

Mark A. Minor

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PROFESSIONAL PREPARATION

University of Michigan Mechanical Engineering B.S. 1993
Michigan State University Mechanical Engineering M.S. 1996
Michigan State University Mechanical Engineering Ph.D. 2000
Michigan State University Mech. Eng./Elec. Eng. Postdoc 2000

APPOINTMENTS

University of Utah Mech. Eng. Assistant Professor 8/00-Present
Johnson Space Center NASA/ASEE Faculty Fellow Summer '01&'02
Michigan State Univ. Mech./Elec. Eng. Postdoc 1/00-8/00
Michigan State Univ. Mech. Eng. Instructor 9/96-4/00
Michigan State Univ. Mech. Eng. Research Assistant 9/96-9/99
Michigan State Univ. Mech. Eng. Teaching Assistant 9/94-4/96
NTN Technical Center Mechanical Research Engineer 2/94-7/94
U. Michigan Hospitals Facilities Engineering Intern 5/92-12/93

FIVE SELECTED PUBLICATIONS

Minor, M.A., Merrell, R., "Instrumentation and Algorithms for Posture Estimation in Compliant Framed Modular Mobile Robotic Systems" *International Journal of Robotics Research*, Vol. 26, No. 5, pp 491-512, May 2007.

Zhu, X., Minor, M. A., Park, S-Y., "Distributed Robust Control of Compliant Framed Wheeled Modular Mobile Robots," *ASME Journal of Dynamic Systems, Measurement, and Control*, Vol. 128, No. 3, September 2006, p489-498.

Minor, M.A., Albiston, B.W., Schwensen, C.L., "Simplified Motion Control for Compliant Framed Wheeled Mobile Robots," *IEEE Transactions on Robotics and Automation*, Vol 22, No. 3, June 2006, p491-506.

Krosuri, S. and Minor, M.A., "Design, Modeling, Control, and Evaluation of a Miniature Hybrid Hip Climbing Robot," *International Journal of Robotics Research*, Vol 24, No. 12, p1033-1053, Dec. 2005.

Shores, B. and Minor, M.A., "Design, Kinematic Analysis, and Quasi-Steady Control of a Morphic Rolling Disk Biped Climbing Robot," *IEEE Int'l Conf. on Rob. and Autom.* Barcelona, Spain. April 2005. p2732-37.

FIVE ADDITIONAL PUBLICATIONS

Zhu, X., Kim, Y., Merrell, R., Minor, M.A., "Cooperative Motion Control and Sensing Architecture in Compliant Framed Modular Mobile Robots," *IEEE Trans. Rob.*, Vol 23, No. 5, pp 1095-1101, Oct. 2007.

Norton, A., Minor, M.A., "Pneumatic Microactuator Powered by the Deflagration of Sodium Azide," *IEEE/ASME Journal of Microelectromechanical Systems*, Vol 15, No 2, pp. 344-354, April 2006.

Aurora, D., Minor, M., Skliar, M., Roemer, R.B., "Control of thermal therapies with moving power deposition field," *Phys. Med. Biol.* 51, 2006, pp. 1201-1219.

Minor, M.A., Jensen, K., and Kim, Y., "Design and control of a three-link serial manipulator for lessons in particle dynamics," *Proc. IEEE Intl. Conf. Robotics and Automation*, Washington, DC, pp. 3435-41, 2002.

M.A. Minor and R. Mukherjee, "Underactuated kinematic structures for miniature climbing robots," *ASME J. Mech. Design*, Vol. 125, 2003, pp. 281-91.

SYNERGISTIC ACTIVITIES

University of Utah Robotics Program, Mechanical Engineering Coordinator. Worked with John Hollerbach to establish the second Graduate Robotics Program in the US as a joint effort between School of Computing and Mechanical Engineering.

Associate Editor: IEEE/ASME International Conference on Advanced Intelligent Mechatronics ('05), IEEE/RSJ International Conference on Intelligent Robots and Systems ('07)

Session Chair: IEEE Int'l Conf. on Robotics and Automation ('07), ASEE Annual Conference and Exhibition, ME Division Controls Session & Laboratory Session ('04)

Program Committee Member: IEEE International Conference on Robotics and Automation ('06, '08), IEEE International Conference on Intelligent Robots and Systems ('06, '07)

Robotics Projects in Mechatronics. Junior level mechanical engineering students design and build small autonomous robots to compete in an annual competition.

SAE Walking Machine Team faculty advisor. Undergraduate students design and build a walking machine for an international competition. Involves the integration of mechanical design, control system development, sensor development, and manufacturing.

Reviewer. Intl. J. Robotics Research; IEEE Transactions on Robotics and Automation; ASME Journal of Dynamic Systems, Measurement, and Control; ASME Journal of Biomechanical Engineering; IEEE Robotics and Automation Magazine, IEEE Conference on Control Applications; American Control Conference, Robotica, Int. J. Robotics and Automation, Int. J. Mechatronics.

Proposal Reviewer. NASA peer reviewer, NSF Panel Reviewer.

Member of the IEEE, ASME, ASEE, and SAE professional societies.

COLLABORATORS & OTHER AFFILIATIONS

Collaborators and Co-Editors:

Pete Wilhelmson (U.Minn Deluth).

Graduate and Postgraduate Advisors:

Postgraduate - R. Lal Tummala (UC San Diego); Ph.D. - Ranjan Mukherjee (Michigan SU);

M.S. - Ronald Rosenberg (Michigan SU).

Thesis Advisor and Postgraduate-Scholar Sponsor:

Current: Youngshik Kim (Ph.D.), Sandip Kulkarni (Ph.D.), Andrew Vogt (Ph.D.), Leng Zhe (Ph.D.), Ramya Bandaru (M.S.), Charles Fisher (M.S.), Andrew Hetrick (M.S.), Cristian Phipps (M.S.), No Postgraduate advisees.

Past 5 years: Xiaorui Zhu (Ph.D.), Brian Albiston (M.S.), Dan Flickinger (M.S.), Chris Hirschi (M.S.), Kent Jensen (M.S.), Youngshik Kim (M.S.), Satya Krosuri (M.S.), Roy Merrell (M.S.), Amir Norton (formerly Mohammidi) (M.S.), Sung-Yong Park (M.S.), Craig Parker (M.S.), Corey Schwensen (M.S.), Benjamin Shores (M.S.), Kate Shigeoka (M.S.), Jared Terry (M.S.). No Postgraduate advisees.

Total: 19 M.S., 5 Ph.D., no Postgraduate advisees.