## **VITAE**

#### HEMANT K. JAIN

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### 1. GENERAL INFORMATION

#### 1.1 Education

Ph.D., Lehigh University, Bethlehem, Pennsylvania.

Major: Information Systems, Minor: Operations Research.

M. Tech., Indian Institute of Technology (I.I.T.), Kharagpur, India.

Concentration: Industrial Engineering and Operations Research.

B.S., University of Indore, Indore, India.

Concentration: Mechanical Engineering.

#### 1.2 Awards

- 1. Roger L. Fitzsimonds Distinguished Scholar Award in recognition of research excellence, Sheldon B. Lubar School of Business, University of Wisconsin Milwaukee 2013-15.
- 2. National high-end foreign expert, State Foreign Experts Bureau, Chinese Ministry of Education, Hefei University of Technology (HFUT), 2014
- 3. The Second China Summer Workshop on Information Management (CSWIM 2008) Honorable Mention, June 2008.
- 4. The Operations Research Society's Stafford Beer Medal for the **best paper published in the European Journal of Information Systems in 2002.**
- 5. University of Wisconsin-Milwaukee, School of Business Administration **research award** in recognition of outstanding research contribution, 2000.
- 6. University of Wisconsin-Milwaukee, School of Business Administration. Business Advisory Council's **research award** in recognition of outstanding research contribution, 1989.

### **Research Interests**

- a.) Big Data Management;
- b.) Business Analytics, Text Mining and Machine Learning;
- c.) Analysis of Social Networking Communities;
- d.) Support for Multidisciplinary Cancer Care;
- e.) Using Virtual Worlds for Providing Medical Services;

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- f.) Internet of Things and Real Time Enterprises;
- g.) Component Based System Development & Web Services;
- h.) Service Oriented Architecture and IT Agility.

#### 1.4 Positions Held

Roger L. Fitzsimonds Distinguished Scholar, Professor Information Technology Management, Sheldon B. Lubar School of Business, University of Wisconsin- Milwaukee, June 2012-Present.

Interim Director, Biomedical and Health Informatics Research Institute (BHIRI), University of Wisconsin – Milwaukee, University level multi school/colleges research Institute, June 2012-June 2014.

National high-end foreign expert, School of Management, Hefei University of Technology, Hefei, Anhui, P. R. China, 2014.

Wisconsin Distinguished & Tata Consultancy Services Professor, Sheldon B. Lubar School of Business, University of Wisconsin – Milwaukee, 2002 to July 2012.

Tata Consulting Services Professor, School of Business Administration, University of Wisconsin – Milwaukee, 2000 to 2002.

Lawrence G. Regner Research Professor, School of Business Administration, University of Wisconsin - Milwaukee, 1997 to 1999.

Research Professor, School of Business Administration, University of Wisconsin-Milwaukee 1990 to 1996.

Associate Professor, School of Business Administration, University of Wisconsin-Milwaukee, 1986 to 1990.

Assistant Professor, School of Business Administration, University of Wisconsin-Milwaukee, 1983 to 1986.

Assistant Professor, College of Engineering, Syracuse University, Syracuse, N.Y., 1981-1983. **1.5 Administrative Experience and Leadership Roles:** 

#### Administrative Positions:

*Interim Director*, Biomedical and Health Informatics Research Institute: A catalyst to expand Biomedical and Health Informatics research at UWM, (2012-2014).

MIS Area Chair, Lubar School of Business, 2000, 2004, 2009.

Director, Management Information Systems Consortium, School of Business Administration, UW Milwaukee, 1995-2000. The MIS consortium built a partnership between the business

community and the MIS group at the University. About twenty companies (many of them fortune 500) paid annual dues to belong to the consortium that organized monthly technical sessions, discussions and helped facilitate data collection to support faculty and Ph. D. student research. The consortium later evolved into The Center for Technology Innovation (CTI).

## Research Programs & Partnerships:

## Healthcare IT & Medical Informatics Research Program:

My research interests are in innovative applications of information technology to support efficiency, effectiveness, and decision making. At University of Wisconsin-Milwaukee, I was instrumental in developing an interdisciplinary Ph. D. program in Biomedical and Health Informatics. The ongoing program is a partnership between schools/colleges of Business, Engineering, Nursing, Health Sciences, Information Study, Public Health and the Medical College of Wisconsin (http://graduateschool.uwm.edu/students/prospective/areas-ofstudy/medical-informatics/). I have been serving on the steering committee of the program since its inception and was the advisor to the first graduate of the program who is currently the Director of Medical Informatics at a top 20 cancer institute, Roswell Park Cancer Institute (RPCI). From 2012-2014, I served as the interim director of UWM's Biomedical and Health Informatics Research Institute (BHIRI). In this role I brought researchers from various academic areas together to address complex issues related to the development and implementation of healthcare informatics solutions. This required identifying and matching relevant problem areas with faculty expertise, motivating faculty and bringing groups of faculty and students together to address research problems. I also worked with healthcare organizations in southeast Wisconsin such as Aurora Healthcare, Columbia St. Mary's, Marshfield Clinics and Medical College of Wisconsin to create research collaborations and develop grant proposals.

In terms of my current research, with Dr. Carmelo Gaudioso, Director of Medical Informatics at Roswell Park Cancer Institute, I have designed and developed a prototype breast cancer case knowledge repository called *MEDIKM* (<a href="http://medikm.com/">http://medikm.com/</a>) to support multidisciplinary cancer care. Another doctoral graduate of mine has worked on patient oriented evidence-based treatment decision support system (TREATQUEST®) for lung cancer and a current doctoral student is working on enhancing clinical trial subject recruitment by matching patient to a clinical trial using machine learning and text mining techniques. With two other current doctoral students, I am working on studying the formation and analysis of health knowledge sharing networks on Twitter. This involves text mining and analysis of about 20 million tweets collected by us.

# Real Time Enterprises Research Program

I was instrumental in obtaining support from Rockwell Automation to establish a research program on Real Time Enterprises. Real Time Enterprises are characterized by zero latency in decision making enabled by real time information obtained from intelligent cyber devices (connected through internet) to physical objects (known as internet of things) and massively distributed decision. These enterprises have *situational awareness*; they can quickly *sense-and-respond* to opportunities and threats, and can *track-and-trace* important items. The objective of this research program is to address issues related to architecting a real time enterprise. The issues

addressed by the program span the organizational structure, design of business processes, system architecture and integration using technologies like Service Oriented Architecture (SOA), Event Driven Architecture (EDA), Business Intelligence (BI), and Business Activity Modeling (BAM).

The current focus is on the development of a <u>Service oriented</u>, <u>Event driven</u>, <u>Smart cyber-agent</u> (SES) approach for real time management of global manufacturing enterprise. We are focusing on developing mechanisms for acquiring events from disparate systems to create event streams. We use complex event processing (CEP) to identify event patterns that can potentially have major impact on the business. The goal is to develop an environment that will allow localized distributed decision making with coordination and control.

Our vision is to link all of the above features into a *Management Dash Board* that allows managers and executives to have a single view of the full enterprise and relevant areas of interest. This provides enterprise the capability to know in real time what is happening inside the enterprise and in related supplier and customer network.

## Business Component & Web Services Research Program,

I was instrumental in obtaining support from Tata Consulting Services, a large global consulting corporation, to establish a research program for the development of tools and techniques for the design and development of reusable business components. A number of faculty members, Ph. D. students and two researchers from Tata Consulting Services worked on this research program.

## Academic Program Development:

<u>Development of Master of Science in eBusiness</u>, Led the School of Business' efforts in the development of MS in eBusiness program, this interdisciplinary program was designed to develop eBusiness leaders. This was one of a handful of such programs offered in the country at that time. The program started in the summer of 2000.

#### 1.6 Positions in Professional Organizations

## 1.6.1 Journal Editorship

Co-editor-in-chief, *International Journal of Cloud Computing (IJCC)*, http://www.hipore.com/ijcc/ (2013-Present);

Editorial Review Board, *Journal of AIS*, flagship journal of Association of Information system, (2008- present);

Member Executive Advisory Board, *IEEE Transactions on Services Computing* (2011-Present).

Associate Editor, *Data & Knowledge Engineering* – Journal published by Elsevier, (2014-present);

Member. Editorial Board, *Information Technology and Management*, (1998 – present);

Associate Editor, *International Journal of Web Services Research*, (2003- present);

Associate Editor, *International Journal of Business Process Integration and Management*, (2003 – present);

Guest Associate Editor, *MIS Quarterly, Special issue* on IT and Innovation (broadly defined to include new product development, service innovation, business model innovation, and management innovation) (2014-15).

Associate Editor-in-Chief, *IEEE Transactions on Services Computing* (2007 to 2010).

Guest Associate Editor, *MIS Quarterly, Special issue* on Business Intelligence Research (2009 to 2012).

