

EDUCATION

2012- 2017 (Thesis Submitted)	PhD in Financial Analytics Department of Management Studies Indian Institute of Technology (IIT) Delhi, India CGPA: 10/10	Thesis Title: Portfolio optimization in Indian stock market: A study using financial analytics Advisors: Dr. Surendra S. Yadav & Dr. Ravi Shankar
2010-2012	Masters of Technology (MTech) in Industrial Engineering and Management Department of Industrial Engineering and Management Indian Institute of Technology Kharagpur, India CGPA: 8.8/10	Thesis Title: Effective utilization of business intelligence in third party logistics Advisor: Dr. Sarada Prasad Sarmah
2006-2010	Bachelors of Technology (BTech) in Production Engineering Department of Production Engineering National Institute of Technology (NIT) Tiruchirappalli, India CGPA: 8.31/10	Thesis Title: Optimization of laser welding parameters using response surface methodology and artificial neural network Advisor: Dr. P. Sathiya

RESEARCH WORK

Thesis: Portfolio Optimization in Indian Stock Market: A Study using Financial Analytics	
<ul style="list-style-type: none"> ▪ Selected profitable stocks for construction of portfolio using Data Envelopment Analysis ▪ Proposed a model based on Hierarchical Risk Parity model and Gerber Statistics for portfolio formation for stocks listed on National Stock Exchange ▪ Developed ensemble forecasting models comprising of non-classical decomposition models and machine learning algorithms for stock price prediction and proposed trading rules to determine timing of buying and selling stocks ▪ Developed a questionnaire and carried out a survey to understand the investment practices in Indian stock market 	

RESEARCH INTERESTS

Big data analytics, data mining, time series analysis, operations research, security analysis and portfolio management
--

PUBLICATIONS

Journals
<ol style="list-style-type: none"> 1. Jothimani D, Shankar R, Yadav SS. 2017. A PCA-DEA framework for stock selection in Indian stock market, Journal of Modelling in Management. https://doi.org/10.1108/JM2-09-2015-0073 2. Jothimani D, Shankar R., Yadav SS. 2015. Discrete wavelet transform-based prediction of stock index: A study on National Stock Exchange fifty index. Journal of Financial Management and Analysis. 28(2): 35-49 3. Jothimani D, Shankar R., Yadav SS. 2015. Towards understanding the cynicism of social networking sites: An Operations Management perspective. Procedia – Social and Behavioral Sciences. 189: 117-132 4. Jothimani D, Sarmah SP. 2014. Supply chain performance measurement of third party logistics, Benchmarking: An International Journal. 21(6): 944-963
Book Chapters
<ol style="list-style-type: none"> 5. Jothimani D, Shankar R, Yadav SS, (2018) Portfolio selection in Indian stock market using relative financial performance indicator approach, In Sushil, Singh, T.P., & Kulkarni, A.J. (Eds.), <i>Flexibility in Resource Management</i> (pp. 185-201), Singapore, Springer. 6. Jothimani D, Shankar R, Yadav SS. (2016), A hybrid EMD-ANN model for stock price prediction, In Panigrahi BK, Suganthan PN, Das S & Satapathy SC (Eds.), <i>Swarm, Evolutionary, and Memetic Computing: SEMCCO 2015, Revised selected papers</i> (pp. 60-70), Cham, Switzerland, Springer International Publishing 7. Bhadani A, Jothimani D. (2016), Big data: Challenges, opportunities and realities, In Singh, M.K., & Kumar, D.G. (Eds.), <i>Effective Big Data Management and Opportunities for Implementation</i> (pp. 1-24), Pennsylvania, USA, IGI Global 8. Jothimani D, Shankar R, Yadav SS. (2016), Modeling hierarchical relationships among enablers of supply chain coordination in flexible environment, In Sushil, Bhal, K. T., & Singh, S.P. (Eds.), <i>Managing Flexibility: People, Process, Technology and Business</i> (pp. 171-186), Heidelberg, Germany, Springer
Contributions in Conferences
<ol style="list-style-type: none"> 1. Jothimani D, Shankar R, Yadav SS. Ensemble of Non-Classical Decomposition Models and Machine Learning Models for Stock Index Prediction, <i>MW AIS 2017 Proceedings</i>, Paper 17, Available at: http://aisel.aisnet.org/mwais2016/17/ 2. Jothimani D, Shankar R, Yadav SS. Robust mean-variance framework for Indian stock market, 10th International Conference of Indian Subcontinent Decision Sciences Institute (ISDSI), Nasik, India, December 28-30, 2016 3. Jothimani D, Shankar R, Yadav SS. Robust portfolio optimization in Indian stock market, 16th Global Conference on Flexible Systems Management (GLOGIFT 16), University of Technology, Sydney, Australia, December 4-6, 2016

