

# Sheng-Jen ("Tony") Hsieh

## Education

Texas Tech University, Lubbock, TX	Industrial Engineering, with minor emphasis in Computer Science	Ph.D., 1995
St. Mary's University, San Antonio, TX	Industrial Engineering	MS, 1989
National Taipei Institute of Technology, Taipei, Taiwan	Industrial Engineering	BS, 1982.

## Employment

**Associate Professor and Graduate Faculty Member**, Dept. of Engineering Technology (Joint Appointment with Dept. of Mechanical Engineering), Texas A&M University, College Station, TX, 2004-present (Assistant Professor, 1998-2004).

**Research Associate**, Air Force Research Laboratory, Wright-Patterson AFB, OH, Summer, 2003

**Research Associate**, Army Aeromedical Research Laboratory, Fort Rucker, AL, Summers, 1999-2002.

**Research Associate**, San Antonio Air Logistics Center, Kelly Air Force Base, TX, Summer, 1998.

**Assistant Professor and Graduate Faculty Member**, Manufacturing Engineering Program, Dept. of Engineering, The University of Texas-Pan American, Edinburg, TX, 1996-98.

**Instructor**, Automation and Robotics Program, Texas State Technical College, Sweetwater, TX, 1995-96

**Teaching/Research Assistant**, Texas Tech University, Lubbock, TX, 1990-92

**Quality Planning Engineer**, Yue-Loong Motor Corporation, Taiwan, 1984-86

**Quality Assurance Engineer**, Army Heavy Vehicles Maintenance Base, Taiwan, 1982-84

## Honors and Awards

**National Science Foundation (NSF) CAREER Award**, "CAREER: Understanding and Supporting the Acquisition of Manufacturing Automation System Integration Skills," 2003-2008.

**American Society for Engineering Education (ASEE) Annual Conference Best Paper Award, PIC I**, 2005  
ASEE Annual Conference and Exposition, Portland, OR  
(<http://www.asee.org/conferences/annual/2005/AwardWinners.cfm>)

**Halliburton Faculty Fellow**, Texas A&M University Engineering Program, 2005-2006.

**Texas A&M University Association of Former Students' College Level Teaching Award**, 2004

**Assessing Technology in Teaching Award**, 2004 (one of two Texas A&M University faculty to receive this award).

**Air Force Office of Scientific Research Summer Faculty Fellowship**, Air Force Research Laboratory Human Effectiveness Directorate (AFRL/HECV) and Materials and Manufacturing Directorate (AFRL/ML), Wright-Patterson AFB, OH, Summers, 2003-2004. Administered by The National Academies for the Air Force Office of Scientific Research.

**Army Summer Faculty Research Fellowship**, Army Aeromedical Research Laboratory, Fort Rucker, AL, Summers, 1999-2002

**Air Force Office of Scientific Research Summer Faculty Fellowship**, San Antonio Air Logistics Center, Kelly AFB, TX, Summer, 1998.

## Research and Education Interests

Dr. Hsieh's areas of research are highly interdisciplinary and include (1) system integration; (2) adaptive learning systems; (3) design of simulations and animations for engineering education; (4) infrared imaging for defect diagnosis and stress failure prediction; and (5) use of nanotubes for nanosensor fabrication. Several of his projects have involved collaborating across fields and with researchers from military research labs and industry.

In the area of system integration, his research has focused on understanding the nature of system integration knowledge and developing adaptive systems for teaching automated system design problem-solving (<http://etidweb.tamu.edu/hsieh/asi.html>). He is currently collaborating with managers and engineers from more than 20 system integration firms in the U.S. and Europe on this research. His long-term goal is to develop an International Center for Manufacturing Automation System Integration Research and Education, funded by NSF and private industry.

Dr. Hsieh has also designed and developed Virtual PLC, a web-based system consisting of animations,

simulations, and intelligent tutors intended to help students learn about programmable logic controllers ([http://etidweb.tamu.edu/hsieh/Hsieh\\_VirtualPLC.html](http://etidweb.tamu.edu/hsieh/Hsieh_VirtualPLC.html)). Over 123 instructors have registered to use this system, including 70 from four-year institutions and 49 from two-year institutions. Many of these institutions are located in rural areas of the U.S., and a few are in Canada and Saudi Arabia. Virtual PLC has been evaluated by students and instructors at Texas A&M University and other institutions and has been very well received.