Associate Editor, *Information Systems Research (ISR)*, a top journal in MIS published by INFORMS (2005-2007).

Guest Associate Editor, MIS Quarterly, Special Issue on Design Science, 2006-2008.

Co-Editor, *Special Issue of Information Technology and Management* on 'Architecture and Design for Application Agility'. Jan 2007.

Member, Editorial Review Board, *Journal of Database Management* 1989 – 2000.

### 1.6.2 Organizational Positions

Member Steering Committee, IEEE International Conference on Web Services (2003 to Present); Member Steering Committee, IEEE International Conference on Services Computing (SCC); Member Services Computing Technical Committee, IEEE computer Society (since 2005); Member, Service, Systems and Organizations Technical Committee of the IEEE SMC Society (2002 to Present);

Member, Expert committee of Annual Conference on e-business in China.

### 1.6.3 Conference Chairs

Co-General Chair, IEEE Big Data congress 2015, June 27 - July 2, 2015, http://www.ieeebigdata.org/2015/, New York, USA;

Program Co-Chair, IEEE Services 2014, The 3rd International Congress on Big Data (BigData 2014, <a href="http://ieeeBigData.org">http://ieeeBigData.org</a>) June 26 to July 1, 2014;

General Chair, IEEE services 2013: IEEE 9<sup>th</sup> World Congress on Services, June 27-July 2, 2013, Santa Clara Marriott, CA, USA;

Co-Program Chair, IEEE SE 2012, 1st International Conference on Services Economics

June 24-29 2012, Hyatt Regency Waikiki Resort and Spa, Honolulu, Hawaii, USA;

Program Co-Chair, Sixth International Conference on Design Science Research in Information Systems and Technology (DESRIST 2011), Milwaukee, (May 5-6, 2011);

Chair, App. & Industry, 2010 IEEE International Conference on Web Services (ICWS 2010);

General Co-chair, 2008 IEEE International Conference on Web Services (ICWS 2008);

General Co-Chair, 2006 IEEE International Conference on Services Computing (SCC 2006);

Local Arrangement Chair, 2006 Workshop on Information System (WITS 06);

Associate Editor, International Conference on Information Systems 2005, 2006;

Mini Track co-chair, Service-based Application Architecture and Development, 2006 America's conference on Information System;

Program Chair, 2004 IEEE International Conference on Web Services;

Book Review Editor, Journal of Info. Technology Cases & Applications (Jan 1999 to Dec 2001) Member, Program Committee WITS 97 & WITS 98, WITS99, WITS2000, WITS06-10, WITS12, WITS13:

Member, Program Committee of Second, Third, and Fourth International Conference on Data Engineering, organized by IEEE Computer Society.

#### 1.7 Ph.D. Dissertation Chair & Committees

## a) Committee Chair/co-chair (Major Professor):

Mohammed I. Bu-Hulaiga, "Model Management in Decision Support System: A Plan-Based Approach," completed August 1987. (Member Shoura Council (Soudi Arabian Version of Parliament), Saudi Arabia.)

Uday Kulkarni, "Integrated Knowledge Based Support for Distributed Database Design," completed April 1989. (Joined and Tenured at Arizona State University.)

Hwa-Suk Ryu, "An Investigation of the Relationship between Organization Characteristics and the Degree of Site Autonomy and its Impact on the Performance of Data Administration in Distributed System" completed 1990. (CEO Hansol Telecom Co, South Korea)

Benedict Arogyaswamy, "Object Oriented Framework for Model Management" Completed September 1992. (Joined and Tenured at University of South Dakota, Currently at Federal Express).

Sandeep Purao, (co-chair with Prof. Nazareth) "A Methodology for Distribution of Object-Oriented Applications", 1995. (Joined & Tenured at Georgia State University, Currently at Pennsylvania State University).

Sreedhar Sundaram, "Integrating Visual Interaction Modeling with Multiple Criteria Group Decision Support Systems", December 1996. (Joined Blackwell Consulting, Chicago, currently at Senior Director Microsoft Services)

George Nezlek, (co-chair with Prof. Nazareth) "Architectures for Cooperative Computing: A Knowledge-Based Approach" June 1997 (Joined Loyola University, Chicago)

Padmal Vitharana, (co-chair with Prof. Fatemeh Mariam Zahedi), "Designing Reusable Business Components", July 2000 (Joined & tenured at Syracuse University)

Jungjoo Jahng, (co-chair with Prof. K. Ramamurthy) "Successful design of electronic commerce environments: The role of sense of presence on user behavior", July 2000 (Joined Rensselaer Polytechnic Institute, Currently at Seoul National University, South Korea)

Seokwoo Song, "Knowledge management in an Agent-Based Environmental Scanning System" Feb. 2001, (Joined Georgia Southern University).

Hangjung Zo, (co-chair with Prof. Nazareth) "Supporting Intra and Inter-Organizational Business Processes with Web Services", Sept. 2006, (Associate Professor, Korea Advanced Institute of Science and Technology (KAIST)).

Choi, Jae, (co-chair with Prof. Nazareth) "Three Research Essays on Business-Driven Strategies for Service-Oriented Architecture Implementation", (Currently at Pittsburgh State University).

Walia, Nitin, (co-chair with Prof. Fatemeh Mariam Zahedi), "Innovation in Virtual Worlds: System Development and Delivery of Health Care Services in Second Life®" 2010, Joined Ashland University Ashland, Ohio 44805

Gaudioso, Carmelo, "A practical approach to breast cancer knowledge management: a tumor board perspective®" 2010, Ph. D. in Medical Informatics, Joined Roswell Park Cancer Research Institute, Buffalo, NY as Director of Medical Informatics.

John D. Delano, (co-chair with Prof. Atish Sinha) "Toward End-User Specification and Design of Business Systems", August 2011, Joined Cedarville University, OHIO.

Abhijit Dutt, "Economic Perspective on Cloud Computing: Three Essays", August 2013, Joined. Penn State University- Beaver.

Danqing Hu, "Patient-Oriented Evidence-Based Treatment Decision Support System (TreatQuest) for Lung Cancer", Ph. D. in Medical Informatics, completed in Fall 2013.

Euisung Jung, "Three essays on enhancing clinical trial subject recruitment using natural language processing and text mining", Proposal Defended

## b) Dissertation Committee Member:

Yuan Liu, "Performance Evaluation of Reorganized and Updated Indexed Files Based on Moments," April 1983, Syracuse University.

David P. Hale, "Using Semantic Information to Allocate Data Fragments within a DDBMS," completed June 1986.

Jeanne Ross, "Management Information Systems Department control over end-user computing in Marketing Department", Completed June 1987

David Munro, "An Architecture for Distributed Decision Support Systems," completed December 1988.

Chaturvedi, Alok, "Conceptual Aggregation Model for Decision Support in Manufacturing Environment," completed August 1989.

Tung-Ching Lin, "Knowledge-Based Semantic Query Processing - An Optimal Transformation Approach," completed August 1989.

Prasad Kilari, "Effect of Information Load on a Decision Maker and the Use of Heuristics." Completed August 1989.

Frank Groom, "An Object Storage Model: Structures for the Storage and Management of Objects", Competed August 1993.

Beth Towell, "An Object Oriented Integration Framework for Distributed Multimedia Database System", Completed August 1993.

Jin-Chul Kim, "Computing Transitive Closure on definite & Indefinite Data in Database Systems", Ph. D. in Computer Science, Completed August 1994.

Bijayananda Naik, "A Knowledge based approach to the management and control of flexible manufacturing systems", Completed May 1995.

Antonio Reis, "Collaborative Decision-Making Supported by a Modeling Environment: A Financial Example" Completed September 1995.

Jaeki Song, "Internet Market Strategies, Implementation Tactics and Web Design", Completed September 2000.

Ying Lu, "IT Capability, uncertainty and organizational performance: Development of Measures and Empirical Examination", Completed December 2005.

Ananth Chiravuri, "Resolving cognitive conflicts among experts in virtual teams during knowledge capture: A multi-round study", Completed December 2006.

Peter Haried, "Evaluating Relational Antecedents and Components of IT off shoring Success: When is Success and Failure One and the Same? Completed, Nov. 2007.

Thomas L. Ngo-Ye, "Analyzing helpfulness of online customer reviews", Completed Dec 2011.

Dong-Heon (Austin) Kwak, "Three research essays on the effects of charity website design on attitudes and online donations", Completed April, 2014.

Wachiraporn Arunothong, "Three research essays on disclosure pf medical information through formal and social information technologies" Completed Nov. 2014.

#### 1.8 Grants and Research Proposals

"Design of Real Time Knowledge Support Systems for Multidisciplinary Cancer Care", submitted Oct 2012 (Not funded) **Agency for Healthcare Research and Quality (AHRQ) of NIH, \$2,500,000.00,** Organizations Involved (Roswell Park Cancer Institute; University of Wisconsin – Milwaukee; University of South Florida).

