Resume/Vitae

James R. Burns
EXECUTIVE SUMMARY

A. **Breadth of technical assignments in consulting and industrial contexts**

Dr. Burns has performed a broad range of technical assignments involving applications of process learning and maturity, applications of information technology, applications of management science, of simulation, and of project management. These assignments range from design of information and enterprise architectures to navigation computers using Kalman filters to development of inference engines for knowledge bases. He has contributed significantly to the methodology for formulation of dynamical models and he has developed new methods for causal knowledge representation and processing.

He is PMP credentialed by the Project Management Institute. He has served as Project Manager for many recent projects. The PMP certification requires a minimum of 4,500 hours of project management experience. He understands the unique aspects of IT project management and how to minimize/manage the risks associated with IT Project management. He has taught project management to MIS (Management Information Systems) majors for 20 years. More importantly he understands how concepts of learning (Senge), maturity (Humphrey) and theory of constraints (Goldratt) can be applied productively to projects and project management. Significant and substantial improvements to project management culture, governance and processes have been realized.

B. **Teaching Philosophy/pedagogy**

Dr. Burns encourages his students to think holistically, to think 'out of the box', to question the premises, to slaughter 'sacred cows,' to break old, outdated assumptions. Tomorrow's problem-solvers must be able to cope with increased complexity, particularly the dynamics thereof. He believes that solutions come from an understanding of the dynamics of the whole, not from emersion into details. Fundamental solutions come from an understanding of dynamic complexity, not detail complexity. He presents scenarios to his students and asks them to problem-solve these predicaments either orally or in writing.

He endeavors to model and espouse the highest levels of maturity and integrity to his students. "Your integrity is worth far more than your grade in this class," is a mantra he often uses. He fosters a strong work ethic and will not sacrifice substance for improved 'teacher evaluations.' Neither does he engage in grade inflation. He is also careful not to assign 'busy-work,' but instead makes certain that all of his assignments, projects, and exams contribute to the overall goal of the course—a thorough understanding of the discipline. He believes in keeping students informed throughout the course as to how they are doing and he often solicits feedback from the students as to how he is doing.

Dr. Burns enjoys teaching courses in operations management and project management as well as system dynamics. He has taught these courses for more than thirty years.

C. **Published research**

Dr. Burns is the author or co-author of over 100 journal articles, presented papers and publications on subjects as diverse as design of decision support systems to dynamical simulation of projects. Much of his published research is concerned with modeling continuous, lumped processes. He has also published several methods for automating the process of knowledge acquisition for causal systems.

D. **Textbook development**

Management Science: An Aid for Managerial Decision Making, Macmillan, (author order: Austin, Burns), 605 pp.

Management Science Models and the Microcomputer, Macmillan, (author order: Burns, Austin), 432 pp., (includes software on diskette).

Microcomputers: Business and Personal Applications, West, (author order: Burns, Eubanks), 630 pp.

Instructor's Manual and Test Bank to Accompany "Microcomputers: Business and Personal Applications", West, 310 pp.

E. **Current Technical Interests**

Dr. Burns is interested in consolidation and reconciliation of various methodologies for enterprise integration. This interest is consonant with his long-standing work in the areas of process modeling and simulation but also includes use of information technology to shorten information delays and the use of project management. An array of new methodologies and philosophies for enterprise integration have developed in recent years with names like just-in-time technology, enterprise architecture planning, concurrent engineering, time-based competition, continuous improvement, process innovation, workgroup computing, business process re-engineering, theory of constraints, process maturity and client/server technology. Dr. Burns is interested in the integration of these technologies in the pursuit of enterprise goals. The result of such integrations is always shortened lead and cycle times, lower cost and better quality.

F. **Current Textbook development**

1. **Information Systems Project Management: Processes and Practice. Drafts of twelve chapters currently exist.**

2. **Systems Thinking and Dynamical Simulation, -- Drafts of 10 chapters currently exist.**

3. **System and Enterprise Integration,--Drafts of five chapters currently exist.**

VITAE SHEET
James R. Burns

I. GENERAL INFORMATION

A.   **Personal Data**

    1. Home address: **9601 Toledo Ave.**
                                  Lubbock, Texas 79424-5020
    2. Citizenship: **United States**

    3. Marital Status: Married (Marilu), two children (Marianne and Rebekah) both married, living away from home

B.   **Academic and Professional Preparation**
    1. Formal education leading to degree
      Ph.D. Purdue University, 1973 (Systems, Operations Research)
      M.S.   Purdue University, 1967 (Engineering Science)
      B.S.   University of Colorado, 1966 (Engineering)

    2. Advanced Study not leading to degree
    15 graduate credits in Engineering at University of Washington (1968-1969)
    Intensive computer course at the Boeing Company
    Control systems courses at the Boeing Company

    3. Certificates
    Registered Professional Engineer in the State of Texas, No. 41941
    Certified in Integrated Resource Management (CIRM), APICS, 1996
    Certified by the Project Management Institute as a PMP (Project Management Professional), 2015

    4. Other professional preparation
          NASA ASEE Summer Faculty Fellow, 1978
          DOE ASEE Summer Faculty Fellow, 1980
          DOD ASEE Summer Faculty Fellow, 1985
          Certified Academic Jonah, 1993

C.   **Professional Experience**

    Teaching Positions Held

    Texas Tech University, College of Business Administration: Area Coordinator of Information Systems and Quantitative Sciences, July 1990 to Sept 1994..

    Texas Tech University, College of Business Administration: Professor of Information Systems   and Quantitative Sciences, 1984 to present.

    Texas Tech University, College of Business Administration: Associate Professor of Information   Systems and Quantitative Sciences, 1980 to 1984.

II. TEACHING EFFECTIVENESS

A. Courses Taught
          a. ISQS 3337   File Structures and C++ Programming Language
          b. ISQS 3344   Operations Management and Management Science
          c. ISQS 4343   Management Science/Operations Research II

d.	ISQS 4350	Information Systems Project Management (will teach this fall '08)
e.	ISQS 5337	Information Systems for Managers
f.	ISQS 5338	Information Technology for Managers
g.	ISQS 5341	Computer Models for Business, Industry, and Government
h.	ISQS 5342	Decision Theory and Management Science
i.	ISQS 5343	Production/Operations Management
j.	ISQS 6337	Business Programming Languages (will teach this fall '08)
k.	ISQS 6340	Decision Support Systems
l.	ISQS 6342	Mathematical Programming for Business
m.	ISQS 6343	Quantitative Analysis for Business (Nonlinear Programming)
n.	ISQS 7340	Management of Information Systems
o.	BA 3304	Operations Management to non-business majors
p.	BA 4381	Independent Study for Undergraduates
q.	BA 4382	Internship in Business Administration
r.	BA 5382	Internship in Business Administration
s.	BA 7000	Contemporary Topics in Software and Systems Integration, including Business Process Reengineering, Client/Server Technology, systems thinking and system dynamics

DISSERTATION COMMITTEE MEMBER--1990 to present

a. David G. Fowler, MIS, completed 1990
b. Kuo-Ping Huang, in progress, I. E.
c. Peter Chai, I. E., terminated
d. Kuo-Chung Roger Chao, completed 1992, I. E.
e. Pana Srinivasan, completed 1992, I. E.
f. Mary Ann Murray, completed 1993, P/OM
g. Jin-Pin Liou, completed 1993, I. E.
h. Paul Geoffrey Willis, completed 1993, P/OM
i. Terri Giddens, completed 1994, MIS
j. Greg Langevin, successfully defended dissertation, July 1997, P/OM
k. Bill Burg, successfully defended dissertation, June 1997, MIS
l. Tai Fu T. Yang, I.E. defended dissertation, May 1997
m. K. P. Huang, I.E., defended dissertation, July 1997
n. Shahid Ibrahim Ali, defended his proposal in 1996, P/OM
o. Huitian Lu, I.E., defended dissertation in January 1998
p. Elliott Joseph Montes, I.E., defended dissertation in January 1998
q. John Randolph Chandler, English, defended dissertation in 1999
r. Leo Wells, Instructional Technology, DOE, defended dissertation in 2000.

