VIJAYAN SUGUMARAN
Department of Decision and Information Sciences
School of Business Administration
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EDUCATION

Ph.D.   Information Technology, Department of Information and Software Systems Engineering, School of Information Technology and Engineering, George Mason University, Fairfax, VA, Spring 1993.

M.S.   Mining Engineering, University of Alaska, Fairbanks, AK, September 1985.

B.Tech.   Mining Engineering, Indian School of Mines, Dhanbad, India, May 1983.

HONORS & AWARDS

- Oakland University Distinguished Professor, 2020
- Nominated for Michigan Association of State Universities Distinguished Professor of the Year Award, representing Oakland University
- Co-Director, Center for Data Science and Big Data Analytics, Oakland University
- Distinguished Professor of the Ministry of Public Security, People's Republic of China
- International Expert, Shanghai University SILC Business School, 2017-2020
- Editor-in-Chief, *International Journal of Intelligent Information Technologies (IJIIT)*
- Fulbright Scholar, Fulbright Specialist Program Grant, 2012
- Research Excellence Award, Oakland University, 2010
- Co-PI, Sogang Business School's World Class University Program (R31-20002) funded by Korea Research Foundation, 2010 – 2013
- AISWorld NET Challenge Award, 2007 – DSS Research Page
- Co-PI, Research Grants Council of Hong Kong, Project Number 9041217 (CityU 110207) Sep. 2007 – Aug. 2009
- Dean's Distinguished Research Professor, 2005-08.
- Outstanding Researcher, Founder's Day Recognition, 2002
- Oakland University Professional Development – Research Leave, 2004
- Oakland University Research Fellowship, 2000, 2003
- SBA Research Fellowship, Oakland University, 2001, 2004, 2006, 2007

- Best Paper Award, 4th Annual AIS Educator Conference, Copper Mountain, 2002, CO, USA.
- Nominated for Best Paper Award, Americas Conference on Information Systems, New York, NY, August 5 – 8, 2004.

WORK EXPERIENCE

Distinguished Professor, Department of Decision and Information Sciences, School of Business Administration, Oakland University, Rochester, Michigan (Winter 2020- Present)

Chair, Department of Decision and Information Sciences, School of Business Administration, Oakland University, Rochester, Michigan (Fall 2014- Present)

WCU Visiting Professor, Department of Service Systems Management and Engineering, Sogang University, 1 Shinsoo-Dong, Mapo-Gu, Seoul 121-742, South Korea (2010- 2013)

Professor, Department of Decision and Information Sciences, School of Business Administration, Oakland University, Rochester, Michigan (Fall 2007- Present)

Associate Professor, Department of Decision and Information Sciences, School of Business Administration, Oakland University, Rochester, Michigan (Fall 2002- Summer 2007)

Assistant Professor, Department of Decision and Information Sciences, School of Business Administration, Oakland University, Rochester, Michigan (Fall 1999- Summer 2002)

Assistant Professor, Department of Business Administration, Le Moyne College, Syracuse, NY. (1993-Spring 1999, *granted tenure and promotion during academic year 1998 – 1999)*

Database Analyst, Planning and Research Corporation, McLean, Virginia. (1992-1993)

Research Associate, Department of Information and Software Systems Engineering, George Mason University, Fairfax, VA. (1988-1993)

Instructor, Department of Decision Sciences and Management Information Systems, School of Business Administration, George Mason University, Fairfax, VA. (1988, 1989, 1992)

AREAS OF INTERESTS

- Medical Informatics, Machine Learning and Deep Learning Models in Medicine
- Natural Language Processing and Text Analytics, Named Entity Recognition
- Business Intelligence, Big Data Analytics, Semantic Web, Ontologies, Web Services/SOA
- Management Information Systems, Web Technologies and E-Commerce Applications
- Intelligent Agent and Multi-agent Systems
    - -- Big Data Management and Data Mining, Geographic Information Systems
    - -- Organizational Process Modeling and Execution, Mass Customization
- Software Product Line, Component Based Development, and Software Reuse
- Knowledge-Based Systems and Intelligent Information Technologies

TEACHING ACTIVITIES

Courses taught at Oakland University

Graduate Courses
MIS514: Systems Analysis
MIS515: Systems Design
MIS604: Introduction to Databases and Data Warehouses
MIS606: Advanced Databases and Big Data Management
MIS620: Electronic Commerce
MIS622: Business Object Development
MIS624: Business Application Architecture
MIS6900: Deep Learning and Text Analytics

Undergraduate Courses
MIS300: Introduction to Management Information Systems
MIS304: Database Management
MIS315: Systems Analysis and Design
MIS420: Electronic Commerce
MIS422: Business Object Development
MIS424: Business Application Architecture
MIS426: Web Application Development

Courses taught at Le Moyne College

Graduate Courses
MIS703: Systems Analysis and Design
MIS701: Database Management Systems.
MIS501: Management Information Systems

Undergraduate Courses
MIS481: Java and Javascript Programming for Internet
MIS480: Database Management Systems.
MIS470: Object-Oriented Business Applications Using C++
MIS375: Systems Analysis and Design
MIS301: Introduction to Management Information Systems

Courses taught at George Mason University

Graduate Course
MIS610: Computer Systems for Management

Undergraduate Courses
MIS411:   Management Information Systems
DESC352: Methods and Models of Management Science
DESC301: Decision Models in Business and Operations Management
DESC200: Statistical Analysis for Decision Making I

RESEARCH ACTIVITIES

Research Grants (Competitive)

PI, SBA Summer Research Grant, Summer, 2023 ($10,000)
"Do Privacy Concerns Impact Wearables in Healthcare? A Longitudinal Study of Fitness Tracker Users' Privacy Coping Strategy"

PI, SBA Summer Research Grant, Summer, 2022 ($10,000)
"Information Privacy Assimilation in IT Organizations: An Empirical Investigation"

PI, SBA Summer Research Grant, Summer, 2021 ($10,000)
"Biomedical Named Entity Recognition (NER) for Chemical-Protein Interactions"

