



Hand Research Laboratory

<http://www.pitt.edu/~zmli/handlab/>

Zong-Ming Li, PhD



Our Hand Research Laboratory is committed to the scientific study of the human hand. We strive to achieve excellence through dedicated effort, innovative research, educational activities, multidisciplinary collaboration, and professional service.

We are proud of our team with expertise in biomechanics, engineering, kinesiology, motor control, orthopaedics, biology, neurology, and occupational therapy. Dr. Zong-Ming Li supervises and coordinates our multi-faceted research endeavors and provides overall leadership. Drs. Robert Goitz and Robert Kaufmann, our attending hand surgeons, provide clinical support to our research activities. Dr. Nancy Baker and Mr. Norm Gustafson, render counseling in occupational therapy. Ms. Jie Tang, a Research Associate, plays an indispensable role in several research projects and in the lab's day-to-day functioning. Ms. Erica Guo, a graduate student at Sichuan University in China and under the guidance of Drs. Yubo Fan and Zong-Ming Li, is close to the completion of her PhD project on carpal tunnel modeling.

Additional new members joining our team are refreshing. Mr. Ashish Nimbarte joined our lab as a Graduate Student Researcher after receiving his Master's degree from Louisiana State University. He is pursuing his PhD in the Department of Bioengineering and plans to research carpal tunnel syndrome with a bioengineering perspective. Mr. Matthew Chakan, an undergraduate student in Bioengineering, is a valuable addition to our lab. Mr. Chakan is involved in various ongoing research projects and helped us set up our new machine shop. Dr. Rodrigo Kaz, a visiting fellow from Brazil, is eagerly involved in our ongoing cadaveric studies. Dr. Yonsik Yoo, a visiting fellow from Korea, anticipates applying his clinical knowledge to the study of anatomical configuration of the carpal tunnel. During the summer of 2005, three medical students, Mr. Chirag Chauhan, Mr. Jerry Chen, and Mr. Eric James, worked in our lab for research projects, and they continue to work with us

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under the Scholarly Project Initiative of the School of Medicine. Lastly, Brittany Zeligowski, a work-study student, aids in the organizational duties of our office and lab.

While being delighted at the addition of new members, we reluctantly watched the departure of others. After his three years of resourceful technical assistance, Mr. Thomas Christophel graduated with dual BS degrees in Bioengineering and Computer Engineering and moved on to his new career pursuit. Ms. Teresa Brininger, a graduate student in Occupational Therapy, has successfully completed her PhD dissertation on the role of various conservative treatments for carpal tunnel syndrome and returned to the army. We wish all our alumni great success in their future careers!

We are proud of our collaboration with distinguished colleagues. Dr. Yongping Zheng assists us in the study of the carpal tunnel with his tissue ultrasound palpation system. Dr. James Wang lends his expertise in mechanobiology for our research on the tenosynovium and transverse carpal ligament. Dr. Lee Berger, the inventor of the Balloon Carpal Tunnel Plasty, is eager to work with us on the mechanical properties of the transverse carpal ligament.

Our research productivity continues to prosper. Our lab has nine peer-reviewed papers published in 2005, two additional papers are published as of February 2006, and several more are in press and under review. We were also active in disseminating our research results in professional conferences of ORS, ASB/ISB, ASSH/ASHT, and so on.

Hands in needs are hands indeed! We are indebted to our sponsors. Our research undertakings have been financially supported by the Whitaker Foundation, the Aircast Foundation, the Pittsburgh Foundation, Freddie Fu David Silver Professor and Chair Funds, and our Departments of Orthopaedic Surgery and Bioengineering. Our research endeavors would not be possible without these supports.

Looking forward, we are gung-ho for another run in the Year of the Dog – following the footsteps of the Super Bowl Champion Pittsburgh Steelers.

LABORATORY PERSONNEL

Nancy Baker, DSc, OTR/L	Faculty in Occup Therapy
Matthew Chakan	Undergraduate Student
Chirag Chauhan	Medical Student
Jerry Chen	Medical Student
Robert Goitz, MD	Faculty in Orthopaedics
Norm Gustafson, OTR/L, CHT	Faculty in Occup Therapy
Eric James	Medical Student
Robert Kaufmann, MD	Faculty in Orthopaedics
Rodrigo Kaz, MD	Visiting Fellow
Zong-Ming Li, PhD	Director
Ashish Nimbarte, MS	Graduate Student Researcher
Jie Tang, MS	Research Associate
Yonsik Yoo, MD	Visiting Fellow
Brittany Zeligowski	Work-Study Student