DISSERTATION COMMITTEE CHAIRPERSON--1990 to present

a. Dong Jung, PhD, completed 4-1-90, MIS
b. Youling Lin, PhD, completed 10-15-91, MIS
c. Hwalsik Chang, PhD, completed 11-1-93, MIS
d. Tom Ottaway, PhD, completed 7-28-96, POM
e. Guyeng-min Joan Kim, PhD, completed 11-15-95, MIS
f. Allen Carrigo, successfully defended dissertation in Dec. 1997, P/OM
g. Gerald Marquis, successfully defended dissertation in June 1997, MIS
h. George Kenyon, successfully defended dissertation in Sept. 1997, P/OM
i. David Helton, successfully defended dissertation in May 2000, MIS
j. Brian Neureuther, successfully defended dissertation in April 1999, co-chair with
     Paul Randolph, P/OM
k. Philip Musa, successfully defended dissertation in August 2000, MIS
l. I-Lin Huang, successfully defended dissertation in March 2001, MIS
m. Balaji Janamanchi, successfully defended dissertation in July 2006, P/OM
n. Chen Yen Liu, successfully defended dissertation in August 2008, P/OM
o. Jeremy Bellah, successfully defended dissertation in August 2009, P/OM

p. Deokkyo Oh, successfully defended dissertation in August 2010, P/OM
q. Vickyching Gu, successfully defended dissertation proposal in April 2012, P/OM
r.   Ajaya K. Swain, successfully defended dissertation in August 2014, POM

III. ADMINISTRATIVE EFFECTIVENESS

From July 1, 1990 through August 1994, I served as Area Coordinator (Department Chairperson) of Information Systems and Quantitative Sciences (ISQS). In the first year of my term of service, our undergraduate and masters MIS programs grew by 43%. Our doctoral programs grew from 19 students to 23 students total enrolled in the program. This growth took place as a result of widespread dissemination and distribution of advertising materials and through numerous presentations. And, more than $165,000 in research and research-related gifts-in-kind were received. During this first year, more than $50,000 in cash gifts and scholarships were made to ISQS cost-of-education and scholarship accounts by private and corporate donors. During this first year minors in MIS were established at all levels (undergraduate, masters and Ph.D.). Four new courses were added to various curricula and several courses were eliminated. And, the undergraduate MIS curriculum was revised. Five doctoral students assumed academic positions at Illinois State, Alabama, Mississippi, Northern Kentucky and Calgary. Finally, faculty research productivity went up by 50% to 1.33 juried articles accepted per faculty member.

In my second year of service, $543,000 in extra-mural funds were received to support research in our knowledge-based systems research laboratory and in our Institute for Studies of Organizational Automation. Two of our MIS faculty were promoted, one to full professor and one to associate professor. And one faculty member was tenured.

During the four years in which I served as Area Coordinator of Information Systems and Quantitative Sciences, it was my responsibility to maintain an MIS Advisory Board of industrial liaisons in information systems. Consisting of information officers, consulting firm partners and prominent information systems managers in industry and government, this Board advised the MIS faculty relative to curricula, and provided cash contributions and gifts. Specifically, $120,000 in scholarships and undesignated cash contributions were raised. Board members in the cities of Austin, San Antonio, Dallas, Houston, Lubbock, Amarillo, and Albuquerque represented the following firms: Accenture, American Airlines, Alcoa Aluminum, Apache Corporation, Corporate Systems, Ernst and Young, Bank of America, IBM, MCI Worldcom, Covenant Hospital, Price Waterhouse Coopers, Cap Gemini, Tenneco Gas, Texaco, Southwestern Bell Telephone, Texas Instruments, Exxon, Pantex and Sandia Labs.

I have had, during my term as Area Coordinator, responsibility for salary adjustment, for promotion/tenure and for selection of awards for ten faculty members. I have had to generate detailed resource plans for the Dean so he could assess our need for additional teaching resources. I have interfaced with the rest of the College regarding our programs and courses in ISQS and I have had to write substantiation/explanation materials in support of our courses in ISQS. I have had to make scholarship award decisions in connection with others, to chair our annual scholarship awards banquet each year and to solicit funds for scholarships.

I have been, during my term as Area Coordinator, very interested in maintaining currency in all of the curricula of the College. The need to involve more MIS and operations management content in our curricula has been a "favorite theme" of mine and one well supported by the current trends in corporate recruiting needs. Furthermore, I believe that all of the departments that comprise the college require closer integration and coordination.

IV. RESEARCH AND PUBLICATIONS

In the lists that follow, single, solitary authorship can be assumed for all citations that do not contain an author order specification in parentheses.

A. **Journal articles**

1. **Burns, J., Sirisomboonsuk, P. Applications of System Dynamics and Big Data to Oil and Gas Production Dynamics in the Permian Basin. International Journal of Business Analytics. Accepted: 2021.**

2. **Sirisomboonsuk, P., Burns, J., Cao, R. Q. Combining the Best Concepts of Agile Methods with Concepts from Predictive Ones: Applications of Simulations, Scenarios, and Logic. International Journal of Project Organisation and Management. Accepted: 2021.**

3. **"Relationship between Project Governance and Information Technology Governance and its Impact on Project Performance," (with Pinyarat Sirisomboonsuk, Qing Cao, Vicky Gu), International Journal of Project Management, 2018, 36(2), 287-300**

4. **"Study of Contrasting Project Dynamics Using System Dynamics Simulation Modeling," (with Balaji Janamanchi), American Journal of Information Technology, AJIT-201601102, December 2016.**

5. **"The Launch Strategy Choices in China's Pharmaceutical Market," (with Vicky Gu), International Journal of Pharmaceutical and Healthcare Marketing, 2016, 10(3), 339-356.**

6. **"Performance Metric Optimization Advocates CPFR in Supply Chains: A System Dynamics Model Based Study," (with Balaji Janamanchi), Cogent Business & Management, 2 February 2016--online.**

7. **"Decision Support for the Entire Project Lifecycle," (with Balaji Janamanchi and Pinyarat Sirisomboonsuk), American Journal of Information Technology, Vol. 5, No. 1&2 (November), 2015, pp. 1-22.**

8. **"Application of Transition-Phase Management Model for an Electronic Health Record System Implementation: A Case Study," (with Javier Calvo-Amodio, Patrick E. Patterson, Milton L Smith), Engineering Management Journal, Vol. 27, No. 3, 131-142, September 2015.**

9. **"A Generalized System Dynamics Model for Managing Transition-Phases in Healthcare Environments," (with Javier Calvo-Amodio, Patrick E. Patterson, Milton L Smith), Journal of Industrial Engineering and Management Innovation, Vol. 1, No. 1, 132-155, September 2014.**

10. **"Offshore Information System Development in India: How Practitioners Respond to Challenges in the Process," (with Jeremy Bellah,, Christopher Cassidy), Journal of Information Technology and Case Analysis Research, Vol. 15, Issue 2, 30-53, 2013.**

11. **"Control Theory Concepts Applied to Retail Supply Chain: A System Dynamics Modeling Environment Study," (with Balaji Janamanchi), Modelling and Simulation in Engineering, Vol. 2013, Article ID 421350, 14 pages, 2013.**

12. "The Case for Comprehensive Models and Methodologies for Project Planning, Tracking and Managing," (with Balaji Janamanchi), Global Perspective on Engineering Management, Vol. 1, Iss. 3, pp. 74-82, Nov. 2012.

13. "Analysis of U.S. Electricity Generation Using Tools of System Dynamics," (with C. Liu), International Journal of Business and Economics Perspectives, Vol. 6, No. 1, pp. 17-30, Winter 2011.

14. "Deterministic, Path-Sensitive Heuristics for Project Earned Value Management," (with Q. Cao), International Journal of Project Organization and Management, Vol. 3, No. 1, pp. 1-21, 2011.

15. "Applications of Real Option Analysis to Vendor Selection Process in IT Outsourcing," (with Q. Cao and V. Gu), Information Systems and Change Management, Vol. 4, No. 2, pp. 143-155, 2009.

16. "Capturing and Comprehending the Behavioral/Dynamical Interactions within an ERP Implementation," (with D. Jung and J. Hoffman), Journal of Organizational and end User Computing, Vol. 21, No. 2, pp. 67-90, April-June 2009.

