CURRICULUM VITAE

NAME: Bradley A. Kramer

TITLE: Associate Professor and Head, Industrial & Manufacturing Systems Engineering
Director, Advanced Manufacturing Institute

DEGREES: B.S., Industrial Engineering, Kansas State University, 1980
M.S., Industrial Engineering, Kansas State University, 1981
Ph.D., Industrial Engineering, Kansas State University, 1985

ACADEMIC EXPERIENCE:

Director, Advanced Manufacturing Institute, 2000 –
Department Head, Industrial and Manufacturing Systems Engineering, KSU, 1993 –
Acting Director, Advanced Manufacturing Institute, Fall, 1997
Associate Professor, Industrial & Manufacturing Systems Engineering, KSU, 1992 –
Assistant Professor, Industrial & Manufacturing Systems Engineering, KSU, 1985 – 1991
Associate Director for Research & Laboratory Development, Center for Research in Computer Controlled Automation, Kansas State University, 1988 - 1990.
Research Associate, Air-Force-SCEEE Summer Faculty Research Program, Wright-Patterson AFB, Summer 1983.
Instructor, Department of Management, Kansas State University, 1981 – 1984.

PROFESSIONAL SOCIETY MEMBERSHIPS:

American Society of Engineering Educators
Institute of Industrial Engineers (KSU Student Chapter Advisor)
Society of Manufacturing Engineers/CASA
Institute for Operations Research and Management Science

HONORS AND AWARDS:

Honorary Societies: Phi Kappa Phi, Sigma Xi, Tau Beta Pi, Alpha Pi Mu
Outstanding Advisor in the College of Engineering, 1992
ASEE/Dow Outstanding Young Faculty Award, 1990
Ralph Teetor Outstanding Engineering Educator, Society of Automotive Engineers, 1988
James Hollis Award for Excellence in Undergraduate Engineering Education; KSU College of Engineering, 1988
Halliburton Professor, College of Engineering, Kansas State University, 1985, 1990
Outstanding Undergraduate Teacher in Industrial Engineering, KSU, 1985, 1986, 1987, 1988

PROFESSIONAL SERVICE APPOINTMENTS:

IDEA Center Board of Directors, 2001 –
National Textile Center, Scientific Review Committee, 2000 – 2005

EXTRAMURAL GRANTS RECEIVED:

NSF Grant EEC 0438691: **Partnership to Accelerate Commercialization of Kansas Bioscience Products and Technologies (October 2004 – September 2007)**
This project creates a coalition to accelerate commercialization of bioscience technologies and products in Kansas. Project partners include: Agriculutural Innovation Center, Bioprocessing and Industrial Value-Added Program, Kansas Department of Commerce (KDOC), and Kansas Technology Enterprise Corporation (KTEC). I am the principal investigator. The project was funded by the National Science Foundation for three years ($592,000) with matching funds provided by KTEC ($62,000).

Early-Stage Technology Development Assistance Center: Bridging the Gap Between New Technologies and Commercialization (September 2004 – August 2007)
This project develop an early-stage technology development center that will provide engineering services in the form of technology development and applied research commercialization support to entrepreneurial university researchers, technology entrepreneurs, and small to medium sized manufacturers in Kansas. I am the principal investigator. The project was funded by the U.S. Economic Development Administration for three years ($465,000) with matching funds provided by KTEC and KDOC ($240,000).

Kansas Technology Enterprise Corporation Center of Excellence Core Grants (2000 –
As the director of the Advanced Manufacturing Institute, I am the principal investigator for annual grants from KTEC to operate the Advanced Manufacturing Institute as one of the KTEC Centers of Excellence. AMI is expected to enhance the technology based economy in Kansas through its support of research and development activities with these funds and must compete for funds annually and be examined by a national review team selected by KTEC on a bi-annual basis. FY 2005 ($765,000), FY 2004 ($765,000), FY 2003 ($860,000), FY 2002 ($900,000), FY 2001 ($900,000), and FY 2000 ($865,000).

Mid America Manufacturing Technology Center (MAMTC) Operations Grants (2000 –
As the director of the Advanced Manufacturing Institute, I am the principal investigator for annual grants from the MAMTC to operate a regional office. This grant supports direct engineering assistance for the small and medium sized manufactures in northeast Kansas. Contracts are negotiated on an annual basis. FY 2006 (in negotiation now), FY 2005 ($403,000), FY 2004 ($400,000), FY 2003 ($468,000), FY 2002 ($524,000), FY 2001 ($525,000), and FY 2000 ($514,000).