"A Personalized Holistic Approach to Complex Decision Making by Cancer Patients", to be resubmitted to **Patient-Centered Outcomes Research Institute** (**PCORI**), \$1,500,000.00, Organizations Involved (Roswell Park Cancer Institute and University of Wisconsin – Milwaukee).

"A Service System for the Real-time Command and Control of Supply Chains for Advanced Manufacturing Enterprises", submitted to **DARPA** (not funded), \$11,913,582.00 Organizations involved (Rockwell Automation, Rockwell Collins, Cybranet, University of Wisconsin-Madison, University of Wisconsin-Milwaukee, Meta Command Systems, and Dedicated Computing).

- "Real Avatars in Treating Patients' Virtual Medical Offices", Clinical and Translational Science Institute (**CTSI**) of South East Wisconsin, **\$100,000.00** (**Funded**) (PI: Fatemeh Mariam Zahedi, co-PI: F., Shaker, Reza, Collaborators: Walia, N., Jain, H. K., Zhao, Huimin).
- "Developing CTSI-Second World and Testing its Efficacy" (**funded** in January 2009, **\$29,000.00**). Clinical and Translational Science Institute (**CTSI**) of South East Wisconsin (PI: Fatemeh Mariam Zahedi, Walia, N., Jain, H. K.).
- "Development of Real Time Enterprises Research Program", Advanced Technology Group, Rockwell Automation, (Funded **\$150,000**) (2007 to 2010)
- Amy M. Coenen, Hemant K. Jain, Tae Youn Kim, Norma Lang (co-PI), Sally P. Lundeen (PI), Susan W. McRoy, Timothy B. Patrick, and Huimin Zhao. Collaborative Intelligent Health Information Systems Initiative (CIHISI). *National Science Foundation, Award Number 0650323*, 2007, (Funded) (\$598,549).
- "Development of Component Based System Development Research Program", (**Funded**), Tata Consultancy Services, (\$600,000), 2000-2012.
- "MPS Portal RFP Development" (May 2003- May 2004),) Department of Technology, Milwaukee Public School (Jain) **\$20,500** (Funded).
- "MPS Student Data Warehouse Enhancement" (May 2003- May 2004),) Department of Technology, Milwaukee Public School (Jain) \$19,500 (Funded).
- "MPS Student Data Warehouse Deployment/Enhancement (Support for the Milwaukee Partnership Academy Initiative) (July Dec 2002) Department of Technology, Milwaukee Public School (Jain) \$20,500 (Funded).
- "4GL Implementation", (Jan Aug. 2002) Department of Technology, Milwaukee Public School (Jain) \$20,500(Funded).
- "Data Driven Decision Making and Special Education System Implementation" (Jan 2001 to Aug 2001) Department of Technology, Milwaukee Public School (Jain) \$39,200 (Funded).
- "Data Warehousing & Special Education Systems (Jan 2000- August 2000) Department of Technology, Milwaukee Public School \$36,000 (Funded).
- Director, UWM MIS Consortium (a consortia of MIS faculty and IS executives in the area). The consortia got over \$50,000 a year in terms of donations.
- "M&I / UWM Information Technology Training Program", Played a key role as Director of MIS Consortium in identifying opportunities and preparing proposal. \$ 260,000 (Funded) (This was a unique partnership program with industry which generated more than \$750,000).
- "Requirements for Special Education" (Aug 1998- July 1999) Department of Technology, Milwaukee Public School (Jain & Nazareth) **\$75,000** (Funded).
- "School Management System" (July 1997-June 1998) Department of Technology, Milwaukee Public School. (Jain & Nazareth) **\$47,000** (**Funded**).

"DBMS Selection and Implementation of Student Data Warehouse for Milwaukee Public School" (Aug. 1996 to June 1997) Department of Technology, Milwaukee Public School. (Jain & Nazareth) \$39,716 (Funded).

"Design of Student Data Warehouse for Milwaukee Public School" (Jan. 96 to July 96)
Department of Technology, Milwaukee Public School. (Jain & Nazareth) \$43,920 (Funded).

"M&I/UWM Strategic Workshop" (Oct 1994 to April 1995) Custom Designed this (16 week 4 hours per week) interdisciplinary workshop for 34 middle level managers of M&I data services. (Coordinator: Hemant Jain, Workshop Faculty: Burstein, Ghose, Jain, Yasai, And Zahedi) **\$100,000 (funded)**.

"Cost justification of System Re-engineering and Downsizing Decisions" (summer 1993) Submitted to Advanced Technology Division, Ameritech, and \$24,000 (funded).

"Re-engineering of Warranty System" (Spring 1993) Submitted to Harley-Davidson Corporation **\$10,000 (Funded).** 

Graduate School Research Incentive Program 1984-85 (**funded**, one course buy-out to develop research proposal for extramural funding).

Management Research Center, Release Time for Research, FY 85-86 and FY 86-87 (funded).

"Study of Interaction Between Distributed Query Processing, Update Synchronization, and Data Placement in a Distributed Database System," Senate Research Committee. Syracuse University 1983. (Funded for \$3600).

## 2. RESEARCH

#### 2.1 Refereed Journal Articles:

"Treating Patients Real Avatars in Virtual Medical Office." *IEEE Intelligent Systems Journal*, Volume 29, No 2, pp. 67-71. June 2014 (Zahedi, F. M., Zhao, H., Walia, N., Jain, H., Sanvanson, P., and Shaker, R.)

"Ease of Use: An Empirical Comparison of Component and Objects", *IEEE Software*, September 2013 (Atish Sinha and Hemant Jain).

"The Impact of SOA Implementation on IT-Business Alignment: A System Dynamics Approach", Vol. 4, No. 1, April 2013, *ACM Transactions on Management Information System*, (Choi, J., Nazareth, D. L., Jain, H. K.).

"Information Technology Skills Management Strategies for Implementing New Technologies in Organizations: A Case of Service Oriented Architecture", *IEEE Transactions on System, Man, and Cybernetics* Vol. 42. Number 4, July 2012, PP 838-853. (Choi, J., Nazareth, D. L., Jain, H. K.).

- "A Knowledge Based Component/Service Repository and its Role in Enhancing Analysts' Domain Knowledge for Requirements Analysis" *Information & Management* Vol. 49, Issue 1, January 2012, PP 24-35, (Padmal Vitharana, Hemant Jain and Fatemeh Mariam Zahedi).
- "End-to-end Reliability of Agile Service Oriented Applications", *Information Systems Frontier*, Vol. 14, No. 5, October 2012, PP971-986, (Zo, H., Nazareth, D. L., Jain, H. K.).
- "Security and Performance in Service Oriented Applications: Trading off Competing Objectives", *Decision Support System*, Vol. 50, Issue 1, PP 336-346, December, 2010, (Zo, H., Nazareth, D. L., Jain, H. K.).
- "Enhancing electronic medical record retrieval through semantic query expansion", *Information Systems and eBusiness Management*, pp. 1–17, 2010 (Hemant Jain, Cheng Thao, Huimin Zhao).
- "Implementing Service-Oriented Architecture in Organizations", *Journal of MIS*, Spring 2010, Vol. 26, No. 4 pp 255-289 (Jae Choi, Derek Nazareth, Hemant Jain).
- "ICIS 2007 Panel report: Bridging Service Computing and Service Management: How MIS Contributes to Service Orientation?", *Communications of AIS*, Vol. 22, Article 22, PP 413-428, March 08. (J. Leon Zhao, Cheng Hsu, Hemant K. Jain, Jim C. Spohrer, Mohan Tanniru, Harry Jiannan Wang).
- "Architecture and Design for Application Agility", Forward to Special Edition, *Information Technology and Management*, Vol. 9, Issue 1, Jan. 2008, PP1-3 (Hemant Jain and Padmal Vitharana).
- "Effects of Interaction Richness on Consumer Attitudes and Behavioral Intentions in E-Commerce: Some Experimental Results", *European Journal of Information System* (Jahng, J., Jain, H. K., Ramamurthy, K) Vol. 16, PP 254-269 (2007).
- "An Empirical Study of the Impact of Product Characteristics and Electronic Commerce Interface Richness on Consumer Attitude and Purchase Intention", *IEEE Transactions on Systems, Man and Cybernetics --Part A Systems & Humans:* vol. 36, no. 6, PP 1185-1202, November 2006 (J. Jahng, Hemant Jain, and K. Ramamurthy).
- "Effectiveness of Visual Interactive Modeling in the Context of Multiple Criteria Group Decisions", *IEEE Transactions on Systems, Man and Cybernetics Part A Systems & Humans*, Vol. 36, No. 2, PP 298-318, March 2006 (Sreedhar Sundaram, Hemant Jain and K. Ramamurthy).
- "Strategy-based Design of Reusable Business Components", *IEEE Transactions on Systems*, *Man and Cybernetics --Part C Applications and Reviews:* Vol. 34, No. 4, November 2004 PP 460-475 (Padmal Vitharana, Hemant Jain and Fatemeh Mariam Zahedi).