17. "Simulation Studies of the Effects of Safety Stock and related Policies upon Bullwhip Oscillation in Supply Chains," (with B. Janamanchi), International Journal of Information Systems and Change Management, Vol. 3, No. 2, pp. 171-187, 2008.

18. "Reducing Bullwhip Oscillation in a Supply Chain: A System Dynamics Model Based Study," (with B. Janamanchi), International Journal of Information Systems and Change Management, Vol. 2, No. 4, pp. 350-371, 2007.

19. "Improved Task Estimation and Project Tracking," (with B. Janamanchi), International Journal of Information Systems and Change Management, Vol. 2, No. 2, pp. 167-190, 2007.

20. "Offshoring Knowledge-worker Jobs: Boom or Burst for the US Economy?," (with B. Janamanchi), The Icfai Journal of Knowledge Management, Vol. V, No. 2, p. 20-39, March 2007.

21. "Dynamics of Change Management in a Technology Project Context," (with B. Janamanchi), International Journal of Information Systems and Change Management, Vol. 1, No. 2, pp. 115-137, 2006.

22. "E-Business Experiences of Practitioners and Consultants," (Author order: Gibson, Lin, Burns), Information Systems Management, Vol. 20, No. 3, Summer 2003, pp. 8-18.

23. "An adaptive production control system utilizing agent technology," (author order: Ottaway, Burns), International Journal of Production Research, Vol. 38, No. 4, March 10, 2000, pp. 721-737.

24. "Decision Process Cycle-Time Reduction through Coordination of Modeling Activities," (author order: Kim, Burns), Cycle Time Research, Vol. 6, No. 1, 2000, pp. 47-54.

25. "An Architecture for Organizational Decision Support Systems," (author order: Kim, Burns), Journal of Organizational and End-User Computing, Vol. 12, No. 3, pp. 23-33, July/Sept 2000.

26. "Error Reduction in Distributed DSS Through Coordination of Modeling Activities: Simulation Study," (author order: Kim, Burns), <u>Journal of Organizational Computing</u>, Vol. 8, No. 3, pp. 217-245, 1998.

27. "Adaptive, Agile Approaches to Organizational Architecture Utilizing Agent Technology," (author order: Ottaway, Burns), <u>Decision Sciences</u>, Vol. 28, No. 1, pp. 483-511, Summer 1997.

28. "An Expert System for Prescribed Burning of Rangelands," (author order: Wright, Burns, Chang, Blair), <u>Rangelands</u>, Vol. 14, No. 5, pp. 286-292, October 1992.

29. "An Intelligent Algorithm for Mixed-Integer Programming Models," (author order: Lin, Austin, Burns), <u>Computers and Operations Research</u>, Vol. 19, No. 6, pp. 461-468, 1992.

30. "Connectionist Approaches to Inexact Reasoning and Learning Systems for Executive and Decision Support: Conceptual Design," (author order: Jung, Burns), <u>Decision Support Systems</u>, Vol. 10, pp. 37-66, 1993.

31. "An Implicit Branch-and-Bound Algorithm for Mixed-Integer Linear Programming," (author order: Lin, Austin, Burns), <u>Computers and Operations Research</u>, Vol. 17, No. 5, pp. 457-465, 1990.

32. "A Specification Language for Generating Intelligent Discrete Next-Event Simulations," <u>Information and Decision Technologies</u>, Vol. 16, No. 1, pp. 3-13, 1990.

33. "Distribution Systems—Warehouse Location and Capacity," <u>OMEGA</u>, (author order: Cokolez, Burns), Vol. 17, No. 1, pp. 45-51, December 1988.

34. "Semantic Nets as Paradigms for Both Causal and Judgmental Knowledge Representation," <u>IEEE Transactions on Systems, Man and Cybernetics</u>, (author order: Burns, Winstead, Haworth), Vol. SMC-19, No. 1, pp. 58-68, January 1989.

35. "Methodology for Knowledge-based Simulation," <u>Information and Decision Technologies</u>, (author order: Burns, Morgeson), Vol. 14, pp. 15-30, 1988.

36. "An Object-Oriented World View for Intelligent, Discrete, Next-Event Simulation," <u>Management Science</u>, (author order: Burns, Morgeson), Vol. 34, No. 12, pp. 1425-1440, Dec. 1988.

37. "Design and Development of a Decision Support System for Curriculum Design," (author order: Mahmood, Burns), <u>Policy and Information</u>, Vol. 9, No. 2, pp. 77-94, December 1985.

38. "On Environmental Factors Affecting Decision Support System Design," (author order: Mahmood, Courtney, Burns), <u>Database</u>, pp. 23-28, Summer 1983.

39. "M-labeled Digraphs: An Aid to the Analysis of Structural and Simulation Models," <u>Management Science</u>, (author order: Burns, Winstead), Vol. 31, No. 3, pp. 343-357, March 1985.

40. "Author's Reply," Published as a correspondence item in <u>IEEE Transactions on Systems, Man and Cybernetics</u>, (author order: Davison, Burns, Winstead), Vol. SMC-13, No. 3, pp. 432-434, September/October 1983.

41. **"Conceptual Design of Decision Support Systems Utilizing Management Science Models,"** <u>IEEE Transactions on Systems, Man and Cybernetics</u>, (author order: Minch, Burns), Vol. SMC-13, No. 4, pp. 549-557, July/August 1983.

42. **"Input and Output Redundancy,"** <u>IEEE Transactions on Systems, Man and Cybernetics</u>, (author order: Burns, Winstead), Vol. SMC-12, No. 6, pp. 785-794, November/December 1982.

43. **"Solar Energy and the National Energy Dilemma: A Model for Policy Evaluation,"** <u>Technological Forecasting and Social Change</u>, Vol. 21, pp. 213-228, 1982.

44. **"An Input/Output Approach to the Structural Analysis of Digraphs,"** <u>IEEE Transactions on Systems, Man and Cybernetics</u>, (author order: Burns, Winstead), Vol. SMC-12, pp. 15-23, No. 1, January/February 1982.

45. **"An Algorithm for Converting Signed Digraphs to Forrester Schematics,"** <u>IEEE Transactions on Systems, Man and Cybernetics</u>, (author order: Burns, Ulgen, Beights), Vol. SMC-9, No. 3, pp. 115-125, March 1979.

46. **"An Integrated Approach to the Development of Continuous Simulation,"** (author order: Burns, Ulgen), <u>Socio-Economic Planning Sciences</u>, Vol. 12, pp. 313-327, 1978.

47. **"A Sector Approach to the Formulation of System Dynamics Models,"** (author order: Burns, Ulgen), <u>International Journal of Systems Science</u>, Vol. 9, No. 6, pp. 649-680, 1978.

48. **"Converting Signed Digraphs to Forrester Schematics and Converting Forrester Schematics to Differential Equations,"** <u>IEEE Transactions on Systems, Man, and Cybernetics</u>, Vol. SMC-7, No. 10, pp. 695-707, 1977.

49. **"Causality: Its Characterization by Methodologies for Modeling Socio-Economic Systems,"** (author order: Burns, Marcy), <u>Technological Forecasting and Social Change</u>, Vol. 14, pp. 387-398, 1979.

50. **"Comment on 'Optimizing Models of Social Systems,"** (author order: Burns, Malone), published as a correspondence item in <u>IEEE Transactions on Systems, Man, and Cybernetics</u>, Vol. SMC-6, No. 3, pp. 207-209, March 1976.

51. **"Error Analysis of Nonlinear Dynamic Simulations: Applications to World Dynamics,"** <u>IEEE Transactions on Systems, Man, and Cybernetics</u>, Vol. SMC-5, No. 3, pp. 331-341, May 1975.

52. **"Optimization Techniques Applied to the Forrester Model of the World,"** (author order: Burns, Malone), <u>IEEE Transactions on Systems, Man, and Cybernetics</u>, Vol. SMC-4, No. 2, pp. 164-172, March 1974.

53. **"Computational Techniques for Analysis of System Dynamics Models of Social Systems,"** (author order: Burns, Malone), <u>Journal of Socio-Economic Planning Sciences</u>, Vol. 8, Pergamon Press, No. 4, pp. 213-223, 1974.