4. **Jothimani D**, Shankar R, Yadav SS. Stock trading decisions using ensemble forecasting framework, *2016 Annual Meeting of Decision Sciences Institute Proceedings*, Austin, Texas, November 19-22, 2016. Available at: <http://www.decisionsciences.org/Portals/16/Proceedings/AM-2016/Files/p1163157.pdf>
5. **Jothimani D**, Shankar R, Yadav SS. Asset selection in Indian stock market using PCA-DEA framework, *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016
6. **Jothimani D**, Shankar R, Yadav SS. A comparative analysis of non-classical decomposition models for stock trading decision, *11th INFORMS Workshop on Data Mining and Decision Analytics*, Nashville, Tennessee, November 12, 2016
7. **Jothimani D**, Shankar R, Yadav SS. Prediction of Nifty index using ensemble forecasting Models, *International Conference on Financial Markets and Corporate Finance (ICFMCF 2016)*, IIT Madras, Tamil Nadu, India, August 12-13, 2016
8. **Jothimani D**, Shankar R, Yadav SS. A comparative study of ensemble based forecasting models for prediction of stock index, *MWAIS 2016 Proceedings*, Paper 5, Available at: <http://aisel.aisnet.org/mwais2016/5/>
9. **Jothimani D**, Shankar R, Yadav SS. An integrated DWT-SVR approach for stock price prediction, *9th International Conference of Indian Subcontinent Decision Sciences Institute (ISDSI)*, Goa, India, January 2-4, 2016
10. **Jothimani D**, Shankar R, Yadav SS. A hybrid empirical mode decomposition and SVR approach for stock index prediction, *2nd Conference on Business Analytics in Finance and Industry (BAFI 15)*, Universidad de los Andes, Santiago, Chile, December 14-16, 2015
11. **Jothimani D**, Shankar R, Yadav SS. Modeling uncertainties in Mean Variance framework using robust optimization, *2015 INFORMS Annual Meeting*, Philadelphia, Pennsylvania, November 1-4, 2015
12. **Jothimani D**, Shankar R, Yadav SS. Forecasting of stock index using empirical mode decomposition and artificial neural network, Baydogan, M.G., Huang, S., Oztekin, A., (Eds.), *Proceedings of the 2015 INFORMS Workshop on Data Mining and Analytics*, Philadelphia, Pennsylvania, USA, October 31, 2015
13. **Jothimani D**, Shankar R, Yadav SS. Relative financial performance indicator approach for portfolio selection: A case of Indian stock market, *15th Global Conference on Flexible Systems Management (GLOGIFT 15)*, Symbiosis International University, Pune, India, October 23-25, 2015
14. **Jothimani D**, Shankar R, Yadav SS. Stock selection in Indian stock market using data envelopment analysis, *8th International Conference of Indian Subcontinent Decision Sciences Institute (ISDSI)*, Pune, India, January 2-4, 2015
15. Bhadani A, **Jothimani D**, Shankar R, Rao DV. Applying unsupervised algorithm to understand the non-voice mobile service preferences among young Indians, *INFORMS Workshop on Data Mining and Analytics* in conjunction with *2014 INFORMS Annual Meeting*, San Francisco, California, November 8, 2014
16. **Jothimani D**, Shankar R, Yadav SS. Stock selection in Indian stock market: An analysis using DEA, *14th Global Conference on Flexible Systems Management (GLOGIFT 14)* organized jointly with *7th International Conference on Contemporary Business*, Curtin University, Singapore, October 15-17, 2014
17. **Jothimani D**, Shankar R, Yadav SS. A big data analytical framework for portfolio optimization, *Workshop on Internet and Big Data Finance (WIBF 14)*, in conjunction with *International Conference on Frontiers of Finance*, City University of Hong Kong, Hong Kong, June 6-7, 2014
18. Bhadani A, **Jothimani D**, Rao DV, Shankar R. Frequent pattern mining for mobile value added services in Indian context, *International Conference on Web Engineering & Application (ICWA)*, December 18-19, 2013, CET Bhubaneswar, Odisha, India
19. **Jothimani D**, Shankar R, Yadav SS. Modeling of supply chain coordination enablers in flexible environment, *13th Global Conference on Flexible Systems Management (GLOGIFT 13)*, December 13-15, 2013, IIT Delhi, New Delhi, India
20. Bhadani A, Kumar A, **Jothimani D**, Pandey R. Modeling the operations of telecom service adoption inhibitors using ISM and MICMAC analysis, *16th Annual International Conference of the Society of Operations Management (SOM)*, December 21-23, 2012, IIT Delhi, New Delhi, India

IT SKILLS

	Languages/Packages
Programming	R, C, C++, Visual Basic
Software Tools	MATLAB, QlikView 10.0, Gephi, SPSS, Stella/iThink, MINITAB, AutoCAD, ProEngineer, MS Office