NSF Conference Grant #SES-0083159
AMI hosted an International Conference on University and Manufacturing Industry Collaboration on August 12 – 13, 2002 in Kansas City, Missouri. I served as the principal investigator for this grant and, consequently, the general chair for the conference. This conference was a forum for sharing different models of successful university/industry collaborations. Speakers included U.S. Senator Pat Roberts, the COO of the Pittsburgh Regional Alliance, the Vice President, Small & Medium Manufacturers Department - National Association of Manufacturers, and the president of the SSTI - State Science and Technical

Institute. International presenters include representatives from England and Germany. NSF funded the conference with $20,000.

Learning Center for Manufacturing: An Innovative Model for Manufacturing Engineering
This project helped built a learning factory for students to produce products for customers while gaining engineering experience. The project was funded by the Society of Manufacturing Engineers ($336,000) for 3 years (1999 – 2002) with matching funds provided by KTEC (250,000). I was a co-investigator on the original proposal and took on the principal investigator role when the previous PI left KSU in early 2000.

NSF Grant #EEC-9872307
An Engineering Learning Center: Model for Systemic Engineering Education Reform. This project extended the use of our manufacturing learning center model to more students in engineering, business, to vo-tech disciplines. I assumed the principal investigator role upon departure of the PI in early 2000. The project was funded by NSF ($800,000) for 3 years (1999 – 2002) with matching funds provided by KTEC ($450,000).

Provision of an Academic Coordinator & Other Academic Services to Support the Development of a Manufacturability Curriculum
I was the principal investigator on this project. This project provided technical assistance to the Kansas City Division of AlliedSignal (Honeywell now operates the KCP – funded by the U.S. Department of Energy) to help them develop their own manufacturability curriculum ($280,000).

Integrated Design, Manufacture, and Assembly Research Project
This project developed an interdisciplinary research laboratory for integrated design, manufacture, and assembly research (IDMA). I was the co-principal investigator on this project. The project was supported by the United States Department of Education ($375,000) and various industrial sources.

Development of a Flexible Material Handling Cell
This project developed an automated material handling cell for our Integrated design, Manufacture & Assembly research laboratory. I was co-investigator on this project. It was sponsored by KTEC ($100,000), and two manufacturing companies ($150,000).

Manufacturing Engineering Education Development at KSU.
1989-1990: I was the principal investigator for this project. The project provides $7,570 to support the development of the manufacturing engineering program at KSU. This grant provided $7,170 for digital readouts for our lathes and for bar code equipment and $400 for faculty development.
1988-1989: I was the principal investigator for this project. The project provided $11,535 to support the development of the manufacturing engineering program at KSU. This grant provided funds for microcomputers for our CAM laboratories, a graduate student fellowship, faculty development funds, and software from Microbot.
1987-1988: I was the principal investigator for this project. The project provided $10,600 to support the development of the manufacturing engineering program at KSU. This grant provided funds for faculty development and the purchase of an Apollo workstation.

1986-1987: I was the principal investigator for this project. The project provided $7,650 to support faculty development, the acquisition of manufacturing engineering library materials, and to purchase power workholding equipment and robot end effectors.

EQUIPMENT GRANTS

In addition to the above, I was responsible for the following equipment grants to Kansas State University (value in excess of $1M): a hydraulic turret punch press, a pallet assembly system, seven industrial robots, two programmable controllers, and a data logger/scanner system.

PUBLICATIONS & PRESENTATIONS:

Kramer, Bradley A., Jeff Tucker, Bret Lanz, and Dale Wunderlich, "AMI: A University-Based Early Stage Technology Development and Commercialization Agent," Proceedings of the 9th International Conference on Engineering Education, July 2006.

Azadivar, Farhad, Bradley Kramer, and Thomas Curry, "A Model for Integration of Engineering Education with Research and Regional Economic Development," Proceedings of the 9th International Conference on Engineering Education, July 2006.

Kramer, Bradley A., Malgorzata Rys, and Shing Chang, "A Minimally Intrusive Outcomes Assessment Strategy," Proceedings of the 9th International Conference on Engineering Education, July 2006.

Kramer, Bradley A., Jeff Tucker, Taylor Jones, Mel Beikmann, and Richard Windholz, "The Engineering Learning Center: A Model for Mentored Product Innovation," Proceedings of the 32nd ASEE/IEEE Frontiers in Education Conference, November 2002.

Kramer, Bradley A., Farhad Azadivar, Jeff Tucker, and Richard Windholz, "Manufacturing System Design Experiences for Engineering Students: Means to Address Competency Gaps," Proceedings of the 2002 American Society for Engineering Education Annual Conference & Exposition.