- "Layered Architecture for Assembling Business Applications from Distributed Components", *Journal of Systems Science and Systems Engineering (JSSSE)*, Vol. 13, No. 1, pp 257-278, March 2004 (Hemant Jain and Balarama Reddy).
- "A Spanning Tree Based Approach to Identifying Web Services", *International Journal of Web Services Research*, Vol. 1, No.1, Jan.-March 2004, PP. 1-20. (Hemant Jain, Huimin Zhao, & Nageswara Chinta).
- "Knowledge-Based Repository Scheme for Storing and Retrieving Business Components: A Theoretical Design and an Empirical Analysis", *IEEE Transactions on Software Engineering*, Vol. 29, No. 7, July 2003, PP 649-664 (Padmal Vitharana, Fatemeh "Mariam" Zahedi, and Hemant Jain).
- "An Assessment Model for Requirements Identification in Component-Based Software Development," The *DATA BASE*: for Advances in Information Systems. Fall 2003 (vol. 34, No. 4) pp 47 63 (Padmal Vitharana, Fatemeh "Mariam" Zahedi, Hemant Jain,).
- "Design, Retrieval, and Assembly in Component Based Software Development", Vol. 46, No. 11, Nov. 2003, pp. 97-102, *Communications of ACM*, (Padmal Vitharana, Fatemeh "Mariam" Zahedi and Hemant Jain).
- "Personality Traits and Effectiveness of Presentation of Product Information in E-Business Systems", *European Journal of Information Systems*, Vol 11, No 3, September 2002, PP 181-195 (J. Jahng, Hemant Jain, and K. Ramamurthy) [Awarded Operations Research Society's Stafford Beer Medal for the best paper published in the European Journal of Information Systems in 2002].
- "ODE: A Tool for Distributing Object Oriented Applications", *Information & Management*, Vol. 39, September 2002, pp 689-703 (Sandeep Purao, Hemant Jain and Derek Nazareth).
- "Exploiting Design Information to Derive Object Distribution Models", *IEEE Transactions on Systems, Man and Cybernetics --Part A Systems & Humans:* Vol. 32, No. 3, May 2002, PP 320-344 (Sandeep Purao, Hemant Jain and Derek Nazareth).
- "An Approach to Distribution of Object-Oriented Applications in Loosely Coupled Networks" *Journal of Management Information System (JMIS)* Vol. 18, No. 3, Winter 2001-2002 pp 195-234 (Sandeep Purao, Hemant Jain and Derek Nazareth).
- "Estimating Server Capacities for Enterprise Computing Architectures" *Parallel and Distributed Computing Practices*", Vol. 3, No. 4 December 2001. (George Nezlek, Hemant Jain and Derek Nazareth). [This paper has been republished as a chapter in Kowalik, J. (Ed.), *Design*, *Performance and Scalability of the Distributed Enterprise Systems*, Nova Science Publishers, New York, Feb. 2002, pp 95-109. (G.S. Nezlek, H.K. Jain and D.L. Nazareth)].
- "The Impact of Electronic Commerce Environment on User Behavior: The Case of a Complex Product", *e-Service Journal*: A Journal of Electronic Services in the Public and Private Sector Vol. 1, No 1, Fall 2001 pp 41-53 (J. Jahng, Hemant Jain, and K. Ramamurthy) This paper is an extension of the study accepted in AMCIS2000 Conference selected by AMCIS2000 mini track as one of the four best papers to be submitted to e-Service Journal.

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- "Effective design of electronic commerce environments: A Proposed theory of congruence and Initial Validation", *IEEE Transactions on Systems, Man and Cybernetics --Part A Systems & Humans:* 30 (4), July 2000, pp. 456-471 (J. Jahng, Hemant Jain, and K. Ramamurthy).
- "Research Issues in Testing Business Components" *Information & Management* Vol 37. No 5, Sept 2000, pp 297-309 (Hemant K Jain and Padmal Vitharana).
- "Supporting Decision Making in Combinatorial Multi-Criteria Situation" *Decision Support Systems* vol. 26 (1999) PP 225-247 (Sandeep Purao, Hemant Jain and Derek Nazareth).
- "An Integrated Approach to Enterprise Computing Architectures" *Communications of ACM* Vol. 42, Nov .1999 PP 82-90 (George S. Nezlek, Hemant K Jain and Derek L. Nazareth).
- "Success of Data Administration in Distributed Environment: An Empirical Evaluation", *MIS Quarterly* Vol 22, Number 1, March 1998 PP 1-23 (Hemant Jain, K. Ramamurthy, H. Ryu, M. Yasai).
- "Effective Distribution of Object-Oriented Applications" *Communications of ACM*, Vol. 41, No 8 pp 100-108 August 1998 (Sandeep Purao, Hemant Jain and Derek Nazareth).
- "Retooling Information Technology Professionals" *Journal of Information Systems Education*, Vol. 9, No. 1&2, Fall/Winter 1998. (Hemant Jain and Souren Paul).
- "An Object-Oriented Framework for the Design and Operation of Flexible Manufacturing Systems", Vol. 4, No. 4, 1997, pp 290 to 309, *Integrated Computer-Aided Engineering* (A. Chakravarty, Hemant Jain, John Liu and Derek Nazareth).
- "Information technology opportunities for developing countries: An assessment for the Indian context", *Innovative applications in computing*, 1993 (Hemant K Jain and Derek L Nazareth).
- "Interaction between concurrent transactions in the design of Distributed Databases", *Decision Sciences*, Vol 24, No 2, March April 1993. Pp 253-277 (Uday Kulkarni and Hemant Jain).
- "Distributed Application Development: SDLC Revisited", *Information and Management* Vol. 20, December 1991, pp 247-255, (Hemant Jain and Sandeep Purao).
- "MCDM Approach for Generating and Evaluating Alternatives in Requirement Analysis", *Information Systems Research*, Vol. 2 No. 3, September 1991, pp 223-239, (Hemant Jain, Mohan Tanniru, and Bijon Fazolallahi).
- "E-R Approach to Distributed Heterogeneous CAD/CAM Database Systems", *Information Resources Management Journal*, Vol. 3, No. 1, 1990, pp. 29-40 (Hemant Jain and Mohammed Bu-Hulaiga).
- "Distributed Computer System Capacity Planning and Capacity Loading," *Decision Sciences*, Vol. 21, No. 2, Spring 1990, pp 253-262 (Amiya Chakravarty and Hemant K. Jain).
- "Expert System Problem Selection: A Domain Characteristics Approach," *Information and Management*, Vol. 17, Dec. 1989, pp. 245-253 (Hemant K. Jain and Alok Chaturvedi).

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- "Knowledge-Based GDSS to Support Reciprocally Interdependent Decisions," *Decision Support Systems*, Vol. 5, December 1989, pp. 287-301 (Mohan Tanniru & Hemant K. Jain).
- "The Relevance of Expert System Technology for India: A Transborder Perspective," *Vivek: An Expert System Journal*, Vol. 2, No. 3, July 1989, pp. 21-29 (Derek Nazareth and Hemant K. Jain).
- "Integrating MCDM Models in the DSS Framework For Marketing Decisions," *Naval Research Logistics*, Vol. 35, No. 6, December 1988, pp. 575-596 (Raj Javalgi & Hemant Jain).
- "An Approach to Postoptimality and Sensitivity Analysis in Zero-One Goal Programs," *Naval Research Logistics*, Vol. 35, No. 1, February 1988, pp. 73-84 (George Wilson and Hemant Jain).
- "A Comprehensive Model for the Design of Distributed Computer Systems," *IEEE Transactions on Software Engineering*, Vol. SE-13, No. 10, October 1987, pp. 1092 -1104 (Hemant Jain).
- "Distributed Computer System Design: A Multicriteria Optimization Methodology," *Decision Sciences*, Vol. 17, No. 4, Fall 1986, pp. 437-453 (Hemant Jain and Amitava Dutta).
- "Distributed Computer System Design: An Interactive Procedure," *Information and Management*, Vol. 9, No. 4, 1985, pp. 269-281 (Hemant Jain).
- "A DSS for Distributed Computer System design in the Presence of Multiple Conflicting Objectives," *Decision Support System*, Vol. 2, No. 3, 1985, pages 233-246 (Amitava Dutta and Hemant Jain).
- "A Comprehensive Model for the Storage Structure Design of CODASYL Databases," *Information Systems*, Vol. 9, No. 3 & 4, 1984, pages 217-230 (Hemant K. Jain).
- "Computer-Aided System for the Database Storage Structure Design," *Information and Management*, Vol. 6, No. 6, December 1983, pages 337-349 (Hemant Jain and John Krobock)
- "Evaluating Research Proposals with Group Techniques," *Research Management*, Vol. 24, No. 6, November 1981, pages 34-38 (Louis Plebani and Hemant Jain).
- "Assembly Line Design with Multiple Stations A Case Study," *Industrial Engineering Journal*, Vol. VI, No. 11, 1977 (Hemant Jain and B. B. Mohanty).