In the area of infrared imaging for defect diagnosis and stress failure prediction, Dr. Hsieh's research has focused on use of active and passive thermal imaging techniques to examine thermal profiles; and on design and development of hybrid experimental and analytic models that describe thermal transfer properties. This research uses a non-destructive testing approach and has a wide range of potential applications, from electronics defects diagnosis to detection of internal defects in vegetables and fruits. Research to date has been supported by the Air Force, Solectron Corporation (now called Flextronics), the Texas Higher Education Coordinating Board, and Texas A&M University Office of Vice President for Research.

In the area of nanotube fabrication and nanosensor design, Dr. Hsieh's research interests include nano insulating film (such as AAO film), nano rods/balls, multi-layer nanotube composites, nano heat-sinks, and nano device design. He is collaborating with international researchers (National Chiao-Tung University) and the medical research community (University of Texas in San Antonio) on nanotube fabrication for nanosensor design.

Overall, Dr. Hsieh's efforts have resulted in \$1,102,457 of research support (his share = \$1,047,726, or 95%), which includes \$1,001,469 in external support and \$100,988 in internal support. He has been the PI on 18 of his 19 grants.

### Grant Support (Selected)

Title	Source (* = external)	Duration	Amount
<i>Design for Remote Monitoring, Control, and Diagnosis of Automated Assembly System</i>	TAMU Office of Vice President for Research	Sept 07 to Aug. 08	\$24,000
<i>Hybrid Active Imaging Techniques for Potato Inspection</i>	TAMU Office of Vice President for Research	Sept 06 to Aug. 07	\$24,000
<i>Enhancement and Dissemination of Virtual PLC for Programmable Logic Controller</i>	*National Science Foundation	June 04 to Dec. 07	\$240,000
<i>Analysis Tool and Methodology Design for Electronics Vibration Stress Understanding and Prediction</i>	*Air Force Office of Scientific Research	May 04 to July 04	\$12,500
<i>CAREER: Understanding and Supporting the Acquisition of Manufacturing Automation System Integration Skills</i>	*National Science Foundation	June 03 to May 08	\$473,675
<i>Noise Modeling for Night Vision Goggles</i>	*Air Force Office of Scientific Research	May 03 to July 03	\$12,500
<i>Virtual Laboratory for Advanced Manufacturing Automation and Control</i>	TAMU Office of Vice President for Research	Sept. 02 to Nov. 03	\$25,000
<i>Integrated Virtual Learning System for Programmable Logic Controller</i>	*National Science Foundation	Feb. 01 to Jan. 04	\$74,999
<i>Design, Verification and Validation of an Image Quality Tester for Helmet-Mounted Displays</i>	*U.S. Army Aeromedical Research Laboratory	Summers, 99 to 01	\$47,781
<i>Use of Thermal Signature for Constellation Board Stress Failure Diagnosis</i>	*Solectron Corporation	Dec. 00 to Jan. 01	\$20,509
<i>Thermal Signature for Lithium Ion Battery Testing</i>	TAMU Energy Research Initiative	Sept. 00 to Jun. 01	\$25,000
<i>Generic Thermal Signature Library for Circuit Card Inspection</i>	*Texas Higher Education Coordinating Board	Jan. 00 to Jun 02	\$ 66,424
<i>Statistical Process Control for Air Frame Assembly Processes</i>	*Bell Helicopter Textron	June 99 to June 00	\$53,081
<i>Robotic Workcell Design for Battery Handling and Sorting Process</i>	*Arbin Instruments	May 99 to Feb 00	\$18,040