B. **<u>Published Presentations</u>**

1. **"Meta-Modeling and Maturity: Making Progress on the Journey of Learning and Maturing,"** (Author order: Sirisomboonsuk, Burns), Proceedings of the 50th Decision Sciences Institute Annual Conference, New Orleans, LA, November 25, 2019.

2. "A Smart App for Personal Visioning, Learning, Scheduling, Productivity, Measurement and Journaling," (Author order: Sirisomboonsuk, Burns), Proceedings of the 50th Southwest Decision Sciences Institute Annual Conference, Houston, TX, March 15, 2019.

3. "Applications of Systems Thinking, Constraint Theory and Organizational Learning to Project Management," (Author order: Burns, Sirisomboonsuk), Proceedings of the 49th Decision Sciences Institute Annual Conference, Chicago, IL, November 18, 2018.

4. "Operationalizing Project Governance and Information Technology Governance: Implications of an Empirical Study of Impacts on Project Performance," (Author order: Sirisomboonsuk, Cao, Gu, Burns), Proceedings of the 49th Southwest Decision Sciences Institute Annual Conference, Albuquerque, NM, March 8, 2018.

5. "Toward Complete Redesign of Curricula for OM and IT Majors in College of Business," (Author order: Burns, Sirisomboonsuk, Janamanchi), Proceedings of the 48th Decision Sciences Institute Annual Conference, Washington DC, DC, November 20, 2017.

6. "Classification of Open Source Project Management Software," (Author order: Janamanchi, Burns), Proceedings of the 48th Decision Sciences Institute Annual Conference, Washington DC, DC, November 17-20, 2017.

7. "Applications of Concepts from Maturity to Processes within PMBOK Leading to Improvements in Product Quality, and Reductions in Project Duration and Cost," (Author order: Burns, Sirisomboonsuk, Janamananchi), Proceedings of the 48th Southwest Decision Sciences Institute Annual Conference, Little Rock, AR, March 8-11, 2017.

8. "Toward Maturation of Processes for Lifelong Learning," (Author order: Sirisomboonsuk, Burns), Proceedings of the 12th Annual Education and Development Conference 2017, Bangkok, Thailand, March 5-7, 2017.

9. "Fast Track vs Crash A System Dynamics Model Base Study," (Author order: Janamanchi, Burns), Proceedings of the 47th Decision Sciences Institute Annual Conference, Austin, TX, November 18-21, 2016.

10. "Applications of Concepts from Maturity, Learning and Leanness to Improvements in Project Quality, and Reductions in Duration and Cost," (Author order: Sirisomboonsuk, Burns, Janamanchi), Proceedings of the 47th Decision Sciences Institute Annual Conference, Austin, TX, November 18-21, 2016.

11. "Relationships between Project Governance and Corporate Governance and their Impacts on Project Performance," (Author order: Sirisomboonsuk, Pinyarat, Burns, Cao, Gu), Proceedings of the 47th Decision Sciences Institute Annual Conference, Austin, TX, November 18-21, 2016.

12. "Understanding the Dynamics of High-Performing Project Teams as Driven by Governance, Organizational Structure and Organizational Culture," (Author order: Sirisomboonsuk, Burns, Vicky, Cao), Proceedings of the 47th Southwest Decision Sciences Institute Annual Conference, Oklahoma City, OK, March 9-12, 2016.

13. "Four Echelon Retail Supply Chain Optimization-insights from Experimenting with Powel's Hill-climbing algorithm in Vensim©," (Author order: Janamanchi, Burns), Proceedings of the 33rd International Conference of the System Dynamics Society, Cambridge, MA, July 19-23, 2015.

14. "Empirical and Optimization Studies of the Bullwhip Effect in Supply Chains," (Author order: Sirisomboonsuk, Burns), Proceedings of the 46th Southwest Decision Sciences Institute Annual Conference, Houston, TX, March 11-14, 2015.

15. **"Can Critical Chain Project Management be Applied to College Students' Project,"** (Author order: Sirisomboonsuk, Burns), Proceedings of the 46th Southwest Decision Sciences Institute Annual Conference, Houston, TX, March 11-14, 2015.

16. **"Teaching MIS Majors How to Calculate the Value of Additional Information,"** (Author order: Sirisomboonsuk, Burns), Proceedings of the Southwest Decision Sciences Institute Annual Conference, Dallas, TX, March 12-15, 2014.

17. **"Three Echelon Retail Supply Chain Dynamics: A System Dynamics Model Based Study,"** (Author order: Janamanchi, Burns), Proceedings of the Decision Sciences Institute Annual Conference, Tampa, FL, November 21-25, 2014.

18. **"A Reconciliation of Dynamic Models of Supply Chains: Applications of Systems Dynamics and Control Theory,"** (Author order: Janamanchi, Burns), Proceedings of the Decision Sciences Institute Annual Conference, Tampa, FL, November 21-25, 2014.

19. **"Estimating optimal project duration and cost for software development projects under conditions of team size dependent productivity: System Dynamics Perspective,"** (Author order: Janamanchi, Burns), Presented at DSI (Decision Sciences Institute) National Conference in San Francisco, November 19, 2012.

20. **"Project Dynamics -Time Varying Team Size Effect on Productivity: A System Dynamics Model-based Study,"** (Author order: Janamanchi, Burns), Presented at DSI (Decision Sciences Institute) National Conference in Boston, November 21, 2011.

21. **"Strategies to Tackle Trends in Customer Orders in a Supply Chain: A System Dynamics Model-based Study,"** (Author order: Janamanchi, Burns), Presented at DSI (Decision Sciences Institute) National Conference in San Diego, November 23, 2010.

22. **"Estimating the Home Purchase Costs of Seoul Citizens,"** (Author order, Oh, Burns), Presented at 28th International Conference of the System Dynamics Society, Seoul, Korea, July 25, 2010.

23. **"Mean Time Between Failures Estimation: A System Dynamics Model-based Study,"** (Author order: Janamanchi, Burns), Presented at the DSI (Decision Sciences Institute) National Conference in Baltimore, November 23, 2009.

24. **"Strategies for Removal of the Federal Budget Deficit and Payoff of the National Debt: Analytical and Simulation Studies,"** (Author order: Burns, Janamanchi), Presented at the DSI (Decision Sciences Institute) National Conference in Baltimore, November 22, 2009.

25. **"The National Energy Dilemma: Models for Policy Evaluation,"** (Author order: Liu, Burns), Presented at 27th International Conference of the System Dynamics Society in Albuquerque, July 27, 2009.

26. **"Optimal Pricing Strategy: A System Dynamics Simulation Study,"** (Author order: Janamanchi, Burns), Presented at the Southwest DSI Regional Meeting, Houston, March 8, 2008.

27. **"Inventory Strategies for Supply Chains in a JIT Context: A Simulation Study,"** (Author order: Janamanchi, Burns), Presented at the Southwest DSI Regional Meeting, Houston, March 8, 2008.

28. **"Dynamics of a Democracy Deeply in debt: Simulation Studies of Federal Revenue and the Capacity of the U.S. to Service its Debt,"** (Author order: Burns, Janamanchi), Presented at the Systems Dynamics Society Conference in Boston, July 28, 2007.

29. "Counterintuitive Benefits of Relaxing Inventory replenishment requirements: A system Dynamics Model-based Study," (Author order: Janamanchi, Burns), Presented at the Decision Sciences Institute National Meeting in Scottsdale, AZ, November 17, 2007.

30. "Customer Order Forecasting in Supply chains: A simulation Study," (Author order: Janamanchi, Burns), Presented at the Decision Sciences Institute National Meeting in Scottsdale, AZ, November 18, 2007.

31. "Optimal Control and Optimization of System Dynamics Models: some Experiences and Recommendations," (Author order: Burns, Janamanchi), Presented at the SWDSI Conference in San Diego, March 15, 2007.

32. "Simulation Studies of the Federal Budget Deficit and the National Debt: Will they be Serviceable, and if so, Under What Assumptions?", (Author order: Burns, Janamanchi), Presented at the IABPAD Spring Conference, Dallas, TX, April 21-22, 2006.