PI, SBA Summer Research Grant, Summer, 2020 ($10,000)
"Process model understanding by novices: Sometimes a diagram is only worth a hundred words"

Co-PI, Scheme for Promotion of Academic and Research Collaboration (SPARC), 2019 ($75,000), Ministry of Human Resource Development, India, 2019
"A Decision Support System for Structural Defects Diagnosis in Underground Transportation Tunnels using Semantic Technologies"

PI, SBA Summer Research Grant, Summer, 2019 ($10,000)
"A Hybrid Genetic Algorithm for Software Architecture Re-Modularization"

PI, SBA Summer Research Grant, Summer, 2018 ($10,000)
"Ontology and Multi-Agent based Decision Support System for Prefabricated Component Supply Chain"

PI, SBA Summer Research Grant, Summer, 2017 ($10,000)
"Using Domain Ontology for Service Replacement Tasks: An Empirical Evaluation"

Co-PI, Global Initiative on Academic Network (GIAN), 2017 ($9000), Ministry of Human Resource Development, India, 2017
"Big Data Analytics & Business Intelligence"

PI, SBA Summer Research Grant, Summer, 2016 ($10,000)
"A Multi-Agent System for Data Sharing and Data Privacy in Healthcare"

Co-PI, Competitive Research Grant, Research Grants Council of Hong Kong, Project Number 9042128 (CityU 11500114) Sep. 2014 – Aug. 2016 (HK$190,000), PI: Narasimha Bolloju, City University of Hong Kong.
"Collaborative Modeling and Analysis of Enterprise-wide Information Systems Integration Requirements with Semantic Search and Reusability Guidance"

PI, SBA Summer Research Grant, Summer, 2014 ($10,000)
"An Approach for Task Specific Ontology Selection on the Semantic Web"

Fulbright Specialist Program Grant, 2012 ($8,000)
"Factors impacting student performance and quality of technical education in developing countries"

PI, Sogang University Research Grant, 2011 ($10,000)
"Design of Adaptive Community Networks using Intelligent Information Technologies and Semantic Tools for Improving Interoperability in the Knowledge and Service Economy"

Co-PI, Sogang Business School's World Class University Program (R31-20002) funded by Korea Research Foundation, 2010 – 2013, (US$10 Million).
"Service Systems Engineering for the Creation of New Growth Engine based on Knowledge Service"

Provost's Graduate Student Research Award, 2009 (US$2,000)
Supervisor for the graduate student project:
"Flexible Process Modeling and Execution in the Healthcare Domain"

Co-PI, Competitive Research Grant, Research Grants Council of Hong Kong, Project Number 9041217 (CityU 110207) Sep. 2007 – Aug. 2009 (HK$559,800), PI: Narasimha Bolloju, City University of Hong Kong.
"Using Collaboration Patterns and Use Case Descriptions to Assist Novice Systems Analysts in Quality Object Modeling"

PI, SBA Summer Research Grant, Summer, 2007 ($8,500)
"Object Modeling using Collaboration Patterns and Use Case Descriptions"

PI, SBA Summer Research Grant, Summer, 2006 ($8,500)
"Modeling Web Service Profiles for the Semantic Web: A UML Based Approach"

PI, SBA Summer Research Grant, Summer, 2004 ($7,000)
"Supporting Database Designers in Entity-Relationship Modeling: An Ontology-Based Approach"

PI, Oakland University Summer Research Grant, Summer, 2003 ($8,500)
"A Heuristic-based Approach for Query Augmentation in the Semantic Web"

Co-PI, Oakland University, Office of Enrollment Management, 2002 ($13,600)
"Analysis of Enrollment and Student Data," (With Bhargava, M., and Rajagopalan, B.)

PI, SBA Summer Research Grant, Summer, 2001 ($8,000)
"An Architecture-Centric Approach to Multi-Agent System Development and Application"

PI, Oakland University Summer Research Grant, Summer, 2000 ($7,500)
"A Domain Model Based Approach to Reuse in Component Based Software Development"

Keynote Speeches

"Collaborative Tunnel Emergency Drill Management System using Mixed Reality, Artificial Intelligence, and Building Information Modeling," International Conference on Information Processing and Computing (ICIPC 2022), June 27, 2022, QIS College of Engineering and Technology, Ongole, AP India.

"Role of Data Analytics and Privacy Issues for wearable Technologies in Healthcare," 12th International Conference-CONFLUENCE' 2022, Theme: Cloud Computing, Data Science and Engineering, Amity University, Noida, Uttar Pradesh, India, Jan 27-28, 2022.

"Integrating Mixed Reality and Artificial Intelligence into Building Information Modeling: A Collaborative Tunnel Emergency Drill Management System," 2021 International Conference on Multi-modal Information Analytics (MMIA 2021), Inner Mongolia University, Huhehaote, China, April 23-24, 2021.

"Data Analytics and Privacy Issues for Wearable Technologies in Healthcare," International Conference on Cyber Security Intelligence and Analytics (CSIA2021), Shenyang, China, March 19-20, 2021.

"Data Management and Analytics for Wearable Technologies," International Virtual Conference on Wearable Technologies & Applications: Emerging Trends and Innovations (WeTA2020), Vellore Institute of Technology, Vellore, India, June 26 - 27 2020.

"Detecting the States of Emergency Events Using Web Resources," 24th International Conference on Applications of Natural Language to Information Systems (NLDB 2019), Salford, UK, June 26–28, 2019.

"The Role of Community Acceptance in Assessing Ontology Quality," International Conference of Applications and Techniques in Cyber Intelligence (ATCI 2019), Anhui University of Science and Technology, Huainan, China, June 22-24, 2019.

"Recent Trends, Developments and research focus in artificial Intelligence & Computer Vision," International Symposium on Artificial Intelligence & Computer Vision (AICV-2018), Anna University, Chennai, India, September 26-28, 2018.

"Development and Application of Automotive Safety Related Ontology through Text Analytics," International Conference on Data Analytics and Business Intelligence (ICDABI '18), Chennai, India, July 16 – 17, 2018.