## Publications

### Refereed Journal Articles (Published)

- Say, W.C., Chen, C.C., and Hsieh, S. "Electrochemical characterization of non-chromate surface treatments on AZ80 magnesium," *Materials Characterization*, accepted for publication on 2007-12-29.
- Hsieh, S. "Problem-Solving Environment for Line Balancing Automated Manufacturing Systems," *Computer Applications in Engineering Education*, accepted for publication in December 2006.
- Hsieh, S., "Robotic Workcell Design Toolkit for Automated System Integration Education," *International Journal of Engineering Education*, 23(2), March 2007, pp. 394-402.
- Hsieh, S., Crane, R., and Sathish, S., "Understanding and Predicting Electronic Vibration Stress Using Ultrasound Excitation, Thermal Profiling, and Neural Network Modeling," *Nondestructive Testing and Evaluation*, 20(2), June 2005, pp. 89-102.
- Hsieh, S. and \*Huang, S. "A Methodology for Microcontroller Signal Frequency Stress Prediction," *Microelectronics Reliability*, 45, 2005, pp. 1243-1251.
- Hsieh, S. and Hsieh, P.Y. "Web-based Modules for Programmable Logic Controller Education," *Computer Applications in Engineering Education*, 13(4), Dec 2005, pp. 266-279.
- Hsieh, S. "Artificial Neural Networks and Statistical Modeling for Electronic Stress Prediction Using Thermal Profiling," *IEEE Transactions on Electronics Packaging Manufacturing*, 27(1), January, 2004, pp. 49-58.
- Hsieh, S. and Hsieh, P.Y., "An Integrated Virtual Learning System for Programmable Logic Controller," *Journal of Engineering Education*, 93(2), April, 2004.
- Hsieh, S. "Reconfigurable Modules, Programmable Logic Controller, and Vision System for Dual Robot Assembly Workcell Design," *Journal of Advanced Manufacturing Systems*, 2(2), December, 2003, pp. 201-228.
- Hsieh, S., Harding, T.H., Rash, C.E., Beasley, H.H., and Martin, J.S. "Helmet-Mounted Display Image Quality Evaluation System," *IEEE Transactions on Instrumentation and Measurement*, 52(6), December, 2003, pp. 1838-1845.
- Hsieh, S. "Re-configurable Dual Robot Assembly System Design, Development and Future Directions," *Industrial Robot: An International Journal*, 30(3), 2003, pp. 250-257.
- Hsieh, S. and Hsieh, P.Y., "Animations and Intelligent Tutoring Systems for Programmable Logic Controller Education," *International Journal of Engineering Education*, 19(2), 2003, pp. 282-296.
- Hsieh, S., "Hybrid analytic and simulation models for assembly line design and production planning," *Simulation Modeling Practice and Theory*, 10, 2002, pp. 87-108.
- Hsieh, S. and Hsieh, P.Y., "Intelligent tutoring system authoring tool for manufacturing engineering education," *International Journal of Engineering Education*, 17(6), 2001, pp. 569-579.
- Mori, K., Nguyen, N., and Hsieh, S. "Prioritizing Efforts to Improve Yield," *International Journal of Industrial Engineering*, 2000, 7(4), pp. 275-280.
- Hsieh, S., Rhoades, G. and Chan, S. "Robot Workcell Design for Hydraulic Cement Mortars Mixing Process," *Industrial Robot: An International Journal*, 1998, 25(3), pp. 205-212.

### Refereed Journal Articles (Under Review or Revision)

- Chen, C.C., Say, W.C., Hsieh, S. and Diau, E. "A Mechanism for Disorder Transformation in the Fabrication of Anodic Titanium Oxide Nanochannel Arrays," *Materials Chemistry and Physics*, under review, submitted on 2007-11-06.
- Kuo, C.G., Chen, C.C., and Hsieh, S., "Fabrication of Bismuth Nanoballs Using Thermal Oil Reflow," *Materials Characterization*, under review (MTL-4282R3, revision submitted 2007-09-15)
- Chen, C.C., Hsieh, S., and Say, W.C. "Technique for Self-Assembly of Tin Nano-Particles on AAO Templates," *Journal of the Ceramic Society of Japan*, under review (R-07012, submitted on 2007-08-02).
- Hsieh, S. and Hsieh, P.Y. "Comparison of Adaptive and Non-Adaptive Approaches to Instruction," under revision for *Journal of Engineering Education*.
- Hsieh, S., \*Wang, C.Y., and Hsieh, P.Y. "Cognitive Task Analysis Methods and Applications in Manufacturing Engineering," under review for *Human Factors in Ergonomics and Manufacturing*.

### Manuscripts in Preparation

- Hsieh, S. "Flexible Assembly Systems: Review and Future Directions," for *Journal of Manufacturing Systems*.
- Hsieh, S. "Review of Thermal Signature for Printed Circuit Board Inspection," for *IEEE Transactions on Electronics Packaging Manufacturing*.

- Hsieh, S. "Learning and Dynamic Thresholding Algorithms for Machine Vision Systems," for Journal of Manufacturing Systems.
- Hsieh, S., Smith, M., and Macedo, J. "Integrated Learning Algorithms for Defect Diagnosis," for Journal of Quality Technology.
- Hsieh, S., "Thermal Signature for Lithium-Ion Polymer Battery Inspection," for Journal of Power Sources.