33. "National Energy Modeling with Implications for a Sustainable Energy Policy," (Author order: Burns, Janamanchi), Presented at the Decision Sciences Institute, Southwest Region, Oklahoma City, March 1-3, 2006.

34. "Strategies for Reducing Inventory Costs and Mitigating the Bullwhip Effect in Supply Chains: A Simulation Study," (Author order: Burns, Janamanchi), Presented at the Decision Sciences Institute, Southwest Region, Oklahoma City, March 1-3, 2006.

35. "Support for Meta-Project Definition, Planning, Resourcing and Execution," (Author order: Burns, Janamanchi), Presented at the 36th Annual Meeting of the Decision Sciences Institute, San Francisco, November 19-22, 2005.

36. "Project Dynamics with Applications to Change Management and Earned Value Tracking," (Author order: Burns, Janamanchi), Presented at the 23rd International Conference of the System Dynamics Society, July 17-21, Boston, 2005.

37. "Offshoring Knowledge Worker Jobs—Boom or Burst for the US Economy," (Author order: Janamanchi, Burns), Presented at the 23rd International Conference of the System Dynamics Society, July 17-21, Boston, 2005.

38. "Supply and Value Chain Support Through Scheduling and Simulation: Applications to the Semiconductor Industry" (author order: Burns, Ulgen), Presented at the USP 2003 Conference, Dearborn, Michigan, September 22-24, 2003.

39. "Fully Supporting the Entire Project Lifecycle with Information Technology," (author order: Burns, Ulgen), Presented at the USP 2003 Conference, Dearborn, Michigan, September 22-24, 2003.

40. "Understanding and Controlling the Behavioral Implications of an ERP Implementation/Installation," (author order, Burns, Jung), Presented at the USP 2002 Conference, Lubbock, TX, March 2002.

41. "Partial Automation of Technology Upgrades Applied to Legacy Software," (author order, Burns, Jung), Presented at the USP 2002 Conference, Lubbock, TX, March 2002, Awarded First prize in the paper competition.

42. "Comprehensive, Enterprise-wide Data Modeling: The Foundation of Organizational Integration," (author order, Gibson, Burns), Presented at the USP 2002 Conference, Lubbock, TX, March 2002.

43. "A Matrix Architecture for Development of System Dynamics Models," (author order, Burns, Ulgen), Presented at the 2002 System Dynamics Society Conference, Palermo, Italy, July 27, 2002.

44. "A Component Strategy for the Formulation of System Dynamics Models," (author order, Burns, Ulgen), Presented at the 2002 System Dynamics Society Conference, Palermo, Italy, July 27, 2002.

45. "Simplified Translation of CLD's into SFD's," Proceedings of the 2001 System Dynamics Society, Atlanta, July 2001.

46. "Structural Validation of Causal Loop Diagrams," Proceedings of the 2001 System Dynamics Society, Atlanta, July 2001.

47. "A Cognitive Comparison of Modeling Behaviors between Novice and Expert Information Analysts," Proceedings of the 2000 Americas Conference on Information Systems, Long Beach, CA, (Author order: Huang, Burns), August 2000.

48. "Comparative Analysis of Systems Thinking and Goldratt's Thinking Processes: Task analysis for Enhancing Organizational Knowledge Management," PICMET2001 Conference Proceedings, 29 pages, (P. Musa, J.R. Burns, and M.G. Beruvides). 2001.

49. "A Classification of Requirement Analysis Techniques on the Basis of Human Cognition," (author order: Huang, Burns), Proceedings of the 1999 Southwest Decision Sciences Institute Conference held March 4-7, 1999 in Houston.

50. "Modeling Information Requirement Analysis as a Text Comprehension Process," (author order: Huang, Burns), Proceedings of the 1999 Southwest Decision Sciences Institute Conference held March 4-7, 1999 in Houston. (This paper is an "Outstanding Paper Award Winner.")

51. "An Evolution View of Domain Knowledge Support for Organizational Information Requirement Analysis," Proceedings of the 1998 Americas Conference on Information Systems, Atlanta, Georgia, (Author order: Huang, Burns), August 1998.

52. "Organizational Information Requirement Topology as the Basis for Organizational Information Requirement Specification Reuse," Proceedings of the 1997 Americas Conference on Information systems, Indianapolis, Indiana, (Author order: Huang, Burns), August 1997.

53. "Redefining Holding Costs," Proceedings of the 1996 Decision Sciences Conference in Orlando, (author order: Kenyon, Burns) November 1996.

54. "Component Models for Integrated System Performance Analysis," Second International Conference on Systems Integration, Morristown, NJ, (author order: Burns, Haddix) June 15-18, 1992.

55. "Automated Visual Inspection Using Syntactic Representation of Images," Proc. 1989 ASME, (author order: Hennessey, Maston, Hahn, Burns, Catanich) July 1989.

56. "Relevant Literature in Support of Knowledge-based Simulation Models," Proc. 1987 IEEE Systems, Man and Cybernetics Conference, (author order: Morgeson, Burns) October 1987.

57. "A Methodology for Fabrication of Intelligent Discrete-event Simulation Models," Proc. 1987 IEEE Systems, Man and Cybernetics Conference, (author order: Morgeson, Burns) October 1987.

58. "Modeling Infimal Management Systems: Applications to Production Planning," <u>Proceedings of the 1985 IEEE International Conference on Systems, Man and Cybernetics</u>, Tucson, Arizona, pp. 194-199, (author order: Burns, Goryunov) October 1985.

59. "A Dual-Primal Revised Simplex Algorithm," <u>Proceedings of the 1983 IEEE International Conference of Cybernetics and Society</u>, Bombay, December 1983.

60. "Toward the Development of a Decision Support System of Curriculum Design," <u>DSI Proceedings</u>, San Francisco, (author order: Mahmood, Burns) November 1982.

61. "M-Labeled Digraphs and Forrester-Style Causal Models," <u>Proceedings of the IEEE International Conference on Cybernetics and Society</u>, Seattle, (author order: Burns, Winstead) October 1982.

62. "CSF-DSS: A Decision Support System for Identifying Critical Success Factors," <u>DSI Proceedings</u>, Boston, November (author order: White, Burns) 1981.

63. "Design of an Interactive Simulation System for Decision Support," <u>DSI Proceedings</u>, Boston, November (author order: Burns, Meile) 1981.

64. "Shading Analysis of a Photovoltaic Cell String Illuminated by Parabolic Trough Concentrator," <u>Proceedings of the IEEE Photovoltaics Specialists Conference</u>, Kissimmee, Florida, (author order: Edenburn, Burns) May 1981.

65. "From Flow Diagram to Simulation Model," <u>Proceedings of the 1980 IEEE International Conference on Cybernetics and Society</u>, Boston, October 1980.

66. "Interactive Conversational Formulation of Dynamical Models by Computer Assistance," <u>Proceedings of the 1980 Summer Computer Simulation Conference</u>, Seattle, August 1980.

67. "On Reachability and its Relationship to Uncontrollability, Unobservability and Redundancy," <u>Proceedings of the 1979 IEEE International Conference on Cybernetics and Society</u>, (author order: Burns, Winstead) October 1979.

68. "Scheduling/Routing/Fleet-sizing Models for Air Transportation Systems," <u>Proceedings of the Tenth Annual Pittsburgh Conference on Modeling and Simulation</u>, Pittsburgh, 1979.

69. "Techniques for Optimization and Curve (Data) Fitting of Continuous Simulations," <u>Proceedings of the Twenty-first Midwest Symposium on Circuits and Systems</u>, Ames, Iowa, August 1978.

70. "Component Connection Concepts and Systems Dynamics," <u>Proceedings of the Twentieth Midwest Symposium on Circuits and Systems</u>, Lubbock, Texas 1977.

71. "Computer-aided Design of Simulation Models for Societal Systems", <u>Proceedings of the Twenty-first North American Meeting of the Society for General Systems Research</u>, February 1978.

72. "A Methodology for Automated Curriculum Design," <u>Proceedings of the Seventh Annual Pittsburgh Conference on Modeling and Simulation</u>, Pittsburgh, (author order: White, Burns) 1976.