"Repurposing Social Tagging Data for Extraction of Domain-level Concepts and Relationships," International Conference on Computational Methods & Software Engineering (CoMSE 2015), Chennai, India, December 28 – 30, 2015.

"Tamil Computing and Big Data," 14th Tamil Internet Conference, 2015, Singapore, 30th May – 1st June.

"21st Century Education and Design of E-Learning Systems," International Workshop on Teaching and Learning, Dec. 19, 2011, B. S. Abdur Rahman University, Chennai, India.

"Intelligent Information Technology and Mobile Advertisement," 2011 Fall Mobile Terminal Management and Advertisement Technology Forum, Nov. 17 – 18, 2011, Busan, South Korea.

Conference Workshops, Tutorials and Webinars

Sugumaran, V., Harroun, J. "Workshop: AI and Deep Learning using SAS Viya," Online Americas Conference on Information System (AMCIS 2021), August 9-13, 2021.

Freeze, R., Cazier, J., Iyer, L., Sugumaran, V. "Workshop: Analytics in the Curriculum," Online Americas Conference on Information Systems (AMCIS 2021), August 9-13, 2021.

Sugumaran, V., Harroun, J. "Workshop: AI and Deep Learning using SAS Viya," Online Americas Conference on Information System (AMCIS 2020), August 12, 2020.
https://aisel.aisnet.org/amcis2020/select_recordings_from_conference/select_recordings_from_conference/8

Freeze, R., Sugumaran, V., Cazier, J., Iyer, L. "Workshop: Analytics in the Curriculum," Americas Conference on Information Systems (AMCIS 2020), August 11, 2020.

Sugumaran, V. "Role of Artificial Intelligence in Fighting Covid-19," International Webinar-Organized by Vinayaka Missions Research Foundation, Chennai, India, June 11, 2020.

Sugumaran, V. "Service Systems Analysis and Implementation," Tutorial, The Korean Operations Research and Management Science Society (KORMS) Fall Conference, October 28, 2011, Konkuk University, Seoul, Korea.

Sugumaran, V., Moroz, C., "Knowledge Management – Introduction, Architecture and Application," Tutorial, 4th Fall Conference on Managing Information Technologies, October 11 – 13, 2001, Oakland University, Rochester, MI.

Refereed Journal Publications

- Du, J., Li, X., Sugumaran, V., Hu, Y., Xue, Y. "Dynamic Model Averaging-based Procurement Optimization of Prefabricated Components," *Neural Computing and Applications* (forthcoming).

- Suganeshwari, G., Syed Ibrahim, S. P., Sugumaran, V. "A Graph-Based Collaborative Filtering Algorithm Combining Implicit User Preference and Explicit Time-Related Feedback," *Neural Computing and Applications* (forthcoming).

- Leukel, J., Ozbek, G., Sugumaran, V. "Application of logistic regression to explain internet use among older adults: a review of the empirical literature," *Universal Access in the Information Society* (forthcoming).

- Gajendran, S., Manjula, D., Sugumaran, V., Hema, R. "Extraction of Knowledge Graph of Covid-19 Through Mining of Unstructured Biomedical Corpora," *Computational Biology and Chemistry*, Vol. 102, 2023, Article: 107808.

- Shanmugam, S., Sugumaran, V., Thangavelu, A., Sekaran, K. "Predicting Rheumatoid Arthritis from the Biomarkers of Clinical Trials using Improved Harmony Search Optimization with Adaptive Neuro-fuzzy Inference System," *Journal of Intelligent & Fuzzy Systems*, Vol. 44, No. 1, 2023, pp. 125-137.

- Du, J., Xue, Y., Sugumaran, V., Hu, M., Dong, P. "Improved Biogeography-Based Optimization Algorithm for Lean Production Scheduling of Prefabricated Components," *Engineering, Construction and Architectural Management*, Vol. 30, No. 4, 2023, pp. 1601-1635.

- Mu, L. F., Tang, X., Sugumaran, V., Sun, X., Xu, W. "Optimal Rebate Strategy for an Online Retailer with a Cashback Platform: Commission-driven or Marketing-based?" *Electronic Commerce Research*, Vol. 23, No. 1, 2023, pp. 475-510.

- Leukel, J., Schehl, B., Sugumaran, V. "Digital inequality among older adults: Explaining differences in the breadth of Internet use," *Information, Communication and Society*, Vol. 26, No. 1, 2023, pp. 139-154.

- Attili, V S P., Mathew, S., Sugumaran, V. "Information Privacy Assimilation in IT Organizations," *Information Systems Frontiers*, Vol. 24, No. 5, 2022, pp. 1497-1513.

- Sugumaran, V., Ibrahim, S. J. A. "Rough set based on least dissimilarity normalized index for handling uncertainty during E-learners learning pattern recognition," *International Journal of Intelligent Networks*, Vol. 3, 2022, pp. 133-137.

- Seo, J., Ko, D., Kim, S., Sugumaran, V., Park, S. "Reminisce: Blockchain Private Key Generation and Recovery using Distinctive Pictures-based Personal Memory," *Mathematics*, 2022, 10(12): 2047, https://doi.org/10.3390/math10122047.

- Juan, C., Sugumaran, V., Peiyan, Q. "Connected and Automated Vehicle Control at Unsignalized Intersection Based on Deep Reinforcement Learning in Vehicle-to-Infrastructure Environment," *International Journal of Distributed Sensor Networks*, 18(7), 2022, DOI: 10.1177/15501329221114060.

- Kavipriya, G., Manjula, D., Sugumaran, V. "Chronological Order based Wrapper Technique for Drug-Target Interaction Prediction (CO-WT DTI)," *Current Bioinformatics*, 17, 2022, DOI: 10.2174/1574893617666220509185052.

- Sreedevi, A.G., Harshitha, N., Sugumaran, V., Shankar, P. "Application of Cognitive Computing in Healthcare, Cybersecurity, Big Data and IoT: A Literature Review," *Information Processing & Management*, Vol. 59, No. 2, 2022, pp. 102888.