#### Refereed Papers in Conference Proceedings

- Yao, A.W.L. and Hsieh, S. "VR-Based Factory Planning and Estimation System for Engineering and Education, under review for Proceedings of the ASME 2008 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE 2008), August 3-6, 2008, Brooklyn, New York, USA
- Hsieh, S. and Cheng, Y.T. "Intelligent Tutor for Ladder Logic Programming," accepted for presentation at 2008 ASEE Annual Conference, June 22-25, 2008, Pittsburgh, PA.
- Hsieh, S. "Analysis of Verbal Data from Automated System Design Problem-Solving," accepted for presentation at 2008 ASEE Annual Conference, June 22-25, 2008, Pittsburgh, PA.
- Hsieh, S. and \*Sun, C.C. "Active Thermography for Potato Characterization," Thermosense XXX, Proceedings of SPIE, 2008, Vol. 6939.
- Hsieh, S., "Conceptual Design Environment for Automated Assembly Line – Framework," 2007 ASEE Annual Conference, June 25-28, 2007, Honolulu, HI.
- Hsieh, S., "Thermal Profiling Techniques for Electronics Inspection," Thermosense XXIX, Proceedings of SPIE, 2007, Vol. 6541.
- Hsieh, S. and Scott, W. "Web-Based Control of Industrial Robot," Proceedings of the 2006 International Symposium on Flexible Automation, July 10-12, 2006, Osaka, Japan.
- Hsieh, S. and \*Sharma, K. "On-board SRAM signal density stress prediction," Thermosense XXVIII, Proceedings of SPIE, 2006, Vol. 6205.
- Hsieh, S. and \*Sharma, K. "Thermography and Neural Networks for SRAM Voltage Stress Prediction," Thermosense XXVIII, Proceedings of SPIE, 2006, Vol. 6205.
- Hsieh, S. and \*Kim, H. "Automated Robotic Workcell Design Toolkit – Preliminary Evaluation," 2006 ASEE Annual Conference, Chicago, IL, June 18-21, 2006.
- Hsieh, S., and \*Gray, L. "Cognitive Support for Learning PLC Programming: Computer-Based Case Studies," 2006 ASEE Annual Conference, June 18-21, 2006.
- Hsieh, S. and \*Kim, H. "Web-Based Problem-Solving Environment for Line Balancing Automated Manufacturing Systems," Proceedings of 2005 ASEE Annual Conference, June 12-15, 2005, Portland, OR. (Winner of ASEE Annual Conference Best Paper Award, PIC I).
- Hsieh, S. "Automated Manufacturing System Integration Education: Current Status and Future Directions," Proceedings of 2005 ASEE Annual Conference, June 12-15, 2005, Portland, OR.
- Hsieh, S. "Design of Web-Based Ladder Logic Tool Kit for Programmable Logic Controller Education," Proceedings of 2005 ASEE Annual Conference, June 12-15, 2005, Portland, OR.
- Hsieh, S., Crane, R., and Sathish, S. "Analysis Tool and Methodology Design for Electronic Vibration Stress Understanding and Prediction." Thermosense XXVII, Proceedings of SPIE, 2005, vol. 5782, pp. 221-233.
- Hsieh, S., Hsieh, P.Y., and \*Zhang, D. "Characterizing Effects of Adaptivity within an Intelligent Tutoring System," Frontiers in Education Conference Proceedings, Savannah, GA, October 20-23, 2004 (on CD-ROM).
- Hsieh, S. "WIP: Integrated Technology for E-Diagnosis of Automated Manufacturing Systems," Frontiers in Education Conference Proceedings, Savannah, GA, October 20-23, 2004 (on CD-ROM).
- Hsieh, S., \*Huang, S.-L. and \*Chang, S.-C. "Microcontroller Signal Density Stress Prediction Framework," Thermosense XXVI, Proceedings of SPIE, 2004, vol. 5405, pp. 476-486.
- Hsieh, S., Hsieh, P., and \*Zhang, D., "Web-Based Simulations and Intelligent Tutoring System for Programmable Logic Controller," Frontiers in Education Conference Proceedings, Boulder, CO, November 5-8, 2003 (on CD-ROM).
- Hsieh, S., Harding, T.H., Rash, C.E., Beasley, H.H., and Martin, J.S., "Proof of Principle for Helmet-Mounted Display Image Quality Tester," in Helmet- and Head-Mounted Displays VIII, Proceedings of SPIE, 2003, vol. 5079, pp. 63-74.
- Hsieh, S. and \*Huang, S. "Thermal Profiling for IC Chip High-Voltage Stress Prediction," Thermosense XXV, Proceedings of SPIE, 2003, vol. 5073, pp. 264-276.
- Hsieh, S. and Hsieh, P.Y., "Web-based Programmable Logic Controller Learning System," Frontiers in Education