73. "A System-Theoretic Approach to the Computer-Aided Design of Nonlinear Dynamic Models for Societal Systems," <u>Proceedings of the Twentieth Midwest Symposium on Circuits and Systems</u>, Lubbock, Texas 1977.

74. **"Models for Problem-Driven Technology Assessments: Applications to Human Rehabilitation,"** <u>Proceedings of the 1977 International Conference on Cybernetics and Society</u>, **Washington, D.C. 1977.**

75. **"Adjacency Matrices and System Dynamics,"** <u>Proceedings of the Eighth Annual Pittsburgh Conference on Modeling and Simulation</u>, **Pittsburgh, (author order: Burns, Ulgen) 1977.**

76. **"Social Modeling Methodology and Kile's RWIII,"** <u>Proceedings of the Society for General Systems Research</u>, **Denver, Colorado, February 1977.**

77. **"System-Theoretic Methods for Machine-Translation of Causal or Cross-Impact Models into Simulation Models,"** <u>Proceedings of the First International Conference on Information Sciences and Systems</u>, **Patras, Greece, August 1976.**

78. **"A Preliminary Approach to Automating the Process of Simulation Model Synthesis,"** <u>Proceedings of the Seventh Annual Conference on Modeling and Simulation</u>, **Pittsburgh, 1976.**

79. **"Towards a Mathematically Rigorous Methodology for Simulation of Social Processes,"** <u>Proceedings of the 1975 Summer Computer Simulation Conference</u>, **San Francisco, July 1975.**

80. **"A Disaggregated, Hierarchical World Model,"** <u>Proceedings of the Fifth Annual Pittsburgh Conference on Modeling and Simulation</u>, **Pittsburgh, Pennsylvania, April 1974.**

81. **"Optimization Techniques Applied to the Forrester Model of the World,"** <u>Proceedings of the Fourth Annual Pittsburgh Conference on Modeling and Simulation</u>, **Pittsburgh, Pennsylvania, April 1973.**

82. **"Sensitivity Analysis and Forrester's Model of the World,"** <u>Seventh Annual Southeastern Conference on System Theory Proceedings</u>, **Raleigh-Durham, North Carolina, (author order: Malone, Burns) March 1973.**

C. <u>Research Monographs Published</u>

1. <u>Burning Expert System User Manual, Technical Report: Texas Tech University, Departments of Range and Wildlife and Information Systems and Quantitative Sciences, (author order: Burns, Wright) 1991.</u>

2. <u>Shading Analysis of a Photovoltaic Cell String</u> Illuminated by a Parabolic Trough Concentrator, SAND80-2209, Sandia Laboratories, Albuquerque, (author order: Edenburn, Burns) 1980.

3. <u>A Cell String Model with Mirror Gap Shading for a Parabolic Trough Photovoltaic Collector, SAND81-0069, Sandia Laboratories, Albuquerque, (author order: Edenburn, Burns) 1980.</u>

4. <u>AIR CARGO: An Integrated Systems View, CR-145384, NASA, Langley Research Center, Hampton, Virginia (there were seventeen authors that produced a 350 page book) 1978.</u>

D. <u>Presented Papers</u>

1. In February 2016, I presented a 'paper' before the local West Texas PMI chapter entitled 'Organizational Maturity and Learning.' Approximately 25 people were in attendance. About 50 hours went into the research for this presentation.

2. "Airline Business Cycles: What causes them and what can be done to counteract them," Presented to Southwest Airlines as part of a CELDi meeting held on site, April 2007.

3. "National Energy Modeling/Policy with Implications for Commercial Airlines," (Author order: Burns, Janamanchi), Presented to Southwest Airlines, Dallas, March 10, 2006.

4. "Cycles in the Sky," (Author order: Burns, Janamanchi), Presented to Southwest Airlines, Dallas, March 10, 2006.

5. "Partitioned Adjacency Matrix Representations of Parse Trees and Neural Nets," ORSA/TIMS, New York, October 1990.

6. "A Specification Language for Generating Intelligent, Discrete, Next-Event Simulations," (author order: Burns, Morgeson), ORSA/TIMS, St. Louis, October 1987.

7. "Incorporating AI Concepts into Intelligent, Discrete, Next-Event Simulation," (author order: Burns, Morgeson), ORSA/TIMS, Miami, October 1986.

8. "M-Labeled Digraphs as Paradigms for Both Casual and Judgmental Knowledge Representation," (author order: Burns, Winstead)), TIMS/ORSA, Los Angeles 1986.

9. "Knowledge Bases and Simulation," ORSA/TIMS, Atlanta, November 1985.

10. "Management Science Models and the Microcomputer," ORSA/TIMS, Dallas, November 1984.

11. "Management Science Software Demonstration," TIMS/ORSA, Chicago, March 1983.

12. "A Cell String Model with Mirror Gap Shading for A Parabolic Trough Photovoltaic Collector", Sandia National Laboratories, Albuquerque, August 1980.

13. "A Model for Policy Evaluation of Solar Energy within the Context of the National Energy Equation", Sandia National Laboratories, Albuquerque, August 1980.

14. "A System Dynamics Model of Oil and Gas Drilling and Production," ORSA/TIMS, Houston, (author order: Burns, Meile) October 1981.

15. "Progress in Knowledge-Based Simulation," TIMS.ORSA, Las Vegas, May 1990.

E. **Papers Being Prepared or Considered for Publication**

1. "A Conceptual Framework for Managerial Problem Diagnosis Support System Design,"

2. "Managerial Problem Diagnosis Support Systems Design, Prototyping and Validation,"

3. "Probabilistic Inferencing with Semantic Networks."

4. "Neural Nets as Linear, Discrete-time, Dynamical Systems."

5. "Quadratic Programming: Implementation Enhancements," (author order: Lin, Burns).

F. **Panel Presentations and Session Chairs**

1. Served as session chair for the SWDSI Meeting in San Diego, held in April 2007.

2. Served as session chair for the DSI meeting in Scottsdale, AZ, held in November 2007.

3. Served as session chair for the 2006 SWDSI Conference in Oklahoma City, 2006.

4. Served as session chair for the 3rd Annual USB CONFERENCE, 2001.

5. Chaired two sessions on System Dynamics Model Formulation at the July 2002 20th Annual Conference on System dynamics, Palermo, Italy.

6. Organized and chaired a session on knowledge-based simulation for the 1990 TIMS/ORSA Meeting in Las Vegas, May 1990.

7. Organized and chaired two sessions on knowledge-based simulation for 1987 IEEE Systems, Man and Cybernetics Conference 1987.

8. Organized and chaired one session on intelligent, discrete-event simulation for 1987 ORSA/TIMS Meeting in St. Louis 1987.

9. Chairman of the 1984 ORSA/TIMS Microcomputer Fair in Dallas, October 1984.

10. Participated in a panel of distinguished authorities who presented and debated on the subject of Systems Science at the 1982 IEEE International Conference on Cybernetics and Society in Seattle, October 1982.

11. Co-chairman of the 1983 TIMS/ORSA Microcomputer Fair in Chicago, April 1983.

12. Chaired session at the 1982 IEEE International Conference on Cybernetics and Society in Seattle entitled "Perspectives on Systems Science," October 1982.

13. Chaired session at the 1981 ORSA/TIMS Conference in Houston entitled "Oil and Synthetic Fuel Development," October 1981.

14. Chaired session at the 1982 ORSA/TIMS conference in San Diego entitled "Corporate Planning II," October 1982.

15. Participated in a panel of distinguished authorities who presented and debated on the subject, "How to Increase the Impact of Simulation on Policymaking." The session was chaired by John McLeod and presented at the 1979 National Computer Conference in New York City.

16. Chaired session at the Tenth Annual Pittsburgh Conference on Modeling and Simulation entitled "Models in Air Transportation," April 1979.

17. Participated in a computerized conference on national modeling organized by Jay W. Forrester 1976.

G. <u>Non-refereed Articles</u>

1. Sirisomboonsuk, Pinyarat & Burns, James R. (2014). How Decisions Determine the Value of Additional Relevant Information. <u>Decision Line</u>, Issue 2/3 (March/May), 12-17.