- Nandini, I., Manjula, D., Sugumaran, V. "Multi-Class Brain Disease Classification Using Modified Pre-Trained CNN Model with substantial Data Augmentation," *Journal of Medical Imaging and Health Informatics,* Vol. 12, No. 2, 2022, pp. 168-183.

- Leukel, J., Sugumaran, V. "How Novices Understand Supply Chain Process Models: An Experimental Study on Using Diagrams and Texts," *Journal of Enterprise Information Management*, Vol. 35, No. 3, 2022, pp. 757-773.

- Yu, G., Wang, Y., Mao, Z., Hu, M., Sugumaran, V., Wang, Y. K. "A Digital Twin-based Decision Analysis Framework for Operation and Maintenance of Tunnels," *Tunnelling and Underground Space Technology*, Vol. 116, 2021, pp. 104125, DOI: 10.1016/j.tust.2021.104125.

- Wang, X., Chang, Y., Sugumaran, V., Luo, X., Wang, P., Zhang, H. "Implicit Emotion Relationship Mining Based on Emotion Recognition from Multimodal Data Prediction," *IEEE Multimedia*, Vol. 28, No. 2, 2021, pp. 96-105.

- Wang, X., Kou, L., Sugumaran, V., Lou, X., Zhang, H. "Emotion Correlation Mining Through Deep Learning Models on Natural Language Text," *IEEE Transactions on Cybernetics*, Vol. 51, No. 9, 2021, pp. 4400-4413.

- Jing, N., Wu, Z., Lyu, S., Sugumaran, V. "Information Credibility Evaluation in Online Professional Social Network Using Tree Augmented Naïve Bayes Classifier," *Electronic Commerce Research*, Vol. 21, No. 2, 2021, pp. 645–669.

- Liu, Q., Mu, L. F., Sugumaran, V., Wang, C., Han, D. "Pair-wise ranking based preference learning for Points-of-interest Recommendation," *Knowledge-Based Systems*, Vol. 225, 2021, 107069.

- Widmer, T., Karaenke, P., Sugumaran, V. "Two-sided service markets: Effects of quality differentiation on market efficiency," *Managerial and Decision Economics*, 2021; 42:588–604.

- Du, J., Dong, P., Sugumaran, V., Castro-Lacouture, D. "Dynamic Decision Support Framework for Production Scheduling Using a Combined Genetic Algorithm and Multiagent Model," *Expert Systems*, Vol. 38, No. 1, 2021, e12533.

- Yu, G., Wang, Y., Hu, M., Shi, L., Mao, Z., Sugumaran, V. "RIOMS: An Intelligent Operation and Maintenance of Urban Roads Using spatio-temporal Data in Smart Cities," *Future Generation Computer Systems*, 2021, 115: 583-609.

- Jing, N., Liu, Q., Sugumaran, V. "A Blockchain-Based Code Copyright Management System," *Information Processing and Management*, Vol. 58, No. 3, 2021, pp. 102518.

- Masood, M. D. M., Manjula, D., Sugumaran, V. "An Efficient Algorithm for Identifying (ℓ, d) Motif from Huge DNA Datasets," *Journal of Ambient Intelligence and Humanized Computing*, Vol. 12, No. 1, 2021, pp. 485-495.

- Zhou, S., Chen, L., Sugumaran, V. "Hidden two-stream collaborative learning network for action recognition," *Computers, Materials & Continua*, Vol. 63, No.3, 2020, pp. 1545–1561.

- Veeramanikandan, M., Sankaranarayanan, S., Rodriques, J., Sugumaran, V., Kozlov, S. "Data Flow and Distributed Deep Neural Network Based Low Latency IoT-Edge Computation Model for Big Data Environment," *Engineering Applications of Artificial Intelligence*, 94: 103785 (2020).

- Gajendran, S., Manjula, D., Sugumaran, V. "Character Level and Word Level Embedding with Bidirectional LSTM - Dynamic Recurrent Neural Network for Biomedical Named Entity Recognition from Literature," *Journal of Biomedical Informatics*, 112: 103609 (2020).

- Xu, Z., Cheng, C., Sugumaran, V. "Big Data Analytics of Crime Prevention and Control Based on Image Processing upon Cloud Computing," *Journal of Surveillance, Security and Safety*, Vol. 1, No. 1, 2020, pp. 16-33.

- Du, J., Dong, P., Sugumaran, V. "Dynamic Production Scheduling for Prefabricated Components Considering the Demand Fluctuation," *Intelligent Automation and Soft Computing*, Vol.26, No. 4, 2020, pp.715-723.

- Du, J., Jing, H., Choo, K. K. R., Sugumaran, V., Castro-Lacouture, D. "An Ontology and Multi-Agent based Decision Support Framework for Prefabricated Component Supply Chain," *Information Systems Frontiers*, Vol. 22, No. 6, 2020, pp. 1467-1485.

- Mu, L. F., Sugumaran, V., Wang, F. "A Hybrid Genetic Algorithm for Software Architecture Re-Modularization," *Information Systems Frontiers*, Vol. 22, No. 5, 2020, pp. 1133-1161.

- Yu, G., Mao, Z., Hu, M., Li, Z., Sugumaran, V. "BIM+ Topology Diagram-Driven Multi-utility Tunnel Emergency Response Method," *Journal of Computing in Civil Engineering*, Vol. 33, No. 6, 2019, pp. 04019038.

- Du, J., Jing, H., Castro-Lacouture, D., Sugumaran, V. "Multi-agent Simulation for Managing Design Changes in Prefabricated Construction Projects," *Engineering, Construction and Architectural Management*, Vol. 27 No. 1, 2019, pp. 270-295.

- Hu, M. Liu, Y., Sugumaran, V., Liu, B. "Automated Structural Defects Diagnosis Using Semantic Technologies in Underground Transportation Tunnels," *Automation in Construction*, Vol. 107, 2019, Article 102929.

- Schehl, B., Leukel, J., Sugumaran, V. "Understanding Differentiated Internet Use in Older Adults: A Study of Informational, Social, and Instrumental Online Activities," *Computers in Human Behavior*, Vol. 97, 2019, pp. 222-230.