#### 2.2 Refereed Journal Articles Under Review:

- "Business Process Driven Composition of Service Oriented Applications: An Evolutionary Heuristic Approach using Multiple Criteria", Submitted to **Journal of MIS** (Zo, H., Nazareth, D. L., Jain, H. K.).
- "Hybrid Collaborative Filtering For High-Involvement Products: A Solution to Opinion Sparsity and Dynamics", Revised and Resubmitted to **Decision Support System** (Cuiqing Jiang, Rui Duan, Hemant K. Jain, Kun Liang)

"Role of hospital information system on patient satisfaction: An empirical study based on technology adoption model", Submitted to **Information Development**, (Changyong Liang, Dongxiao Gu, Fangjin Tao, Hemant K Jain, Yu Zhao, Bin Ding).

"Providing Software As A Service: A Model Of Design Decisions by SaaS Provider", being revised for resubmission to *JAIS* (Dutt, A; Jain, Hemant; Kumar, Sanjeev).

"Influence mechanism of patient accessible HIS implementation on Doctor-Patient relationship: A service fairness perspective", being revised for resubmission to **Information and Management** (Changyong Liang, Dongxiao Gu, Fangjin Tao, Hemant K Jain, Yu Zhao, Bin Ding).

"Reusing Components and Objects for Modeling Business Systems: The Influence of Decomposition Characteristics and Analyst Experience", being revised for resubmission to, The **DATA BASE:** for Advances in Information Systems, (Atis Sinha and Hemant Jain).

### 2.3 Working Papers

"Enhancing Analysts' Mental Models for Improving Requirements Elicitation: A Two-Stage Theoretical Framework and Empirical Results" To be submitted to **Information Systems Research** in April 2015 (Padmal Vitharana, Fatemeh "Mariam" Zahedi, and Hemant Jain).

"Delivering Group Medical Care in an Augmented World: Design and Study of Patient Behavior Expectation" To be submitted to **JMIS** in April 2015 (Walia, Nitin; Zahedi, Fatemeh Mariam; Jain, Hemant).

"Impact of a Knowledge Management System on Consultation of Clinical Practice Guidelines and Research Articles at Breast Cancer Conferences", to be Submitted to **Medical Decision Making** in April 2015 (Gaudioso, Carmelo; Jain, Hemant; Purao, Sandeep).

"A Platform-Based Design Approach for Flexible Software Components", to be submitted in April 2015 to **ACM Transactions on Management Information System** (Marcus A. Rothenberger, Hemant Jain, & Vijayan Sugumaran).

"An Evaluation Rubric for Software Component Repositories", to be submitted to **MIS Quarterly** (John Delano, Hemant Jain & Atish P. Sinha).

"MEDIKM: An informational artefact to facilitate deliberations and decisions about cancer treatment", to be submitted to **MIS Quarterly** (Gaudioso, Carmelo; Jain, Hemant; Purao, Sandeep).

"A Study of the formation and analysis of health knowledge sharing network in Twitter", to be submitted to **Journal of MIS**, (Sharif Vaghefi, Mahyar, Beheshti, Neshat and Hemant Jain).

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#### 2.4 Scholarly books/monographs/scholarly book chapters

Jain, H., Sinha, A., Vitharana, P. (Eds) (2011), "Service Oriented Perspectives in Design Science Research", Springer, 2011, ISBN 978-3-642-20632-0.

Jain, H., Zhao, H., & Chinta, N. R. (2007), "Web Services Identification: Methodology and CASE Tools". Book Chapter 12, In Liang-Jie Zhang (Ed.), *Modern Technologies in Web Services Research*, IGI Publishing. Pp.247-271 (an extended version of "A Spanning Tree Based Approach to Identifying Web Services," International Journal of Web Services Research, 1(1), 2004, 1-20).

G.S. Nezlek, H.K. Jain and D.L. Nazareth, "Estimating Server Capacities for Enterprise Computing Architectures", Book Chapter in *Design, Performance and Scalability of the Distributed Enterprise Systems*, Kowalik, J. (Ed.), Nova Science Publishers, New York, Feb. 2002, pp 95-109. [This was previously published as a paper in "Parallel and Distributed Computing Practices" Vol. 3, No. 4 December 2001].

Sam Valanju & Hemant Jain "Managing Global Information Technology Infrastructure for Transnational Corporations", Book Chapter in *Global Information Technology and Electronic Commerce: Issues for the New Millennium* (Ed) Prashant C. Palvia, Shailendra C. Jain Palvia & Edward M. Roche, Ph.D., 2001

Hemant Jain & Jaeki Song, "Locational Economics and Global Software Development Centers", Book Chapter in *Global Information Technology and Electronic Commerce: Issues for the New Millennium* (Ed) Prashant C. Palvia, Shailendra C. Jain Palvia & Edward M. Roche, Ph.D. 2001

### 2.5 Noteworthy Program Appearances

"Web Services, Software Process, Search Methods, & Conceptual Modeling", Panelist on a session chaired by Peter Chen at Workshop on "*Current Issues on Conceptual Modeling*" (*CICM*) at *ER 2012 conference*, Florence, Italy Oct. 2012.

"Adoption of Service Computing a balancing act", organized and chaired Keynote panel at 8<sup>th</sup> *IEEE World Congress on Services*, Hawaii, and July 2012.

"Challenges and Future Directions of Service Computing", Keynote panel presentation, at 8<sup>th</sup> *IEEE World Congress on Services*, Hawaii, July 2012.

"Trends of Services and Cloud computing", Presentation as keynote panel member, *IEEE joint conferences on CLOUD, SERVICES, SCC and ICWS 2010*, Miami, FL, July 2010.

"SES Architecture for Real Time Enterprises", Key Note Address delivered at *International Joint Conference on Information and Communication Technology 2010*, Bhubaneswar, India.

Organized and Chaired a Panel at *International Symposium on Information Systems*, Indian School of Business, Hyderabad, India on "Service Oriented Computing Innovation Opportunities for Indian IT Industry", (December 21, 2007).

Panelist, "Bridging service computing and service management: How MIS contribute to service orientation?" *International Conference on Information System (ICIS)*, Montréal, (December 12, 2007).

Organized and co-chaired a Panel, "service computing in daily work with the focus on service engineering vs. software engineering, exploiting the intrinsic relationship, the commonality, and the differences between service engineering and software engineering." *IEEE Services Congress, IEEE Computer Society*, Salt Lake City, (July 15, 2007).

"Service Oriented Architecture: Path to Business Agility", *A key Note address at 2006 eBusiness Sumit*, Beijing, China, February 2006.

"Architecture: Path to Business Agility", Key Note address delivered at TCS Technical Architect Conference (TACTiCS), Nov. 2005, Chicago.

## **2.6 Refereed Conference Proceedings**

"Creating a Repository for the Design and Delivery of Web Services", **WITS 2012 workshop**, Orland, Dec. 2012 (John Delano, & Atish P. Sinha, Hemant Jain)

"CIO's role in Organizations embedding IT in Products & Services: A case of Johnson Controls", *Pre-ICIS SIM Academic Workshop* 2010, December 2010 (Subhash (Sam) Valanju and Hemant Jain).

"What makes your Information Systems agile? A Business-Driven model for Agility providers", In *Proceedings of the Ninth Workshop on e-Business (WeB 2010)* December 2010 PP 43-50, (Choi, J. and Jain, H.).

"The Impact of SOA Implementation Strategies on Business Value and Agility: A Systems Dynamics Approach", 6th International Conference on Advanced Information Management and Service (IMS2010), Korea (Choi, J., Nazareth, D. L., Jain, H. K.).

"Building Educational Presence in Second Life®: An Exploratory Study" Proceedings *of the Americans Conference on Information Systems*, vol. 15, 2009, pp. 8 pages. (Walia, N., Zahedi, F. M., Jain, H. K.).

"Semantic Query Expansion for Effective EMR Retrieval", In *Proceedings of the Second China Summer Workshop on Information Management (CSWIM 2008)*. Kunming, China. (Thao, C., Jain, H, & Zhao, H.)