2. "Noxious Plant Control: An Expert System for Prescribed Burning," in the <u>Research Highlights--1991: Noxious Brush and Weed Control; Range and Wildlife Management</u>,

Vol. 22, College of Agricultural Sciences, Texas Tech University, (author order: Wright, Burns, Chang, Blair), pp. 14-15, 1991.

3. **"Knowledge-based Simulation" in the Concise Encyclopedia of Information Processing in Systems and Organizations, Pergamon Press, (author order: Burns, Haworth), pp. 316-322, 1990.**

4. **"Operations Research and the Microcomputer," ORSA-BAS Newsletter, Vol. 1, No. 1, Spring, 1982.**

5. **"On Selecting a Microcomputer for Professional Applications in Operations Research," ORSA-BAS Newsletter, Vol. 1, No. 2, Summer, 1982.**

6. **"Maximize Your Profits," Kilobaud Microcomputing, pp. 158-162, August, 1981.**

7. **"Working Smarter, Not Harder with Simulation," ISQS Informational Newsletter, Vol. 1, No. 1, Texas Tech University, College of Business Administration, Spring 1992.**

8. **"Time-taming Technologies," Sent to the MIS Advisory Board, Texas Tech University, College of Business Administration, Spring 1992.**

H. Journal or Proposal Referee

1. **IEEE Transactions on Systems, Man and Cybernetics, 1973-present.**
2. **National Science Foundation, 1976 to 1988.**
3. **Decision Sciences, 1982.**
4. **Management Science, 1980, 1984.**
5. **Computers in Operations Research, 1992.**
6. **Socioeconomic Planning Sciences, 1975.**
7. **Automatica, 1973.**
8. **Technological Forecasting and Social Change, 1976, 1968, 1981.**
9. **International Journal of Information Systems and change Management**
10. **Journal of Organizational and End-User Computing**

I. Funded Research Activities - Principal Investigator

1. **"Automated Visual Inspection: Defect Characterization and Production Testing--Supplement to Support Minorities," submitted 6/15/90 to State of Texas Advanced Technology Program (K. Hennessey is project director); requested amount: $25,200; amount funded: $24,000.**

2. **"Proposal to Receive a Gift from Pritsker and Associates of their $18,000 SLAMSYSTEM software for use in teaching simulation in the COBA," Application materials were transmitted and the award was received. Amount of Award: $18,000.**

3. **"Real time Analysis to Optimize the Burning of Blacklines in Grass-shrub fuels with a Helitorch," submitted 7/15/89 to State of Texas Advanced Technology Program (with one other principal investigator); requested amount: $196,500; amount funded: $165,000.**

4. **"Automated Visual Inspection: Defect Characterization and Production Testing," submitted 7/15/89 to State of Texas Advanced Technology Program (with one other principal investigator); requested amount: $394,000; amount funded: $394,000.**

5. **Texas Tech College of Business Administration Research Award (1982), "Analysis and Synthesis of a Menu/Query-Driven Discrete Simulation Language," $2,150.**

6. Texas Tech College of Business Administration CPD Research Award, $5,000 for one half-time graduate student assistant for nine months.

7. Texas Tech College of Business Administration Research Award (1981), "Formulation of a Model of U.S. Oil and Gas Drilling and Production with Focus upon the Windfall Profit Tax," $600.

8. Texas Tech College of Business Administration Research Award (1981), "Development, Fabrication, Design, and Test of a Decision Support System for Curriculum Design," $290.

9. Crosbyton Project (1976), "Simulation and Optimization Studies Applied to the Crosbyton Solar Energy Project," $3,000.

10. State of Texas Institutional Funds (1978), "Computer Aids to the Formulation of Dynamical Decision Models," $1,512.

11. State of Texas Institutional Funds (1976), "Continuing Studies in Methodologies for Modeling Social Processes," $3,400.

12. State of Texas Institutional funds (1977), "Formulation of Simulation Models for Social Processes," $3,700.

13. National Science Foundation (1976), "Exploratory Computer Studies in Technology Assessment: Human Rehabilitation Techniques," $9,000.

14. State of Texas Institutional Funds (1975), "Contribution to Methodology for Modeling Social Processes," $3,150.

J.   Funded Research Activities - Team Leader
1. Department of Energy (1978), "Trans-Pecos Solar-Powered Irrigation Experiment," $411,000.

K.   Research Proposals Written and Submitted But Not Funded

1. "Real time Analysis for Hand and Helitorch Rangeland Burning: Weather Analysis, Map Scanning, Simulation Studies and Commercialization," submitted 7/15/91 to State of Texas Advanced Technology Program (with H. Wright, Range and Wildlife); requested amount: $196,500.

2. "Exploratory Studies of Robust and Efficient Inferencing Mechanisms for Inexact Reasoning," submitted 7/15/91 to State of Texas Advanced Research Program (with one other principal investigator); requested amount: $180,500.

3. "Exploratory Studies of Robust and Efficient Inferencing Mechanisms for Inexact Reasoning," Submitted as a pre-proposal to DARPA (Defense Advanced Research Projects Agency) on July 16, 1990.

4. "M-Labeled Digraphs: Mechanisms for Causal, Judgmental, Declarative, and Associative Knowledge Representation and Reasoning," Submitted as a pre-proposal to DARPA on July 16, 1990.

5. "Productivity Improvement Through Scheduling Systems Research," submitted 6/1/78 to NSF, $362,244.

6. **"Computer Aids to the Design of Occupationally-Oriented Curricula," $63,000, submitted 4/1/77 to NSF-RISE.**

7. **"A Proposal for Research on a Computer-assisted Methodology for the Development of Simulation Models of Social, Economic, Environmental and Energy Systems," $58,000, submitted 12/1/75 to NSF.**

8. **"A Proposal for Research on Energy Efficient Housing in the Southwestern United States," submitted to ERDA, (with W. Marcy), 1975.**

9. **"Developments in the Methodology for Simulation of Social Processes," $26,500, submitted 12/1/74 to NSF.**

10. **"International Center for Open Systems Research," submitted 9/1/89 to the National Science Foundation (with four other principal investigators); requested amount: $21,194,749.**

L. Research Proposals Pending

(none)

M. Rough Manuscripts and textbook Development

1. **Information Systems Project Management: Processes and Practice, a partially-written book that has been submitted to publishers for publication consideration.**

2. **Systems Thinking and Dynamical Simulation, -- a book in rough manuscript form.**

3. **Management Science Models and the Microcomputer, Macmillan, (co-author) 432 pp., 1985. (includes software on two diskettes).**

4. **Management Science: An Aid for Managerial Decision Making, Macmillan, (Co-author), 605 pp., 1985.**

5. **Microcomputers: Business and Personal Applications, West, (co-author), 630 pp., 1988.**

6. **Instructor's Manual and Test Bank to Accompany "Microcomputers: Business and Personal Applications", West, 310 pp., 1988**

7. **System and Enterprise Integration,--Drafts of five chapters currently exist**

N. Unpublished Materials

1. **"Sensitivity Analysis of Nonlinear Dynamic Simulations: Applications to World Dynamics," Purdue University.**

2. **"Applications of Control Theory to System Dynamics Models of Social Systems," Ph.D. Thesis, Purdue University.**

3. **"Applications of Modeling Methodologies to the Technology Assessment of Technologies Intended to Rehabilitate Human Disabilities," a report submitted to the National Science Foundation, 1977.**

4. **"User's Manual and Documentation for the Plastic Parts Scheduling Program," Technical Report, Texas Instruments, Inc., 187 pp., 1978.**

5. "Defect Characterization: Quality Management in the Semiconductor Industry," Technical Report, Institute for Studies of Organizational Automation, Texas Tech University, Dec. 1991.

6. "User Interfaces for Defect Characterization: A Requirements Specification," Technical Report, Institute for Studies of Organizational Automation, Texas Tech University, Aug. 1991.

7. "Time-taming Technologies," Sent to the MIS Advisory Board, Texas Tech University, College of Business Administration, Spring 1992.

N. Other Published Works

1. Small Computers for Business and Professional Use, A collection of transparency masters and related materials published by the Center for Professional Development for a short course by the same name, 1982.

2. Effective Management and Control with Computer Systems, a collection of transparency masters and related materials published by the Center for Professional Development for a short course by the same name, 1982.