- Kim, N., Lee, Y., Sugumaran, V., Park, S. "Value-Driven use Cases Triage for Embedded Systems: A Case Study of Cellular Phone" *International Journal of Advanced Computer Science and Applications (IJACSA)*, Vol. 10, No. 5, 2019, pp. 723-728.

- Li, L., Sugumaran, V. "A Cognitive-based AES Model Towards Learning Written English," *Journal of Ambient Intelligence and Humanized Computing*, Vol. 10, No. 5, 2019, pp. 1811-1820.

- Arunarani, A. R., Manjula, D., Sugumaran, V. "Task scheduling techniques in cloud computing: A literature survey," *Future Generation Computer Systems*, Vol. 91, 2019, pp. 407-415.

- Masood, M. D. M., Manjula, D., Sugumaran, V. "Identification of New Disease Genes from Protein-Protein Interaction Network," *Journal of Ambient Intelligence and Humanized Computing*, (2018). https://doi.org/10.1007/s12652-018-0788-1.

- Leukel, J., Sugumaran, V. "How product representation influences the understanding of supply chain process models," *Enterprise Information Systems*, Vol. 12, No. 10, 2018, pp. 1285-1307.

- Beaulah, M. R. P., Manjula, D., Sugumaran, V. "Categorization of Images using Autoencoder Hashing and Training of Intra Bin Classifiers for Image Classification and Annotation," *Journal of Medical Systems*, Vol. 42, No. 7, 2018, pp. 132:1-132:15.

- McDaniel, M., Storey, V., Sugumaran, V. "Assessing the quality of domain ontologies: Metrics and an automated ranking system," *Data & Knowledge Engineering*, Vol. 115, 2018, pp. 32-47.

- Wang, X., Sugumaran, V., Zhang, H., Xu, Z. "A Capability Assessment Model for Emergency Management Operations," *Information Systems Frontiers*, Vol. 20, No. 4, August 2018, pp. 653-667.

- Xu, Z., Luo, X., Liu, Y., Hu, C., Mei, L., Yen, N., Choo, K. K. R., Sugumaran, V. "From Latency, through Outbreak, to Decline: Detecting the States of Emergency Events Using Web Media Big Data," *IEEE Transactions on Big Data*, Vol. 4, No. 2, 2018, pp. 245-257.

- Yu, G., Liu, J., Du, J., Hu, M., Sugumaran, V. "An Integrated Approach for Massive Sequential Data Processing in Civil Infrastructure Operation and Maintenance," *IEEE Access*, Vol. 6, No. 1, 2018 pp. 19739-19751.

- Attili, P. V. S., Mathew, S. K., Sugumaran, V. "Understanding Information Privacy Assimilation in IT Organizations using Multi-Site Case Studies," *Communications of the Association for Information Systems*, Vol. 42, Article 4, 2018, pp. 66 – 94.

- Jing, N., Jiang, T., Du, J., Sugumaran, V. "Personalized Recommendation Based on Customer Preference Mining and Sentiment Assessment from Chinese E-Commerce Websites," *Electronic Commerce Research*, Vol. 18, No. 1, 2018, pp. 159-179.

- Arunarani, A. R., Manjula, D., Sugumaran, V. "FBAT-SCAS: A Security and Cost Aware Workflow Scheduling Approach Combining Firefly and Bat Algorithms," *Concurrency and Computation: Practice and Experience*, Vol. 29, No. 24, 2017, pp. 1 – 13.

- Balijepally, V., DeHondt, J., Sugumaran, V., Nerur, S. "Value Proposition of Agility in Software Development – An Empirical Investigation," *Journal of Database Management*, Vol. 28, No. 4, 2017, pp. 40 - 59.

- Sugumaran, V., Geetha, T.V., Manjula, D., Gopal, H. "Guest Editorial: Computational Intelligence and Applications," *Information Systems Frontiers*, Vol. 19, No. 5, 2017, pp. 969-974

- Rothenberger, M., Jain, H., Sugumaran, V. "A Platform-Based Design Approach for Flexible Software Components," *Journal of Information Technology Theory and Application*, Vol. 18, No. 2, 2017, pp. 29 – 56.

- Sathiya, B., Geetha, T.V., Sugumaran, V. "A Metric based Automatic Selection of Ontology Matcher Using Bootstrapped Patterns," *Journal of Web Engineering*, Vol. 16, No.7&8, 2017, pp. 619-652.

- Gao, X. Z., Sangaiah, A. K., Sugumaran, V. "Editorial: Cloud based cyber-physical systems in the design of next-generation digital systems," *Intelligent Automation & Soft Computing*, Vol. 23, No. 3, 2017, pp. 475–476.

- Du, J., Sugumaran, V., Gao, B. "RFID and Multi-Agent Based Architecture for Information Sharing in Prefabricated Component Supply Chain," *IEEE Access*, Vol. 5, No. 1, 2017, pp. 4132 – 4139.

- Du, J., Sugumaran, V. "Clustering and Ontology-Based Big Data Integration Framework for Surface Subsidence Risk Mitigation in Underground Tunnels," *Cluster Computing*, Vol. 19, No. 4, 2016, pp. 2001 – 2014.

- Suganya Devi, R., Manjula, D., Sugumaran, V. "Efficient Indexing Structure to Handle Durable Queries through Web Crawling," *Cluster Computing*, Vol. 19, No. 3, 2016, pp. 1347-1358.

- Wimmer, H., Yoon, V., Sugumaran, V. "A Multi-Agent System to Support Evidence Based Medicine and Clinical Decision Making via Data Sharing and Data Privacy," *Decision Support Systems*, Volume 88, 2016, pp. 51 – 66.

- Xu, Z., Zhang, H., Sugumaran, V. Choo, K. K. R., Mei, L., Zhu, Y. "Participatory Sensing based Semantic and Spatial Analysis of Urban Emergency Events using Mobile Social Media," *EURASIP Journal on Wireless Communications and Networking*, 2016:44, pp. 1 – 9.