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- "Information Technology Skill Management: A Systems Dynamics Approach" *Proceeding of Hawaii International Conference on System Sciences*, January 2008, (Choi, J., Nazareth, D., Jain, H.).
- "A Strategy Based Approach for Service Design to Integrate Inter-organizational Business Processes", In *Proceedings of the Sixth Workshop on e-Business (WeB 2007)* December 2007, (Zhao, X. and Jain, H.).
- "Modeling the Adoption Decision Process of Service-Oriented Architecture: A Systems Dynamics Approach", *Workshop on Information Systems (WITS 07)*, (Choi, J., Nazareth, D., Jain, H.).
- "Service-Oriented Enterprises and Architectures: State of the Art and Research Opportunities", *Proceedings of the thirteenth Americas Conference on Information Systems*, Aug. 2007, (Vitharana, P., Bhaskaran, K., Jain, H., Wang, H, Zhao, L.)
- "Measuring Reliability of Applications Composed of Web Services", *Proceeding of Hawaii International Conference on System Sciences*, January 2007, (Zo, H., Nazareth, D., Jain, H.).
- "Flexible Software Component Design Using a Product Platform Approach". *Proceeding of International Conference on Information Systems (ICIS06)*. Jain, H. K., Rothenberger, M., Sugumaran, V. (2006).
- "Impact of Indian Software Developers' Exposure to US Culture on IS Skills and Job Satisfaction" (pp. 114). Hong Kong: *Proceeding of the INFORMS International Conference*. (Srite, M. D., Jain, H. K., Ngo-Ye, L. T.).
- "Information System Agility: Characteristics and Dimensions", *Proceedings of the Twelfth Americas Conference on Information Systems*, Aug. 2006, (Jae Choi & Hemant Jain).
- "Comparative Investigation of Vulnerabilities in Open Source and Proprietary Software An Exploratory Study", *Proceedings of the Twelfth Americas Conference on Information Systems*, Aug. 2006, (Nitin Walia, Balaji Rajagopalan, Hemant Jain)
- "Business Agility and Process Management: A Tutorial", *IEEE International Conference on Web Services (ICWS'06)*, (Hemant Jain).
- "A Scheme for Symptom Based Retrieval of Electronic Medical Records". In *Proceedings of the Fourth Workshop on e-Business (WeB 2005)* (pp. 451-458). December 2005, Las Vegas, NE. (Jain, H., Zhao, H., & Klemer, D. P.)
- "Integrating Healthcare Information Systems Using Web Services and Vertical Industry Languages", In *Proceedings of Third Workshop on e-Business (WeB 2004)* (pp. 460-468). Washington D. C., (2004) (Hemant Jain and H. Zhao).

- "Federating Heterogeneous Information Systems Using Web Services and Ontologies". In *Proceedings of the Tenth Americas Conference on Information Systems* (pp. 3799-3804). New York, NY, (August 2004) (Hemant Jain and H. Zhao).
- "A Conceptual Model for Comparative Analysis of Standardization of Vertical Industry Languages", *In Proceedings of the Workshop on Standard Making: A Critical Research Frontier for Information Systems* (pp. 210-221), John L. King and Kalle Lyytinen, (eds.), Seattle, Washington, (2003), (Hemant Jain, & H. Zhao).
- "Web Service Identification A Multi-objective Genetic Algorithm Based Approach", In *Proceedings of Second Workshop on e-Business (WeB 2003)* (pp. 351-361). Seattle, Washington, (2003) (Hemant Jain, H. Zhao, & N. R. Chinta).
- "Does Extended Exposure to Other Cultures Change the Cultural Values and Performance Indicators of IT Workers? A Study with Global E-Commerce Implications", *Proc. of the 2003 International Business Information Management Conference*, Dec. 2003 Cairo, Egypt PP. 427-428. (Hemant Jain & Mark Srite).
- "A Spanning Tree based Approach to Identify Web Services", to be presented at *International Conference on Web Services*, Las Vegas, June 2003, PP 272-277, (Hemant K. Jain, Nageswara Rao Chinta, Huimin Zhao).
- "Internet Diffusion and Digital Divide in China: Some Empirical Results", *Proceedings of the Ninth Americas Conference on Information Systems*, (Aug 2003), (Ge, Wei and Jain, Hemant).
- "Reciprocal Effect of Team Commitment and Media Richness in eCollaboration: A Conceptual Model", *Proc. of Second International Conference on Electronic Business*, PP 16-18, Dec 10-13 2002 Taipei, Taiwan. (Suprasith Jarupathirun & Hemant Jain).
- "Assembling Application Systems from Reusable Business Components: A Prototype Implementation", Proc. *of ISOneWorld Conference*, Las Vegas from April 4-5, 2002 (Hemant Jain).
- "Architecture for Deployment of Distributed Business Components to Assemble e-Commerce Applications", *Proc. Of Sixth INFORMS Conference on Information Systems & Technology*, November 3-4, 2001, Miami Beach Florida, PP 299-313. (Hemant Jain, Naresh Chalimeda, Nageswara Rao Chinta, Navin Ivaturi, Balarama Reddy).
- "Business Component Identification- A Formal Approach", *Proc. of Fifth IEEE International Enterprise Distributed Object Computing Conference (EDOC, 01)*, 4-7 September 2001, Seattle, Washington, USA, PP 183-187 (Hemant Jain, Naresh Chalimeda, Navin Ivaturi, Balarama Reddy).
- "A Conceptual Framework for Identifying Business Components", *Proc. Of the Seventh Americas Conference on Information Systems*, Boston, Aug. 2-5, 2001, pp 1270-1273 (Hangjung Zo & Hemant Jain).

- "Personality and Product Information Presentation in e-Commerce Environments", Proc. *Of the Seventh Americas Conference on Information Systems*, Boston, Aug. 2-5, 2001, pp 1367-1370(J. Jahng, Hemant Jain, and K. Ramamurthy).
- "I-KSS: An Internet Knowledge Sharing System", *Proc. Of the Seventh Americas Conference on Information Systems*, Boston, Aug. 2-5, 2001, pp 1367-1370 (Seokwoo Song & Hemant Jain).
- "Empirical Investigation into the Impact of Electronic Commerce Systems Richness on User Behavior: The Case of a Complex Product," *Proceedings of the Association for Information Systems- Americas Conference (AMSIS 2000)*, Long Beach, CA, August 11-13, 2000 (J. Jahng, Hemant Jain, and K. Ramamurthy). This manuscript is one of four selected by the mini-track of this conference for further consideration in a special issue of *e-Service Journal*; substantive extension and modification of this article was done and has been accepted by the Journal for publication in Summer of 2001.
- "Data Warehousing in Public Schools: Lessons Learned in an On-going Implementation," *Proceedings of the Association for Information Systems Americas Conference*, (*AMSIS 2000*) Long Beach, CA, August 11-13, 2000 (Hemant Jain, Robert Nelson, Derek Nazareth).
- "Designing Technology Environment for E-Commerce and Client/Server Applications", *Proceedings of the International Conference on Advances in Infrastructure for Electronic Business, Science and Education on the Internet (SSGRR-2000),* L' Aquila, Italy, August 2000. (George Nezlek, Hemant Jain & Derek Nazareth).
- "Product Complexity, Richness or Web-based Electronic Commerce Systems and System Success: A Proposed Research Framework" *Proc. Of Fifth Americas Conference on Information Systems*, August 1999 PP 520-522 (Jungjoo Jahng, Hemant Jain and K. Ramamurthy).
- "Cost Model for Global Software Development", *Proc. Of Fifth Americas Conference on Information Systems*, August 1999 PP 301-303 (Jaeki Song & Hemant Jain).
- "ABESS: An Agent-Based Environmental Scanning System", *Proc. Of the Americas Conference on Information Systems*, Aug. 1998 pp 217-219 (Seokwoo Song, Hemant Jain and Fatemeh Mariam Zahedi).
- "An Integrated Approach to Defining Enterprise Computing Architectures", *Proc. Of the Americas Conference on Information Systems*, Aug. 1998 pp 971-973 (George S. Nezlek, Hemant Jain and Derek Nazareth).
- "Distribution of Object-Oriented Applications in a Client/Server Environment", *Proc. of the Americas Conference on Information Systems*, Aug. 1996, pp 705 707 (Sandeep Purao, Hemant Jain and Derek Nazareth).
- "Distribution of Multimedia Objects", *Proc. of the Americas Conference on Information Systems*, Aug. 1996, pp 708 709 (Seokwoo Song and Hemant Jain).

