Multifingered Manipulation", *Proceedings of the 1998 IEEE International Conference on Robotics and Automation (ICRA '98)*, May 1998, pp. 3631-3638.
10. L. Han, and J.C. Trinkle, "Object Reorientation with Finger Gaiting", *Proceedings of 2nd IMACS International Multi-conference: Computational Engineering in Systems Applications (CESA '98)*, co-sponsored by IEEE, April 1998.
11. L. Han, and J.C. Trinkle, "The Instantaneous Kinematics and Planning of Dexterous Manipulation", *Proceedings of the 1997 IEEE International Symposium on Assembly and Task Planning (ISATP'97)*, August 1997, pp. 60-65.
12. L. Han, Y. Guan, Z. Li, S. Qi, and J.C. Trinkle, "Dexterous Manipulation with Rolling Contacts", *Proceedings of the 1997 IEEE International Conference on Robotics and Automation (ICRA '97)*, May 1997, pp. 992-997.
13. J.C. Trinkle, S.-L. Yeap, and L. Han, "When Quasi-static Jamming is Impossible", *Proceedings of the 1996 IEEE International Conference on Robotics and Automation (ICRA '96)*, May 1996, pp. 3401-3406.
14. L. Han, and P. He, "A Randomized Parallel Algorithm for Computer Stereo Vision" (in Chinese), *Proceedings of the 1991 National Conference on Pattern Recognition and Artificial Intelligence*, China, August 1991.

Professional Activities

- **Referee** for Scientific Journals (14 manuscripts) and Conferences (8 manuscripts) including:
 - IEEE Transactions on Robotics and Automation
 - IEEE Transactions on Neural Networks
 - International Journal of Robotics Research
 - International Journal on Robotics and Automation

- IEEE International Conference on Robotics and Automation
 - IEEE/RSJ International Conference on Intelligent Robots and Systems
 - IEEE International Symposium on Assembly and Task Planning
- **Review Coordinator:** Design for Manufacturing Conference 2001 and 2002
- **Seminar Organizer:** AI & Robotics Seminars, Department of Computer Science, Texas A&M University, Fall 1997
- **Membership** in professional organizations
 - ACM
 - IEEE
 - Society of Computer Simulation International
 - ASME International.

Departmental Service

- **Social Event Officer:** Computer Science Graduate Student Association (CSGSA), Texas A&M University, Fall 1998 -- Summer 1999.
- **Secretary:** Computer Science Graduate Student Association (CSGSA), Texas A&M University, Fall 1997.
- **Communications Committee Co-Chair:** Aggie Women in Computer Science (AWICS), Texas A&M University, Fall 1996 -- Spring 2000.