- Xu, Z., Zhang, H., Hu, C., Mei, L., Xuan, J., Choo, K. K. R., Sugumaran, V., Zhu, Y. "Building Knowledge Base of Urban Emergency Events based on Crowdsourcing of Social Media," *Concurrency and Computation: Practice and Experience*, Vol. 28, No. 15, 2016, pp. 4038 – 4052.

- Kim, J., Naylor, G., Sivadas, E., Sugumaran, V. "The Unrealized Value of Incentivized eWOM Recommendations," *Marketing Letters*, Vol. 27, No. 3, 2016, pp. 411 – 421.

- Xu, Z., Wei, X., Liu, Y., Mei, L., Hu, C., Choo, K. K. R., Zhu, Y., Sugumaran, V. "Building the search pattern of web users using conceptual semantic space model," *International Journal of Web and Grid Services*, Vol. 12, No. 3, 2016, pp. 328-347.

- Krishnaraju, V., Mathew, S. K., Sugumaran, V. "Web Personalization for User Acceptance of Technology: An Empirical Investigation of E-Government Services," *Information Systems Frontiers*, Vol. 18, No. 3, 2016, pp. 579-595.

- Kim, D., Yim, M., Sugumaran, V., Rao, H. R. "Web Assurance Seal Services, Trust and Consumers' Concerns: An Investigation of E-Commerce Transaction Intentions across Two Nations," *European Journal of Information Systems*, Vol. 25, No. 3, 2016, pp. 252-273.

- Zhang, X., Sugumaran, V. "Content Based Search Engine for Historical Calligraphy Images," *International Journal of Intelligent Information Technologies*, Vol. 10, No. 3, 2014, pp. 1 – 18.

- Byun, J., Rhew, S., Hwang, M., Sugumaran, V., Park, S.Y., Park, S.J. "Metrics for Measuring the Consistencies of Requirements with Objectives and Constraints," *Requirements Engineering*, Vol. 19, No. 1, 2014, pp 89-104.

- Lee, Y.C., Hanh, N.T., Sugumaran, V. "Open Source CRM Software Selection Using the Analytic Hierarchy Process," *Information Systems Management*, Vol. 31, No. 1, 2014, pp. 2 – 20.

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SERVICE ACTIVITIES

Professional Services

Editor-in-Chief
- *International Journal of Intelligent Information Technologies (IJIIT)*

Program Co-Chair, 28th International Conference on application of Natural Language to Information systems (NLDB 2023), University of Derby, UK, June 21-23, 2023.

Conference Chair, Midwest Decision Sciences Institute Annual Conference, Oakland University, Rochester, Michigan, April 8-9, 2022.

Publication Chair, International Conference on Advancements in Interdisciplinary Research (AIR-2022), Motilal Nehru National Institute of Technology Allahabad, Prayagraj (U.P.), India, May 6 – 7, 2022

Program Co-Chair, Midwest Association for Information Systems Annual Conference, Oshkosh, WI, 2019.

Program Co-Chair, 24th International Conference on application of Natural Language to Information systems (NLDB 2019), Salford University, Manchester, England, June 26-28, 2019.

International Program Co-Chair, Australian Conference on Information Systems, Sydney, Australia, 2018.

Program Co-Chair, 5th IEEE International Conference on Big Data Service and Applications (BDS 2019).

Honorary Chair, 3rd International Conference on Intelligent Information Technologies (ICIIT 2018), Anna University, Chennai, India, December 11-14, 2018.

General Chair, 2nd International Conference on Intelligent Information Technologies (ICIIT 2017), Anna University, Chennai, India, December 20-22, 2017.

Program Co-Chair, Workshop on Big Data Research and Development in Knowledge Engineering, in conjunction with SEKE2017, Wyndham Pittsburgh University Center, Pittsburgh, USA, July 5 - July 7, 2017.

Poster and Prototype Demos Chair, Workshop on Information Technology and Systems, (WITS 2017), December 14-15, 2017, Seoul, South Korea.

Track Chair, Intelligent Agent and Multi-Agent Systems Track, Americas Conference on Information Systems, 2000 – 2022

Program Co-Chair, 21st International Conference on application of Natural Language to Information systems (NLDB 2016), Salford University, Manchester, England, June 22-24, 2016.

Program Co-Chair, 14th Workshop on e-Business (WeB 2015), Fort Worth, Texas, December 12, 2015.

Program Co-Chair, 18th International Conference on application of Natural Language to Information systems (NLDB 2013), Salford University, Manchester, England, June 2013.

Program Co-Chair, 13th International Conference on Applications of Natural Language to Information Systems (NLDB 2008), June 24 – 27, 2008, London, UK.

Workshop Co-Chair, International Workshop on Software and Services for IT Convergence (SSIC 2011, SSIC 2012), Jeju, South Korea, May 23, 2011, and July 16, 2012 respectively.

President, AIS Special Interest Group on Ontology Driven Intelligent Systems (SIGODIS), 2012-2015.

Vice President of AMCIS Events, AIS Special Interest Group on Agent-Based Info. Systems (SIGABIS), 2005 - present

Information Technology Feature Editor, Decision Line

ISWORLD, **DSS Research Website Co-Editor**

Editorial Review Board Member
- Journal of Electronic Commerce in Organizations
- Journal of Computer Information Systems
- Journal of International Technology and Information Management
- International Journal of Web Services Research
- Information Systems Management
- Journal of Database Management
- Information Systems Frontiers
- Data and Knowledge Engineering

Track Co-Chair, Service-Based Information Systems Track, Australasian Conference on Information Systems (ACIS), Sydney, Australia, 30th November - 2nd December, 2011.

Track Co-Chair, Information Technology Service Management, Service Computing and Engineering Track, Conf-IRM, June 12-14, 2011, Seoul, Korea.

Track Co-Chair, Service Science and Information Systems Track, 15th Pacific Asia Conference on Information Systems (PACIS 2011), Brisbane, Australia, July 9-11, 2011.

Tutorials/Workshops Co-Chair, Americas Conference on Information Systems (AMCIS 2011), Detroit, MI, August 4 -7, 2011.