- "Derivation of Traffic Volumes for Effective Distribution of Object-Oriented Applications", Proceeding *of* 29<sup>th</sup> *Hawaii International Conference on System Sciences*, January 1996, (Sandeep Purao, Hemant Jain and Derek Nazareth.).
- "An Architecture for Implementing Intelligent Visual Interactive Modeling in Group Decision Support Systems", *Proc. of 5<sup>th</sup> Annual Workshop on Information Technology & Systems*, Nijenrode, Netherlands, December 1995, pp 186-195 (Sreedhar Sundaram & Hemant Jain).
- "Object Oriented Technology & It's Impact on System Development", *Proc. of the First Americas Conference on Information Systems*, Pittsburgh, August 1995, (Hemant Jain & Alok Chaturvedi).
- "Distributing Object Oriented Systems", *Proc. of The First Americas Conference on Information Systems*, Pittsburgh, August 1995. (Sandeep Purao, Hemant Jain & Derek Nazareth).
- "A Task Processing Strategy for Object-Oriented Distributed Systems", *Proc. of 26<sup>th</sup> Annual Meeting of the Midwest Decision Sciences Institute*, May 1995, pp 85-87. (Srinivas Vuppuluri & Hemant Jain).
- "A Semantic Approach to Horizontal Fragmentation of Classes in Object-Oriented Applications" *Proc. of National Conference of Decision Science Institute*, November 1993 (Hemant Jain & Sandeep Purao).
- "Direct Manipulation Support for Flexible Manufacturing Systems Using an Object-Oriented Model," *Proceeding of 24<sup>th</sup> Hawaii International Conference on System Sciences*, January 1991, pp 93-101 (Derek Nazareth and Hemant K. Jain.) Nominated for Best Paper in the Organizational Systems and Technology Track at Conference.
- "Using Semantic Knowledge in Partitioning and Allocation of Data in Distributed Databases," *Proceeding of 24<sup>th</sup> Hawaii International Conference on System Sciences*, January 1991. Vol 2, pp 146-154, (Uday Kulkarni and Hemant K. Jain.).
- "A DSS for Design of Distributed Databases," *Proceeding of the National Conference of Decision Sciences Institute*, November 1990. (Uday Kulkarni and Hemant K. Jain).
- "Software Project Selection and Allocation of Programmer/Analysts: A Multicriteria Optimization Methodology," *Proc. of Seventh International Conference on Computer and Mathematical Modeling*, Aug. 1989, Chicago. (Hemant K. Jain).
- "Plan-based Approach for Selection and Sequencing of Production Planning Models in Decision Support Systems," *Proc. of First International Conference on Artificial Intelligence in Industry and Government*," November 1989, pp 306-319 (Hemant K. Jain and M. Bu-Hulaiga).
- "The Issue of Site Autonomy in Distributed DataBase Administration," *Proc. of Ninth Annual International Conference on Information Systems*, Dec. 1988, pp. 203-213. (Hemant K. Jain and Hwa-suk Ryu).

- "An Interactive Plan-based Procedure for Model Integration in DSS," *Proceedings of 21<sup>st</sup> Hawaii International Conference on System Sciences*, Jan. 1988. (Bu-Hulaiga & Hemant K. Jain).
- "Situation-Action Framework for Expert System Problem Selection", *Proceedings of the 1987 North American Conference of the International Business Schools Computer Users Group*. July 26-29, 1987, pp 132-136 (Hemant K. Jain & Alok Chaturvedi).
- "Models for Management: A DSS Perspective, "Proceedings of the National Conference of Decision Sciences Institute, Nov. 1986 (Hemant K. Jain and Raj Javalgi).
- "Processor Selection and Data Allocation Model for Distributed System Design," *Proceeding of the National Conference of American Institute for Decision Sciences*, November 1985 (Hemant K. Jain).
- "Advances in Distributed DBMS for CAD/CAM," *Proceeding of COMPINT 85*, An IEEE International Conference on Computer Aided Technology, Sept. 1985 (Hemant K Jain and Dimitrios Liaskos).
- "Role of Multiple Criteria Decision Making Models in Building Decision Support Systems," *Proceeding of Sixteenth Annual Pittsburgh Conference on Modeling and Simulation*, April 1985 (Hemant K. Jain).
- "Goal Programming Approach to Physical Design of Network Database," *Proceeding of COMPSAC*, the IEEE Computer Society's Seventh International Computer Software and Application Conference, Nov., 1983 (Hemant K. Jain).

### 2.7 Book reviews

- "Architecting Web Services", Published in *Journal of Information Technology Cases and Applications (JITCA)* Vol. 4, No 2 April 2002.
- "Business Component Factory: A Comprehensive Overview of Component-Based Development for the Enterprise" Published in *Journal of Information Technology Cases and Applications* (*JITCA*) Vol. 3, No 2 April 2001.
- "The E-business (R)EVOLUTION: Living and Working in an Interconnected World", Published in *Journal of Information Technology Cases and Applications (JITCA)* Vol. 2, No 4 December 2000.
- "Tried & True Object Development: Industry-Proven Approach with UML", Published in *Journal of Information Technology Cases and Applications (JITCA)* Vol. 2, No 2 April 2000.
- "Global Electronic Commerce: Theory and Case Studies", Published in *Journal of Information Technology Cases and Applications (JITCA)* Vol. 1, No 4 December 1999.

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"Web Commerce Technology Handbook" Published in *Journal of Information Technology Cases and Applications (JITCA)* Vol. 1, No 2 April 1999.

#### 2.8 Other Publications

"Component-Based Development: How It will Change the Role of Information Technology in Organizations" **Information Management**, Vol 15, No ½, Spring 2002. Page 14 & 36.

#### 2.9 Presentations

"A Text Mining-Based System for Clustering Clinical Trials and Matching Patients", **ISIS 2013: International Symposium on Information System**, Goa (India), January 2013 (Atish Sinha, Hemant Jain, Omid Ghiasvand and Carmelo Gaudioso)

"Reusing Components and Objects for Modeling Business Systems", **ISIS 2013: International Symposium on Information System**, Goa (India), January 2013 (Atish Sinha, Hemant Jain).

"Economic Perspective of Application Development in Cloud Computing: Study of Modularity and Performance", **ISIS 2013: International Symposium on Information System**, Goa (India), January 2013 (Hemant Jain, Abhijit Dutt)

Jain, Hemant, "Achieving Business Agility through Components and Web Services: The New System Development Lifecycle", Webinar Presented at Research Colloquium, <u>GE Healthcare</u>, May 2012.

Jain, Hemant, "Supporting Intra and Inter-Organizational Business Processes with Web Services", Presented at <u>Research Lab, Infosys</u>, Bangalore, Aug. 2006.

Jain, Hemant, "SOA Enabled Approach for Swift Application Development", <u>Invited Research Presentation</u> at Dept of Automation, Tsinghua University, Beijing, China, Feb. 2006.

Jain, Hemant, "SOA Enabled Approach for Swift Application Development", <u>Invited Research Presentation</u> at Dept of Computer Science, Peking University, Beijing, China, Feb. 2006.

Jain, H., Zhao, H., Klemer, D. P., & Gaudioso, C. (March 2006). Semantic Retrieval of Medical Records Related to Patient Symptoms. <u>Presented at the Second Winter Information Systems Conference</u>, Salt Lake City, UT.

"Achieving Business Agility through Component Architecture & Web Services", <u>Research Seminar Presented at IBM T. J. Watson Research Center</u>, March 2005.

"Web Services Quality & Manageability", <u>Panel Presentation at 2005 IEEE International Conference on Web services</u>, July 2005.

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- "Web Services Identification and Design", <u>Research presentation at Special Interest group on Web services</u>, Center for Technology Innovation, University of Wisconsin Milwaukee, Oct. 2005.
- "Business Process Driven Application Assembly using Reusable Business Components", <u>Proceedings of TCS Technical Architect Conference (TACTiCS)</u>, Nov. 2005, Chicago (Hemant Jain, Vipul Shah, Subhankar Ghosh, Kiran Kumar Reddi, Jyothi K. Shettigar).
- "SOA Enabled Approach for Swift Application Development", <u>Proceedings of TCS Technical Architect Conference (TACTiCS)</u>, Nov. 2005, Chicago (Hemant Jain, Vipul Shah, Sudhi Rajan Sinha).
- "Achieving Business Agility through Component Architecture & Web Services", <u>Invited Presentation</u> at School of Business Administration, University of Texas at Dallas, Oct. 2004.
- "Achieving Business Agility through Component Architecture & Web Services", <u>Invited Presentation</u> at School of Business Administration, Texas A & M University, Nov. 2004.
- "Application Reengineering & Integration Strategy Using Component Based Development & Web Services", <u>Invited Presentation</u> at, Mananaging IT in Networked Organizations: Conference on Managing Information Technologies, October 2003, Tucson, Arizona.
- "Application assembly using Business Components and Web Services: The New System Development Life Cycle", <u>Invited Presentation</u> at School of Business Administration, Arizona State University, Oct. 2003.
- "Application assembly using Business Components and Web Services: The New System Development Life Cycle", <u>Invited Presentation</u> at School of Business Administration, Georgia State University, April 2003.
- "Application assembly using Business Components and Web Services: The New System Development Life Cycle", <u>Research Seminar presented</u> at Seoul National University (South Korea), School of Economics and Management Tsinghua University, Beijing (P. R. China), and Fudan University (P. R. China), December 2002.
- Panel Presentation on 'Key Note 'Fifty Years On- Business Computing in 2051', <u>Second International Conference on Electronic Business</u>, Dec 10-13 2002 Taipei, Taiwan.
- "Workbench for Assembling Applications from Business Components/Web Services", 5<sup>th</sup> Fall Conference on Managing Information Technologies, Rochester, Michigan, October, 2002 (Hemant Jain, Vipul Shah, Naresh Chalimeda, Nageswara Rao Chinta, Balarama Reddy).
- Panel Presentation at All-Academy Symposium, 'Building Effective Transnational Product Development (IT) Networks: Challenges and Opportunities in Human Resource Management', Sixty-Second Annual Meeting of The Academy of Management Denver Colorado, Aug. 9<sup>th</sup> to 14<sup>th</sup> 2002.
- "Architecture for Component Based Software Development and Web Services", Poster Session Presentation, <u>The first International Conference on COTS-Based Software Systems</u> (ICCBSS) Orlando, Florida, February 4-6, 2002 (Hemant Jain & Balarama Reddy Thavanati).