Kramer, Bradley A., Farhad Azadivar, and Jeff Tucker, "Engineering Learning Center: A model to Enhance the Engineering Educational Experience and Achieve Economic Development," Proceedings of the 2002 NSF Design, Manufacturing Grantees & Research Conference.

Kramer, Bradley A., Jeff Tucker, and Farhad Azadivar, "Manufacturing Learning Center: A Model to Enhance Manufacturing Engineering Education," Proceedings of NAMRC XXX, May 2002.

Kramer, Bradley A., Dale Basham, and Franklin Spikes, "Lifelong Engineering Education: A Cooperative University/Industry Approach," World Conference on Engineering, 1995.

Ben-Arieh, David and Bradley A. Kramer, "Computer Aided Process Planning for Assembly: Generation of Assembly Operations Sequence", International Journal of Production Research, Vol. 32, No. 3, 1994, pp. 643-656.

Cranmer, Laura and Bradley A. Kramer, "A Method to Estimate Robot Cycle Time," IBM Technical Report, 1992.

Gondhalekar, Sudhir and Bradley A. Kramer, "Flexible Automated Assembly From Product Specific and Generic Information," Proceedings of the Kansas Conference on Excellence in Manufacturing, 1992.

Bradley A. Kramer and Biju Andrews, "Evaluation of the Use of Dynamic Information in Job Shop Scheduling," Proceedings of the Kansas Conference on Excellence in Manufacturing, 1992.

Kramer, Bradley A., Arun Anur, Satya Nadanasundaram, and Suresh Reddy, "Comparison of an Expert System and A Neural Network Used to Perform Milling Diagnostics," Proceedings of the Fifth Oklahoma Symposium on Artificial Intelligence, 1991.

Kramer, Bradley A. and Ching-Lai Hwang, "Resource Constrained Project Scheduling: Modeling With Multiple Alternatives," Journal of Mathematical Computing and Modelling, Vol. 15, No. 8, pp. 49-63, 1991.

Lee, Y. Y., B. A. Kramer, and C. L. Hwang, "A Comparative Study of Three Lot-Sizing Methods for the Case of Fuzzy Demand," International Journal of Operations & Production Management, Vol. 11, No. 7, 1991.

Kramer, Bradley A., Arun Anur, Satya Nadanasundaram, and Suresh Reddy, "Comparison of an Expert System and A Neural Network Used to Perform Milling Diagnostics," Proceedings of the Fifth Oklahoma Symposium on Artificial Intelligence, 1991.

Kramer, Bradley A., "A Hands-On Approach to Production Planning and Control," Proceedings of the 1991 ASEE Annual Conference.

Lee, Y. Y., B. A. Kramer, & C. L. Hwang, "An Interactive Fuzzy Multiple Objective Linear Programming Approach to Aggregate Production Planning," Presented at the First International Conference on Automation Technology, Taiwan, 1990.

Lee, Y. Y., B. A. Kramer, and C. L. Hwang, "Part Period Balancing With Uncertainty: A Fuzzy Sets Theory Approach," International Journal of Production Research, Vol. 28, No. 10, pp. 1771-1778, 1990.

Kramer, Bradley A. and Satya Nadanasundaram, "Development of an Expert Milling Defect Diagnosis System," Proceedings of the Fourth Oklahoma Symposium on Artificial Intelligence, 1990.

Andrus, David, Bradley Kramer and Paul McCright, "Global Competitiveness: A Case for Cooperative Manufacturing/Marketing Education," Proceedings of the 1989 Annual Meeting of the Southern Marketing Association.

Kramer, Bradley A., Paul McCright, and David Andrus, "Manufacturing vs. Marketing: Breaking the Barriers," presented to the 1989 Midwest Section Meeting of ASEE.

DEGREE PROGRAMS DEVELOPED:

Responsible for defining and developing the Master of Engineering Management degree program and shepherding it through the Kansas Board of Regents approval process.

Responsible for defining and developing the baccalaureate degree program in manufacturing systems engineering at Kansas State University. Program was approved by the Kansas Board of Regents and was accredited by the Accreditation Board for Engineering and Technology in 1993.

UNIVERSITY COURSES TAUGHT:

Advanced Topics in Computer Integrated Manufacturing
Computer Aided Manufacturing
Computer Applications in Industrial Engineering
Industrial System Dynamics
Introduction to Industrial Engineering
Manufacturing Systems Design & Analysis
Numerical Control of Machine Tools
Product and Process Engineering
Production Management
Production Planning & Inventory Control
Production Process Engineering
Robotics
Topics in Automated Factory Concepts
Tool Engineering

WORKSHOPS DEVELOPED AND CONDUCTED:

Justification of Automation
Computer Numerical Control for the Small Manufacturer