INDUSTRY EXPERIENCE

Industry	Work Description
Four Soft Limited (Jun - Dec 2011)	Part of the team that proposed Key performance Indicators (KPIs) and developed a business intelligence tool for third party logistics provider
HAL (ARDC) (Dec 2008)	Project on design of aircraft fuel system for Turbo propeller trainer aircraft
HAL (ETBR&DC) (May - Jun 2008)	Project on design of master process sheet and operation sketch of compressor stator of a gas turbine engine

TEACHING ASSISTANT AT IIT DELHI

- SML 873: Security Analysis and Portfolio Management
- SML 849: Current and Emerging Issues in Manufacturing Management (Focus on Supply Chain Analytics)
- SML 875: International Financial Management

ACADEMIC ACTIVITIES AND MEMBERSHIP

Awards/Travel Grants

- **Full travel grant** from International Collaboration division at Indian Council of Social Science Research (ICSSR) to present at Annual Meeting of Decision Sciences Institute (DSI) 2016, Austin, Texas, USA from November 19-22, 2016
- **Full travel grant** from International Travel division at Department of Science and Technology (DST) to present at 2016 INFORMS Annual Meeting, Nashville, Tennessee, USA from November 13-16, 2016
- **Full travel grant** from International Travel division at Council of Scientific and Industrial Research (CSIR) to present at 2016 INFORMS Annual Meeting, Nashville, Tennessee, USA from November 13-16, 2016
- Recognized as an **Outstanding Reviewer** for Journal of Advances in Management Research in the Emerald Literati Network 2016 Awards for Excellence
- **Research Scholar Travel Award** from IIT Delhi to present at 2015 INFORMS Annual Meeting, Philadelphia, Pennsylvania, USA

Reviewer for Journals

- International Journal of Emerging Markets
- Benchmarking: An International Journal
- Journal of Advances in Management Research

Roles in Conferences

- Program Committee Member
 - 11th Annual Midwest Association for Information Systems (MWAIS 2016) Conference, Milwaukee, Wisconsin, USA
- Session Chair
 - Annual Meeting of Decision Sciences Institute (DSI) 2016, Austin, Texas, USA
 - 2015 INFORMS Annual Meeting, Philadelphia, Pennsylvania, USA
- Reviewer
 - Annual Meeting of Decision Sciences Institute (DSI) 2016, Austin, Texas, USA
 - International Conference on Information Systems (ICIS) 2014, Auckland, New Zealand
- Facilitator
 - 13th Global Conference on Flexible Systems Management (GLOGIFT 13), IIT Delhi, India
 - International Conference on Advances in Supply Chain and Manufacturing Management (ASCMM 2011), IIT Kharagpur
- Associate Editor
 - Proceedings of XVI International Conference of Society of Operations Management, IIT Delhi, India

Membership	<ul style="list-style-type: none">▪ Institute for Operation Research and Management Science (INFORMS)▪ Association of Information Systems (AIS)▪ Decision Sciences Institute (DSI)▪ American Finance Association (AFA)▪ Production and Operations Management Society (POMS)▪ Production Engineering Association (PEA) (2006-2010)
Workshops Attended	<ul style="list-style-type: none">▪ Leadership through self discovery, organized by IIT Delhi Alumni Association, IIT Delhi, Aug 1-3, 2014▪ Introduction to intellectual property, organized by Rajiv Gandhi School of Intellectual Property Law, IIT Kgp, Dec 13-15, 2010▪ Soft computing, organized by Department of Mechanical Engineering, IIT Kgp, Dec 2010▪ Introduction to game theory, organized by Department of Industrial Engineering and Management, IIT Kgp, Dec 8-10, 2010▪ CAD workshop, organized by Department of Production Engineering, NIT, Trichy, April 12-13, 2008▪ Automobile assembly, organized by Department of Production Engineering, NIT, Trichy, April 12-13, 2008

OTHER INFORMATION

- Active member of **R meetup group** in National Capital Region, India since 2012
- Selected for **Young Students' Scientist Programme** (YSSP) organized by MHRD

LIST OF REFERENCES

Dr. Surendra S. Yadav Professor Department of Management Studies Indian Institute of Technology Delhi E-mail: ssyadav@dms.iitd.ac.in	Dr. Ravi Shankar Professor Department of Management Studies Indian Institute of Technology Delhi Email: ravi1@dms.iitd.ac.in	Dr. P. Vigneswara Ilavarasan Associate Professor Department of Management Studies Indian Institute of Technology Delhi Email: vignes@iitd.ac.in ; evignesh@gmail.com
--	--	---

LANGUAGES: English, Hindi, Tamil

PERSONAL INTERESTS: Yoga, Reading