

## **Robert J. Hannemann**

Director, Tufts Gordon Institute, 2007 – 2014

Professor of the Practice, Tufts University Department of Mechanical Engineering, 2007 –

Chairman *ad interim*, Tufts Department of Mechanical Engineering, 2010 – 2013

### ***Education***

Sc.D., Mechanical Engineering, Massachusetts Institute of Technology, 1975

M.S., Mechanical Engineering, New York University, 1972

B.S., Mechanical Engineering, Illinois Institute of Technology, 1970

### ***Academic Experience***

Tufts University Mechanical Engineering Department, Professor of the Practice (2007 - present)

University of Maryland, Assistant Professor of Mechanical Engineering (1976-1978)

### ***Professional Experience***

Thermal Form and Function, Inc., Founder and Senior Advisor (2005 – present)

Atlantic Technologies (technology consulting) Principal, (2003-present)

Lasersharp, Inc. (optical amplifiers), CEO (2001-2003)

Corning, Inc., VP Business Development (2000-2001)

Lasertron, Inc. (semiconductor lasers), President and General Manager (1996-2000)

Digital Equipment Corp., Business Unit General Manager (1993-1996)

Digital Equipment Corp., Principal Engineer to Senior Corporate Consultant (1978-1993)

Bell Telephone Laboratories, Member of Technical Staff (1970-1976)

### ***Professional License***

PE, State of Maryland

### ***Professional Membership***

ASME

### ***Selected Honors and Awards***

**2010** Fellow, ASME

**1986** IEEE Outstanding paper in Technology and VLSI

**1977** ASME Henry Hess Award

### ***Patents***

*Integral Heat Pipe Module* (US 4,833,567)

*Tape Automated Bonding Semiconductor Package* (US 4,914,741)

*Integral Heatsink Semiconductor Package* (US 5,158,912)

Others pending

### ***Service Activities***

Dean's Cabinet (2007- 2014)

School of Engineering Graduate Committee (2008 - 2014 )

Corporate Development Committee (2007 – 2009)

Proposal External Reviewer, U.S. DOE (2010)

## *Partial Publication List*

### *Book:*

R. Hannemann, Alan Kraus, and M. Michael Pecht, *The Physical Architecture of VLSI Systems*, John Wiley and Sons, New York (1994).

### *Journal Articles:*

1. "Analysis of Surface Mount Thermal and Thermal Stress Performance," IEEE Trans. Components, Hybrids, and Manufacturing Technology, vol. CHMT-6(3), 257-266 (1983) (with D. Waller and L. Fox).
2. "Externally Pumped Rankine Cycle Thermal Transport Devices," Progress in Aeronautics and Astronautics, vol. 70, 293-306 (1979).
3. "Thermal Analysis and Design Considerations for a Dual-Beam Microwave Applicator for Hyperthermia Research," Journal of Biomechanical Engineering, vol. 101, 151-156 (1979) (with J. E. Robinson).
4. "Surface Thickness Effects in Dropwise Condensation," International Journal of Heat and Mass Transfer, vol. 21, 65-66 (1978).
5. "Electronic System Thermal Design for Reliability," IEEE Trans. On Reliability, vol.26(5), 306-311 (1977).
6. "Thin Film Conducting and Semiconducting Resistance Thermometers for Surface Temperature Measurement," Trans. ASME: Journal of Engineering for Power, vol. 99(3), 385-390 (1977).

### *Refereed Symposium Papers:*

1. "Analysis of Alternative Data Center Cooling Approaches," *ASME InterPACK 07*, Vancouver, BC (2007) (with H. Chu).
2. "Thermal Design and Performance of Two-Phase Micro-Scale Heat Exchangers," *ASME National Heat Transfer Conference*, San Francisco, CA (2005) (with J. Marsala and M. Pitasi).
3. "Physical Technology for VLSI Systems," *Proc. IEEE International Conference on Computer Design: VLSI in Computers*, 48-53 (1986).