IT Committee Chair, Decision Sciences Institute, 2007 – 2010

Track Chair, Intelligent Information Systems, IRMA 2001, 2002, 2005, 2006, 2007

Track Chair, Ecommerce Track, DSI Annual Meeting, Boston, MA, November 2004.

Poster/Demo Chair, Workshop on E-Business (WeB 2006, 2007)

Prototype Chair, Workshop on Information Systems and Technologies (WITS), 2007

Tutorials Co-Chair, International Conference on Conceptual Modeling, 2002.

VP for Web Management, Special Interest Group on E-Business, 2007 – 2010

SIGDSS, **Resources Chair**, 2002-2005

Program Committee Member:
- Associate Editor, International Conference on Information Systems (ICIS), 2001, 2005, 2006, 2009, 2011

- Workshop on E-Business (WeB), 2005 – 2009, 2015-2019
- International Workshop on Variability Modeling of Software-Intensive Systems (VAMOS), 2008 – 2009
- International Workshop on Conceptual Modeling Approaches for E-Business (ECOMO), 2009.
- International Conference on Ontologies, DataBases, and Applications of Semantics (ODBASE), 2009.
- International Conference on Adaptive Business Information Systems (ABIS), 2009.
- International Workshop on Dynamic Software Product Lines (DSPL), 2008–2009.
- International Conference on Enterprise Information Systems (ICEIS), 2005 – 2014
- Midwest AIS Conference, 2006, 2008
- IADIS International Conference on E-Society, 2003 – 2016
- International Conference on Applications of Natural Language to Information Systems (NLDB), 1999 – 2014
- International Workshop on Engineering Semantic Agent Systems (ESAS), 2006-2016.
- International Workshop on Experience Management and Engineering (EME), 2006
- International Conference on Innovations in Information Technology (IIT'05)
- IEEE International Conference on Web Services (ICES), 2004
- Agent Technology in Business Applications (ATeBA-04), 2004
- Workshop on Information Technologies and Systems (WITS) 2000, 2001, 2007
- International Conference on Conceptual Modeling (E-R), 2000, 2002, 2003, 2007, 2013.
- INFORMS Conference on Information Systems and Technology (CIST), 2001

Cluster Coordinator, Institute for Operations Research and Management Sciences Annual Conference, 1996, May 5-8, Washington D. C.

Session Chair, Institute for Operations Research and Management Sciences Annual Conference, 1996, May 5-8, Washington D. C.

Session Chair, Decision Sciences Institute's Annual Conference.

Discussant, Decision Sciences Institute's Annual Conference.

Discussant, North East Decision Sciences Institute's Annual Conference.

Ph.D Dissertation Co-Chair

- Raji Ramachandran, Amrita Vishwa Vidyapeetham, Amritapuri, Clappana, Kollam – 690 525, Kerala, India
- Ujjwal Kumar, Amrita Vishwa Vidyapeetham, Bangalore - 560035 Karnataka, India

Ph.D Dissertation Committee Member

- Matthias Volk, Otto-von-Guericke-University Magdeburg, Magdeburg, Germany
- Sandeep Keshwapanthula, School of Engineering and Computer Science, Oakland University

- Sharanamma Bannur, School of Engineering and Computer Science, Oakland University
- Sai Krishna Karthikeya Challa, School of Engineering and Computer Science, Oakland University
- Karthikeya Challa, School of Engineering and Computer Science, Oakland University
- Dingwang Wang, School of Engineering and Computer Science, Oakland University
- Zirun Qi, Georgia State University, Atlanta, USA.
- Melinda L. McDaniel, Georgia State University, Atlanta, USA.
- Stephen Russell, University of Maryland Baltimore County.
- Diana Tanase, University of Westminster, London, UK.

External Examiner for Ph.D Dissertation

- T. Roosefert Mohan, SRM Institute of Science and Technology, India, 2023
- S. Sivasankari, SRM Institute of Science and Technology, India, 2022
- Gouthaman Panneer Selvam, SRM Institute of Science and Technology, India, 2021
- Silpa Sangeeth L R, Indian Institute of Technology Madras, 2021
- Siddique Ibrahim Sp, Vellore Institute of Technology, 2021
- Uma Lakshmi Kalakada, Alliance University, India, 2021
- Preeti Tamrakar, Vellore Institute of Technology, India, 2020
- Lakshmi K.S., SRM Institute of Science and Technology, India, 2020
- Gokul Krishnan, National Institute of Technology Karnataka, India, 2020
- Kushal Saha, Indian Institute of Management, Calcutta, India, 2020
- Mahesh Balan, Indian Institute of Technology-Madras, India, 2019
- Sung Lee, University of New South Wales, Sydney, Australia, 2019
- Richard Rannard, University of New South Wales, Sydney, Australia, 2018
- Rajbabu, National Institute of Technology, Trichy, India, 2018
- Christeena Joseph, Saveetha University, Tamil Nadu, India, 2018
- N. Vivekananthamoorthy, Hindustan University, Tamil Nadu, India, 2017
- Deepak Dahiya, Indian Institute of Technology, Madras, India, 2017
- Amy Louise Affleck, Curtin University, Perth, Australia, 2016
- S. Pavithra, Anna University, Chennai, India, 2016
- E. Umamaheswari, Anna University, Chennai, India, 2014
- K. S. Kuppusamy, Pondicherry University, Pondicherry, India, 2013
- Aisha Banu, Anna University, Chennai, India, 2010
- Kafui Andre Monu, University of British Columbia, Vancouver, Canada, 2009
- Felix Leung, City University of Hong Kong, 2007
- Jordi Conesa, Technical University of Barcelona, Barcelona, Spain, 2006

National/International Reviewer for Funding Agencies

- United Kingdom Research Initiative, 2021
- United Kingdom-India Education and Research Initiative, 2016
- Fulbright Specialist Program, 2012 – 2014.
- Czech Science Foundation, Grant Proposal Evaluator, 2013

- Catalyst Grant Program, University of Wisconsin Milwaukee Research Foundation
- National Science Foundation, Career Award Panel, Division of Computing and Communication Foundation, 2007
- Fonds de Recherche sur la Nature et Technologies, Quebec, Canada, 2006.
- Transport Research Program, Department of Public Enterprise, Ireland, 2002.