- Conference Proceedings, Boston, MA, November 6-9, 2002 (on CD-ROM).
- Hsieh, S. "Neural Network and Statistical Modeling Techniques for Electronic Stress Prediction," *Thermosense XXIV, Proceedings of SPIE, 2002, Vol. 4710, pp. 626-637.*
- Hsieh, S., Harding, T.H., and Rash, C.E. "Design of an Image Quality Tester," *Helmet- and Head-Mounted Displays VI, Proceedings of SPIE, 2001, Vol. 4361, pp. 205-212.*
- Hsieh, S. "Thermal Signature for Printed Circuit Boards Stress Failure Diagnosis," *ThermoSense XXIII, Proceedings of SPIE, 2001, Vol. 4360, pp. 60-70.*
- Hsieh, S. and Calderon, A. "Thermal Signature for Solder Defects Detection and Prevention Using a Neural Network Approach," *Thermosense XXIII, Proceedings of SPIE, Vol. 4360, pp. 636-643, 2001.*
- Hsieh, S. and Hsieh, P.Y., "Intelligent Tutoring Systems for Manufacturing Engineering Education," in *Proceedings of the 5th Annual International Conference on Industrial Engineering Theory, Applications and Practice, December 13-15, 2000, Hsinchu, Taiwan.*
- Hsieh, S. "Design of an Automated Robotic Assembly System for Rechargeable Battery Handling and Sorting Processes," in *Proceedings of the 5th Annual International Conference on Industrial Engineering Theory, Applications and Practice, December 13-15, 2000, Hsinchu, Taiwan.*
- Hsieh, S. "A Robust Thermal Signature for Circuit Card Defect Diagnosis," *Flexible Automation and Intelligent Manufacturing 10th International Conference Proceedings, June 28-30, 2000, College Park, MD, pp. 741-749.*
- Mori, K. and Hsieh, S. "Yield Improvement Procedures for Particle Defects," in *Proceedings of the 4th Annual International Conference on Industrial Engineering Theory, Applications and Practice, November 17-20, 1999, San Antonio, TX (on CD-ROM).*
- Hsieh, S. "A Robust Configurable Vision Module for Printed Circuit Board Defect Identification," in *Proceedings of the 3rd Annual International Conference on Industrial Engineering Theory, Applications and Practice, November 17-20, 1999, San Antonio, TX (on CD-ROM).*
- Hsieh, S., \*Andrade, J., \*Cabrales, A., and \*Martinez, V. "Automated Storage/Retrieval System Design Using Ladder Diagrams and Icon-based Programs," in *Proceedings of the 1999 ASEE Annual Conference and Exposition, Charlotte, NC (on CD-ROM).*
- Hsieh, S. and Bose, S. "An Integrated Approach to Manufacturing Engineering Course Project Design." In *American Society for Engineering Education (ASEE) Gulf Southwest Section Annual Conference Proceedings, 1999 (on CD-ROM, filename Hsieh084.PDF).*
- Hsieh, S. "Hybrid Analytic and Simulation Models for Assembly Line Design and Production Planning," In *Proceedings of the 3rd Annual International Conference on Industrial Engineering Theories, Applications and Practice, December 28-31, 1998, Hong Kong (on CD-ROM, ISBN 0-9654599-3-4, filename PN208.PDF).*
- Hsieh, S. "Integration of Manufacturing System Design into Curriculum," in *SME Proceedings of the 2nd International Conference on Education in Manufacturing, October 14-16, 1998, San Diego, CA, pp. 121-125.*
- Hsieh, S. "An Intelligent Automatic Thresholding Component for Machine Vision Systems," In *Flexible Automation and Intelligent Manufacturing 8th International Conference Proceedings, July 1st to July 3rd, 1998, Portland, Oregon, pp. 655-664.*
- Hsieh, S. and Rhoades, G. "Robotic Workcell Design for Cement Mortars Production," in *Proceedings of Robotics 98-The 3rd ASCE Specialty Conference on Robotics for Challenging Environments, 1998, pp. 126-132.*
- Hsieh, S., Smith, M.L., and Macedo, J.A. "Integrated Learning Strategies for Defects Diagnosis," in *Proceedings of the 2nd Annual International Conference on Industrial Engineering Applications and Practice, 1997, pp. 755-760.*
- Hsieh, S., Bose, S. and \*Tovar, J. "Use of Group Technology and Simulation Modeling for Facility Layout Design at Whirlpool Corporation in Reynosa," in *Proceedings of the 2nd Annual International Conference on Industrial Engineering Applications and Practice, 1997, pp. 175-180.*
- Hsieh, S. "Simulation for Engine Plant Warehouse Design at an Automobile Manufacturing Facility," in *Proceedings of the International Association of Science and Technology for Development International Conference on Applied Modeling and Simulation, 1997, pp. 408-411.*
- Hsieh, S. "Simulation for Multiple Buffer Storage Design in a Multi-Stage and Mixed-Model Production Environment at an Automobile Manufacturing Facility," in *Proceedings of The International Association of Science and Technology for Development International Conference on Applied Modeling and Simulation, 1997, pp. 412-414.*
- Hsieh, S. "Use of Reverse Engineering Concept for Engineering Course Design," in *American Society for Engineering Education (ASEE) Gulf Southwest Section Annual Conference Proceedings, March, 1997, pp. 16-18.*
- Hsieh, S. "Experiences in Computer-Integrated Manufacturing Laboratory Design," in *American Society for*