"Tutorial: Component Based System Development Technologies and Implementation", Presented at INFORMS 2001 Annual Meeting, Miami Beach, November 4-7, 2001.

"Layered Architecture for Deployment of Distributed Business Components", 4<sup>th</sup> Fall Conference on Managing Information Technologies, Rochester, Michigan, October 11-13, 2001.

"Designing Reusable System Components", <u>Third Fall Conference on Managing Information Technologies</u>, Rochester, Michigan, October 13- 14, 2000.

Invited paper presentation in 1998 Theme for Public Sector Issues, "Technology Infrastructure for Urban America: Role of Public Schools", Presented at 1998 <u>Decision Science Institute Annual meeting</u> (Robert Nelson & Hemant Jain).

Served as panel member on a session, "A Comparison of the Silicon Valleys of USA and India" at 1998 Decision Science Institute Annual meeting.

Organized a panel session on "System Development Using Reusable Components", at <u>8<sup>th</sup> Annual Workshop on Information Technology & Systems</u> (WITS) December 1998.

Invited to be featured speaker on Component Based IS development at 8<sup>th</sup> Fall Conference on Managing Advanced Information Technology.

"Object Oriented Approach for Managing Modeling Resources of an Organization" Presented at <u>TIMS/ORSA</u>, Phoenix, November 1993 (Jain & Arogyaswamy).

"A technique for Sementic Fragmentation of Classes in Object-Oriented Applications" Presented at <u>TIMS/ORSA</u>, Phoenix, November 1993 (Purao & Jain).

"Real-Time Management of Integrated Manufacturing Systems: An Object-Oriented Approach" presented at TIMS/ORSA, Orlando, April 1992 (Jain & Nazareth).

"Intelligent Load Balancing in Decentralized Distributed Systems", presented at <u>TIMS/ORSA</u>, Orlando, April 1992 (Jain & Fan).

"A GDSS Approach for Resolving Conflict in Knowledge from Multiple Experts", presented at <u>TIMS/ORSA</u>, Las Vegas, May 1990. (D.L. Nazareth and H.K. Jain).

"Model Manipulation in Large Modelbases: An Object-Oriented Approach", presented at <u>TIMS/ORSA</u>, Nashville, May 1991. (B.J. Arogyaswamy, H.K. Jain and D.L. Nazareth).

"Integrated Support for Design of Distributed Databases." Presented at <u>ORSA/TIMS</u> <u>Joint National Meeting</u>, Vancouver, May 1989.

"Representation of Uncertain Data in Database Systems." Presented at <u>ORSA/TIMS Joint National Conference—Washington</u>, D.C., April 1988. (Invited paper).

"Representing and Manipulating MCDM Models in Model Management System 'ALI'." Presented at ORSA/TIMS Joint National Conference—Washington, D.C., April 1988.

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- "A Knowledge-Based Model Manipulation Structure for Conflicting Goals in DSS", Presented at ORSA/TIMS Joint National Conference—St. Louis, October 1987.
- "A Study of Sensitivity of Distributed Database Design to Changes in Input Parameters", Presented at ORSA/TIMS Joint National Conference—St. Louis, October 1987.
- "Simulation Model of a Distributed DBMS", Presented at <u>ORSA/TIMS Joint National Conference—New Orleans</u>, April 1987 (Invited paper).
- "Role of Multiple Criteria Decision Making Models in Building Decision Support Systems," presented at <u>Sixteenth Annual Pittsburgh Conference on Modeling and Simulation</u>, April 1985. (Invited paper).
- "Goal Programming Approach for the Design of Distributed Computer System," presented at ORSA/TIMS joint National conference Dallas, Texas, November 1984. (Invited paper).
- "A Selection-Allocation Model for Distributed Systems." Paper presented at the <u>ORSA/TIMS</u> Joint National Conference, Orlando, Nov. 6-8, 1983.
- "A Goal Programming Model for the Assignment of Programmers to Software Development Projects." Paper presented at the <u>ORSA/TIMS Joint National Conference</u>, <u>Orlando</u>, Nov. 6-8, 1983.
- "A Goal Programming Model for the Storage Structure Design of Database," paper presented at the <u>TIMS/ORSA Joint National Conference</u>, <u>Detroit</u>, April 1982.
- "Distributed Databases and Database Machines," paper presented at 1981, <u>Syracuse University Minnowbrook Workshop</u>, on Database Machines.

#### 3. TEACHING

## List of courses taught:

- 1. Business Process Management (using SAP), Graduate
- 2. Business Process Integration (Using SAP), Undergraduate
- 3. Data Base Management (Undergraduate and Graduate)
- 4. IT Infrastructure for Business (Graduate)
- 5. Ph.D. Seminars (Graduate)
- 6. Electronic Commerce (Graduate & Undergraduate)

#### 4. SERVICE

#### 4.1 University Service

Program Development:

Steering committee of Ph. D. program in Healthcare Informatics. (Since 2004-to present). Member Executive committee of UWM's Biomedical and Health Informatics Research Institute (BHIRI)

Led the SBA task-force for the development of Master of Science in eBusiness Program. Member.

## **Recruiting Chairman MIS:**

1997-98 - Sucessfully recruited two tenure track and one visiting faculty positions

1992-93 - Successfully recruited full professor of MIS

1986-87 - Successfully recruited two new faculty members.

1988-89 - Successfully recruited two new faculty members.

## **Faculty Committees**

Member, Search Committee, Vice Provost for research, UWM (2014-2015).

Member, Graduate Faculty Committee, UWM (2015-2017)

Member, UWM Taskforce on Top Research University (2013-2014).

Member, Lubar School Taskforce on Healthcare related programs (2013-present)

Member, Ph. D. Program Committee (2012-present)

Area Chair, MIS area (2008-2009)

Member, Ph. D. Program Committee (2004-2005)

Chair, SBA Ph. D. Program Committee (2003-2004)

Member, SBA Masters Program Committee (2000-2001)

Member, SBA Strategic Planning & Marketing Committee (1998-1999)

Member, UWM Records & Enrollment Committee (1998-2000)

Member, UWM Instate Tuition appeals committee (1997, 1998, and 1999)

Member, University Faculty Senate, (Fall 1996)

Member, Computer Policy Committee, School of Business Administration (1995-1997)

Chair, Ph. D. program committee, School of Business Administration (1993-1995)

Member, Task force for re-engineering Undergraduate program (1993)

Member, Task force for planning computer facilities in new building (1992-present)

Member, Recruitment Committee for senior faculty (1992-93)

Chair, Long range Planning Committee (1992-93)

Member, Long range Planning Committee (1991-92)

Chair, Management Research Center Committee (1991-92)

Member, Ph.D. Program Committee (1988-90)

Chair, Graduate Studies Council (1987-88, 1988-89)

Chair, Ph.D. Program Committee (1987-88, 1988-89)

Member MS Program Committee (1983-84; 1985-86)

Member Undergraduate Program Committee (1984-85)

Chairman, Ph.D. Preliminary Examination Committee (1985-86)

Member, MIS Scholarship Committee (1985-86)

MIS Research Seminar Coordinator (1985-86)

## 4.2 Professional Service

National Science Foundation, review panel for SBIR grants (server on many panels in last 10 years).

National Science Foundation, review panel for Partnerships for Innovation: Building Innovation Capacity (PFI: BIC) Program (2015).

#### Reviewer:

Communications of ACM

**Decision Support System** 

**Information Systems Research** 

National Science Foundation.

IEEE Transactions on Software Engineering.

IEEE Transactions on Computers.

IEEE Transactions of Data & Knowledgeable Engineering.

Large Scale Systems.

**Decision Sciences** 

National Computer Conference.

International Conference on Software Engineering.

Data and Knowledge Engineering.

Hawaii International Conference on System Sciences.

#### External Reviewer:

Reviewed tenure cases as an external reviewer for major Universities.

## 4.3 Memberships:

Member - AIS, IEEE Computer Society

Member - Beta Gamma Sigma