3. Fundamentals of Data Processing for Non-Data Processing Managers, a workbook published by the Center for Professional Development for a short course by the same name, 1983.

4. User's Manual for the Rangeland Burning Expert System, a manual for the field operation of an expert system developed under grant number State of Texas ATP Grant No. 003644018.

V. INSTITUTIONAL AND PROFESSIONAL SERVICE

A. Institutional Service
1. College of Business Administration: Coordinator of the T.I. Workstudy Program, 1980-1982.

2. Research Advisory Board, College of Business Administration, 1980-1983.

3. Merit Committee, College of Business Administration, 1983-1985, 1987, 1988.

4. Promotion and Tenure Committee, College of Business Administration, 1986.

5. MBA Curriculum Committee, Chairperson, College of Business Administration, 1989.

6. Graduate Programs Advisor in Management Science, College of Business Administration, 1985-present.

7. Ph.D. Program Advisor in Operations Management, 2000-present.

8. Graduate School Committee to assess the graduate programs of the Industrial engineering Department, 2000

9. Chair of the Graduate School Committee to assess the graduate programs of the Industrial Engineering Department, 2006.

B. Professional Organizations

System Dynamics society, 2000-present
Operations Research Society of America, 1982-2000, full membership.
The Institute of Management Science, 1975-2000.
IEEE Control Systems Society, 1972-1980.
IEEE Systems, Man, and Cybernetics Society, 1972-2000.
Society for General Systems Research, 1976-1978.
World Future Society, 1974-1977.
World Population Society, 1973-1975.
Decision Sciences Institute, 1980-1983, 1985, 1990.

C. Honor Societies

Tau Beta Pi   Phi Kappa Phi   Sigma Tau

D. Offices held

Chairman of the IEEE-SMC Systems Science Committee, 1982-2000.
Editor of the ORSA/BAS Forum, 1982-1984.
Regular member of the IEEE-SMC Administrative Committee, 1983-1986.
Associate Editor of Information and Decision Technologies, 1988-present.

E. Awards

1. Recipient of the Franklin B. Taylor Award for most outstanding paper presented at the 1980 IEEE International Conference on Cybernetics and Society in Boston.

2. College of Business Administration Outstanding Researcher, 1982.

3. Listed in Outstanding Young Men of America in 1974 and 1981.

4. Institute for Studies in Organizational Automation Award of Excellence, July 1989.

5. Recipient of the President's Academic Achievement Award in 1990. This award to given to three faculty members within the entire University each year and includes a $1500 honorarium.

6. Recipient of the 2008 Favorite Professor Award by the MBA Class of May 2008.

VI. INDUSTRIAL POSITIONS AND CONSULTANCIES

A.   Los Alamos National Laboratories, Los Alamos, New Mexico, Summers of 1986 and 1987.
Developed algorithms for random variate generation and for statistics collection and reporting in pseudo-code for inclusion within Lisp-based KEE simulation models. Developed code for independence and correlation tests of 0-1 uniform random variate generators. Wrote meta-specification for formulation of intelligent, discrete, next-event simulation models. Formalized concepts of cognitive event, cognitive activity, and decision sets. Investigated the possibility for developing a specification language for formulation of intelligent task simulations. Initiated a thorough review of all relevant literature. Helped develop a knowledge-based simulation for manufacturing management.
TITLE: Consultant

B.   White Sands Missile Range, White-Sands, New Mexico, Summer of 1985.
Developed an inference engine for a knowledge base whose objective is to provide meteorological intelligence in relation to terrain, equipments, personnel, and operations. Coded design in U.C.S.D. PASCAL for operation on field-hardened microcomputers.
TITLE: Consultant

C.   Sandia Laboratories, Albuquerque, Summer of 1980.
Developed simulation model of solar energy. Using a popular national energy model, the effects of
market penetration by solar energy were characterized in terms of reduced dependence
upon foreign crude, reduction in usage rates of fossil fuels, etc. Results are published in
article III-A-11.
Developed a model of a photovoltaic cell string which is illuminated by a parabolic trough reflector.
The model shows what effect gaps have on cell illumination and how this effect influences
the shunting of diode strings for various angles of solar incidence. The model was
formulated to study diode string length and to determine how best to maximize power
under variant incidence angles. Results are published in articles III-B-19 and III-C-1 and
2.   TITLE: DOE Summer Faculty Fellow

D.   Langely Research Center, Virginia, Summer of 1978.
Developed scheduling/ routing/fleet-sizing models for a proposed national air cargo system. Results
are published in articles III-B-15 and III-C-3.   TITLE: NASA Summer Faculty Fellow

E.   Texas Instruments, Lubbock, 1978-1979.
Developed expert system to schedule plastic piece-part shop orders onto injection molding machines.
Problem involved roughly 50 presses with over 1000 different piece parts. Program
assigns shop orders to appropriate and available presses in such a fashion as to meet due
date requirements while minimizing the number of setups required. Incorporates over 30
scheduling rules.
TITLE: Consultant

F.   Purdue University, Indiana, 1971-1973.
Performed systems analysis of the U.S. Coast Guard pollution and surveillance functions. Helped
develop optimal aerial pollution surveillance strategies.

G.   The Boeing Company, Seattle, 1969-1970.
Helped design, develop, codify, verify, and implement a simulation of the AWACS airplane. Used
simulation models to evaluate vendor radar, and avionics designs. Used Kalman filtering
to track aircraft.
TITLE: Software Engineer

H.   The Boeing Company, Seattle, 1967-1969.
Worked within Lunar Orbiter program. Smoothed Lunar Orbiter doppler data. Developed satellite
navigation system through utilization of a Kalman filter. Performed error analyses of
models of several different satellite navigation system configurations.
TITLE: Research Engineer

I.   The Boeing Company, New Orleans, Summer of 1966.
Developed computer model to determine the stress loads on the shell of the <u>Saturn V rocket under
varying wind dynamics during launch.</u>
TITLE: Associate Research Engineer

VII. COMPUTER RELATED PROFICIENCIES

I have taught courses in and/or am familiar with the following:

A. Operating Systems
   1. Microsoft Windows 7, XP, 98, NT

   2. **IBM's OS-MVS using Job Control Language**
   3. **CDC's NOS (Network Operating Systems)**
   4. **Digital Research's CP/M for use on microcomputers**
   5. **Stanford University's WILBUR**
   6. **IBM's TSO (time-sharing option)**
   7. **DEC's VMS operating system**
   8. **Microsoft's MS-DOS and PC-DOS**

B. Development tools with which I am familiar
   1. **PowerBuilder 3, 4**
   2. **Visual Basic for Applications**
   3. **Visual Basic 3.0, 4.0, 5.0, 6.0**

C. General purpose languages with which I am familiar:
   1. **C++**
   2. **PASCAL**
   3. **FORTRAN**
   4. **VISUAL BASIC**
   5. **JAVA**
   6. **SAS (statistical and some general purpose use)**

D. Simulation languages with which I am familiar
   1. **SIMSCRIPT II.5 (CACI, Inc.)**
   2. **CSMP**
   3. **DYNAMO II**
   4. **SLAM SYSTEM**
   5. **SIMKIT in IntelliCorp's KEE**
   6. **SIMFACTORY II.5 (CACI, Inc.)**
   7. **SIMPROCESS**
   8. **PROMODEL, MEDMODEL, SERVICE MODEL**
   9. **Vensim, Stella, I Think (System Dynamics)**

E. Productivity software packages with which I am familiar

1. **MS Office Professional (most current)**	11. **VP-Expert**
2. **WordPerfect 5.1, 6.0**	12. **Front Page version 4.0, 3.0**
3. **WordStar Releases 3.3 and 4**	13. **MS Visual Basic 4.0, 5.0, 6.**
4. **Lotus 1-2-3 Release 2.01, 2.2**	14. **Asprova**
5. **dBase III Plus**	15. **Optiant**
6. **Turbo C++ version 3.0 for DOS**	16. **Vensin 5.0 and prior**
7. **Turbo Pascal version 3.3**	17. **Microsoft Enterprise Software:**
8. **SuperCalc 4**	**Exapta**
9. **Javelin Plus**	18. **Cordys**
10. **MS Project 2016**	