Engineering Education (ASEE) Gulf Southwest Section Annual Conference Proceedings, March, 1997, pp. 411-413.

Hsieh, S. and Rhoades, G. "Using an Industry Project for Engineering Capstone Work," in American Society for Engineering Education (ASEE) Gulf Southwest Section Annual Conference Proceedings, March, 1997, pp. 273-278.

\*Tovar, S., Hsieh, S. and Bose, S.C. "Simulation of Plant Layouts and FMEA of a Manufacturing Process," in American Society for Engineering Education (ASEE) Gulf Southwest Section Annual Conference Proceedings, March, 1997, pp. 622-625.

Ford, R. and Hsieh, S. "Integration of Equipment for a Flexible Manufacturing Laboratory" in American Society for Engineering Education (ASEE) Annual Conference Proceedings, 1991.

Dieck, A., Hsieh, S. and Moras, R.G. "Development of a Simulation Model for an Automobile Facility Using Just-in-Time Concepts," in Proceedings of the Twenty-first Annual Modeling and Simulation Conference, University of Pittsburgh, 1990.

### Technical Reports

Hsieh, S. (2004), Analysis Tool and Methodology Design for Electronics Vibration Stress Understanding and Prediction. Report of research performed for Air Force Research Laboratory, Materials and Manufacturing Technology Division (AFRL/ML).

Hsieh, S. (2003), Noise Modeling for Night Vision Goggles. Report of research performed for Air Force Research Laboratory, Crew Systems Interface Division, Visual Systems Display Branch (AFRL/HECV).

Hsieh, S. (2002), Proof of Principle for Helmet-Mounted Display Image Quality Tester. Report of research performed under Contract No. DAAD19-02-D-2001, TCN 02-065. Fort Rucker, AL: U.S. Army Aeromedical Research Laboratory.

Hsieh, S. (2001). Preliminary Verification and Validation of IHADSS Tester. Report of research performed under Battelle Scientific Services Contract No. DAA H04-96-C-0086 (TCN 01-065). Fort Rucker, AL: U.S. Army Aeromedical Research Laboratory, 2001, pp. 1-67.

Hsieh, S. (2001). Use of Thermal Signature for Constellation Board Stress Failure Diagnosis, Final Report submitted to Solectron Texas, February 2001, pp. 1-26.

Hsieh, S., Rash, C. E., Mora, J.C., Harding, T.H., and Beasley, H. H. (2000). Design of Interface and Algorithms for an Image Quality Tester, Report No. USAARL-2000-26, Fort Rucker, AL: U.S. Army Aeromedical Research Laboratory (available at <http://stinet.dtic.mil/>, record accession no. ADA383159).

Hsieh, S., Rash, C.E., Harding, T.H., Beasley, H.H., and Martin, J.S. (2000). Preliminary Design of an Image Quality Tester for Helmet-Mounted Displays. Report No. USAARL-2000-08. Fort Rucker, AL: U.S. Army Aeromedical Research Laboratory (available at <http://stinet.dtic.mil/>, record accession no. ADA371607).

Hsieh, S. (1999). Robotic Workcell Design for Battery Handling and Sorting Process. Final Report submitted to Arbin Instruments, pp. 1 – 15.

Hsieh, S. (1998). Thermal Signature for Circuit Card Fault Identification. Air Force Office of Scientific Research Summer Research Report, pp. 6-1 to 6-17.