

**David Trumper**  
Professor of Mechanical Engineering

**Education**

Ph.D., Electrical Engineering and Computer Science (EECS), MIT, 1990  
M.S., Electrical Engineering and Computer Science (EECS), MIT, 1984  
B.S., Electrical Engineering and Computer Science (EECS), MIT, 1980

**Academic Experience**

2004-Present            Professor of Mechanical Engineering, MIT  
2000- 2004            Associate Professor with tenure, MIT  
1996-1998            Associate Professor, MIT  
1995-1996            Assistant Professor, MIT  
1993-1998            Adjunct Professor, University of North Carolina  
1990-1993            Assistant Professor, University of North Carolina

**Non-Academic Experience**

1986-1987            Engineer, Waters Division of Millipore  
1980-1982            Engineer, Hewlett-Packard Co.  
1979-1979            Student employee, Teradyne, Inc.

**Certifications or Professional Registrations**

2018, Organizing Committee, ASPE Annual Meeting  
2018, NIH STTR Review Panel  
2017, Organizing Committee, ASPE Annual Meeting  
2017, NIH STTR Review Panel  
2016, *Co-Chairman*, ASPE Spring Topical Meeting, "Control of Precision Systems,"  
MIT, Cambridge, MA.

**Current Membership in Professional Organizations**

Institute of Electrical and Electronics Engineers (IEEE)  
American Society for Precision Engineering (ASPE)  
American Society of Mechanical Engineers (ASME)

**Selected Honors and Awards**

2017, MIT Committed to Caring Award  
2017, 2017 NI Engineering Impact Award, Advanced Research  
2016, IFAC Mechatronics Paper Prize  
2014, IFAC Mechatronics Paper Prize

**Service Activities Within and Outside of the Institution**

2012-Present, Independent Activities Period Coordinator  
2008-Present, Graduate Admissions Committee  
2001-2015, Departmental Awards Committee

### **Publications and Presentations from the Past Five Years**

Yoon, J-Y., and Trumper, D.L., "Strong and Quiet Linear Iron-Core Synchronous Motor," submitted to the ASPE Annual Meeting, March, 2018

Noh, M., and Trumper, D.L., "Homopolar Bearingless Slice Motors Driving Reluctance Rotors," 16th International Symposium on Magnetic Bearings, Beijing, China, August, 2018

Zhou, L., Hamer, T., Harrison, H., and Trumper, D.L., "New Take-Home Laboratory Experiments for Enabling Hands-On Engineering Education," submitted to National Instruments NIWeek, February, 2018

Yoon, J-Y., and Trumper, D.L., "Strong and Quiet Linear Iron-Core Synchronous Motor," ASPE Annual Meeting, October 30-November 2, 2017

T. T. Hamer, L. Zhou, D. L. Trumper, V. Perez, A. Gil, A. H. Slocum, and N. Calvet, "Implementation of thermal-insulating and mixing elements in a concentrated solar power on demand system," SolarPACES 2017, Concentrated Solar Power and Chemical Energy Systems, September 26-29, 2017, Santiago de Chile, Chile

Book chapter: Trumper, D.L., Hocken, R.J., Amin-Shahidi, D., Ljubicic, D., and Overcash, J., *High Accuracy Atomic Force Microscope*. In *Control Technologies For Emerging Micro And Nanoscale Systems*, Lecture Notes in Control and Information Sciences, 2011, Volume 413/2011, 17-46.

Yoon, J-Y., and Trumper, D.L., "High-Force, Linear Iron Core Fine-Tooth Motor," 11<sup>th</sup> International Symposium on Linear Drives for Industry Applications, Osaka Japan, September 6-8, 2017

T. T. Hamer, L. Zhou, D. L. Trumper, A. H. Slocum, and N. Calvet, "An origami-inspired design of a thermal mixing element within a concentrated solar power system." In *ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, American Society of Mechanical Engineers, 2017

Noh, M., Gartner, M., and Trumper, D.L., "Magnetically Levitated Blood Pump Impeller for Life Support," National Instruments NIWeek Conference, Austin, TX, May, 2017.  
**Winner of 2017 NI Engineering Impact Award in Advanced Research category.**

### **Professional Development Activities in the Last Five Years**

2014-Present, Advisory Board, NASCENT NSF Engineering Research Center, University of Texas at Austin, Austin, TX.

2015-Present, HTSC Advisory Board, High-Tech Systems Center, Technical University of Eindhoven, Netherlands