External Reviewer for Tenure and Promotion Applications

- Information Systems and Operations Management, Raj Soin College of Business, Wright State University, Dayton, OH, 2022
- Department of Accounting and Information Systems, Villanova University, Villanova, PA, 2021
- Department of Management Science and Information Systems, University of Massachusetts, Boston, 2020
- Department of Information Systems, College of Business, University of Nevada, Reno, 2019
- School of Computing, Science and Engineering, Salford University, Manchester, UK, 2018
- Department of Information Technology, College of Engineering and Computing, Georgia Southern University, P.O. Box 8150, Statesboro, GA 30460, 2018
- Department of IT and Decision Sciences, Old Dominion University, Norfolk, Virginia 23529, USA, 2017
- School of Business and Economics, Michigan Technological University, Houghton, MI 49931, USA, 2017
- Information Systems and Operations Management, Raj Soin College of Business, Wright State University, Dayton, OH, 2017
- College of Management, University of Massachusetts Boston, 2015
- Baruch College, The City University of New York, 2014
- Business School, University of Colorado at Denver and Health Sciences Center, 2013.
- School of Information Systems and Technology, University of Wollongong, Sydney, Australia, 2012
- Information Systems and Operations Management, Raj Soin College of Business, Wright State University, Dayton, OH, 2011
- Department of Information Systems, University of Maryland Baltimore County, Baltimore, 2007, 2010
- Department of Information Technology and Decision Sciences, Old Dominion University, Norfolk, Virginia, 2010
- Department of Management Science and Information Systems, University of Massachusetts, Boston, 2009
- Business School, University of Colorado at Denver and Health Sciences Center, 2007
- Baruch College, The City University of New York, 2007
- Villanova School of Business, Villanova University, 2006.
- CIS Department, Colorado State University, 2005
- College of Business Administration, Loyola Marymount University, 2004
- College of Commerce and Finance, Villanova University, 2002

Technical Reviewer

Journals
Information Systems Research
MIS Quarterly
IEEE Transactions on Data and Knowledge Engineering
IEEE Transactions on Engineering Management
IEEE Transactions on Systems Man and Cybernetics
Communications of the ACM
Journal of Organizational Computing and Electronic Commerce
Data and Knowledge Engineering
Decision Support Systems
Journal of Management Information Systems
Journal of Information Technology Theory and Application
Journal of Global Information Technology Management
INFORMS Journal on Computing
INFORMS Transactions on Education
International Journal of Human Computer Interactions
DataBase for Advances in Information Systems Journal
Information Systems Journal
Industrial Management and Data Systems
Journal of Electronic Commerce in Organizations
Journal of Information Systems and e-Business
Journal of International Technology and Information Management
Journal of Computer Information Systems
Journal of Database Management
Journal of Information Technology Management
IDEA Group Book Chapter Review
Heuristics: The Journal of Intelligent Technologies Journal

Conferences
IEEE International Conference on Web Services (ICES)
Agent Technology in Business Applications (ATeBA-04)
IADIS International Conference on E-Society
International Conference on Information Systems
Americas Conference on Information Systems (AMCIS)
Information Resources Management Association Annual Conference
Conceptual Modeling (ER Conference)
Decision Sciences Institute Annual Conference Proceedings
       Management Information Systems Track
       DSS/AI/Expert Systems Track
North East Decision Sciences Institute's Annual Conference Proceedings.
International Business School Computing Association Annual Conference Proceedings

Oakland University

Search Committee Member, Dean of School of Business Administration, 2022

Member, Strategy and Structure sub-committee of the "OU Global" Initiative, 2021-2022.

Search Committee Member, Chief Information Officer, 2021

Search Committee Member, Dean of Graduate Studies, 2019-2020.

Graduate Research Day Committee, 2015-2016.

Search Committee Member, Vice President for Research, 2015-2016.

Search Committee Member, Vice President for Research, 2011.

University Faculty Re-employment and Promotion Committee (FRPC) 2008 – 2011

Member of Academic Computing Committee (University Senate Committee) 2006–2008

Chair of the Foundation of Excellence subcommittee on Diversity (2005 – 2008)

Member of the Foundation of Excellence Task Force (2005 – 2008)

Member of search committee for the AVP for E-Learning and Instructional Support position (Fall 2003)

Chair of Teaching and Learning Senate Committee (2003 – 2004), member (2002 – 2003)

Academic Honors and Standings Senate Committee (2000 – 2002)

Faculty Adviser for Indian Student Association (2000 – 2002)

School of Business Administration

Executive MBA Review Committee, 2015

SBA Building Committee, 2015

SBA Distinguished Service Award Committee (2009 – 2011)

SBA Computer Advising Committee (2007 – 2009)

Co-organizer, SBA Research Seminar and Workshop Series, 2005 – 2008.

Chair of the SBA Undergraduate Curriculum Committee (UCC) – (2002 – 2003), member (2001 – 2002)

Chair of the SBA Committee on Instruction (COI) – (2002 – 2003), member (2001-2002)

AACSB Accreditation Committee – Instructional Resources

Decision and Information Sciences Department

Search Committee Chair, Assistant Professor of MIS, 2021

Search Committee Chair, Assistant Professor of MIS, 2020

Search Committee Member, Special Instructor position for QMM, 2019

Search Committee Chair, Assistant Professor of MIS, 2018

Search Committee Chair, Assistant Professor of Business Analytics, 2017

Search Committee Member, Assistant Professor of Operations Management, 2017

Undergraduate Curriculum Review Committee, 2015

MIS Minor Coordinator, 2014 - 2015

MIS Curriculum Review Committee, 2013

Search Committee Member, Special Instructor position

Capstone Course Advisor

Member of DIS Department Undergraduate Curriculum Committee

Member of DIS Department Graduate Curriculum Committee

Course coordinator for MIS 304

Member of MIS Faculty Search Committee

PROFESSIONAL ORGANIZATIONS

Member of Association for Information Systems
Member of Association for Computing Machinery