

## EDUCATION

2012- April 2017 (Expected)	PhD in Financial Analytics Department of Management Studies Indian Institute of Technology (IIT) Delhi, India CGPA: 10/10	<b>Thesis Title:</b> Portfolio optimization in Indian stock market: A study using financial analytics <b>Advisors:</b> 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	<b>Thesis Title:</b> Effective utilization of business intelligence in third party logistics <b>Advisor:</b> 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	<b>Thesis Title:</b> Optimization of laser welding parameters using response surface methodology and artificial neural network <b>Advisor:</b> Dr. P. Sathiya

## RESEARCH WORK

<b>Dissertation: Portfolio Optimization in Indian Stock Market: A Study using Financial Analytics</b>	
<ul style="list-style-type: none"> <li>▪ Selected profitable stocks for construction of portfolio using Data Envelopment Analysis</li> <li>▪ Solved portfolio optimization using extended Markowitz Mean-Variance model comprising of various constraints including cardinality constraints, bounding constraints and market sector capitalization using metaheuristics</li> <li>▪ Developed ensemble forecasting models comprising of non-classical decomposition models and machine learning algorithms for stock price prediction</li> <li>▪ Developed a questionnaire and carried out a survey to understand the investment practices in Indian stock market</li> </ul>	

## RESEARCH INTERESTS

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

<b>Journals</b>
<ol style="list-style-type: none"> <li>1. <b>Jothimani D</b>, Shankar R., Yadav SS. 2015. Discrete wavelet transform-based prediction of stock index: A study on National Stock Exchange fifty index. <i>Journal of Financial Management and Analysis</i>. 28(2): 35-49</li> <li>2. <b>Jothimani D</b>, Shankar R., Yadav SS. 2015. Towards understanding the cynicism of social networking sites: An Operations Management perspective. <i>Procedia – Social and Behavioral Sciences</i>. 189: 117-132</li> <li>3. <b>Jothimani D</b>, Sarmah SP. 2014. Supply chain performance measurement of third party logistics, Benchmarking: An International Journal. 21(6): 944-963</li> <li>4. <b>Jothimani D</b>, Shankar R, Yadav SS, A PCA-DEA framework for stock selection in Indian stock market, <i>Journal of Modelling in Management</i>, Accepted: April 7, 2016</li> </ol>
<b>Book Chapters</b>
<ol style="list-style-type: none"> <li>5. <b>Jothimani D</b>, Shankar R, Yadav SS. (2016), A hybrid EMD-ANN model for stock price prediction, In Panigrahi BK, Suganthan PN, Das S &amp; Satapathy SC (Eds.), <i>Swarm, Evolutionary, and Memetic Computing: SEMCCO 2015, Revised selected papers</i> (pp. 60-70), Cham, Switzerland, Springer International Publishing</li> <li>6. Bhadani A, <b>Jothimani D</b>. (2016), Big data: Challenges, opportunities and realities, In Singh, M.K., &amp; Kumar, D.G. (Eds.), <i>Effective Big Data Management and Opportunities for Implementation</i> (pp. 1-24), Pennsylvania, USA, IGI Global</li> <li>7. <b>Jothimani D</b>, Shankar R, Yadav SS. (2016), Modeling hierarchical relationships among enablers of supply chain coordination in flexible environment, In Sushil, Bhal, K. T., &amp; Singh, S.P. (Eds.), <i>Managing Flexibility: People, Process, Technology and Business</i> (pp. 171-186), Heidelberg, Germany, Springer</li> </ol>
<b>Conferences</b>
<ol style="list-style-type: none"> <li>1. <b>Jothimani D</b>, Shankar R, Yadav SS. Robust mean-variance framework for Indian stock market, 10<sup>th</sup> <i>International Conference of Indian Subcontinent Decision Sciences Institute (ISDSI)</i>, Nasik, India, December 28-30, 2016 (Upcoming)</li> <li>2. <b>Jothimani D</b>, Shankar R, Yadav SS. Robust portfolio optimization in Indian stock market, 16<sup>th</sup> <i>Global Conference on Flexible Systems Management (GLOGIFT 16)</i>, University of Technology, Sydney, Australia, December 4-6, 2016</li> <li>3. <b>Jothimani D</b>, Shankar R, Yadav SS. Stock trading decisions using ensemble forecasting framework, 2016 <i>Annual Meeting of Decision Sciences Institute Proceedings</i>, Austin, Texas, November 19-22, 2016. Available at: <a href="http://www.decisionsciences.org/Portals/16/Proceedings/AM-2016/Files/p1163157.pdf">http://www.decisionsciences.org/Portals/16/Proceedings/AM-2016/Files/p1163157.pdf</a></li> </ol>

4. **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
5. **Jothimani D**, Shankar R, Yadav SS. A comparative analysis of non-classical decomposition models for stock trading decision, *11<sup>th</sup> INFORMS Workshop on Data Mining and Decision Analytics*, Nashville, Tennessee, November 12, 2016
6. **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
7. **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/>
8. **Jothimani D**, Shankar R, Yadav SS. An integrated DWT-SVR approach for stock price prediction, *9<sup>th</sup> International Conference of Indian Subcontinent Decision Sciences Institute (ISDSI)*, Goa, India, January 2-4, 2016
9. **Jothimani D**, Shankar R, Yadav SS. A hybrid EMD-ANN Model for stock price prediction, *The 6<sup>th</sup> International Conference on Swarm, Evolutionary and Memetic Computing (SEMCCO)*, Hyderabad, India, December 18-20, 2015
10. **Jothimani D**, Shankar R, Yadav SS. A hybrid empirical mode decomposition and SVR approach for stock index prediction, *2<sup>nd</sup> 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, *15<sup>th</sup> Global Conference on Flexible Systems Management (GLOGIFT 15)*, Symbiosis International University, Pune, India, October 23-25, 2015
14. **Jothimani D**, Shankar R, Yadav SS. A DEA framework for portfolio selection in Indian stock market, *Open House 2015*, IIT Delhi, April 18, 2015
15. **Jothimani D**, Shankar R, Yadav SS. Stock selection in Indian stock market using data envelopment analysis, *8<sup>th</sup> International Conference of Indian Subcontinent Decision Sciences Institute (ISDSI)*, Pune, India, January 2-4, 2015
16. **Jothimani D**, Bhadani AK., Shankar R. Towards understanding the cynicism of social networking sites: An operations management perspective, *18<sup>th</sup> Annual International Conference of the Society of Operations Management (SOM)*, IIT Roorkee, Uttarakhand, India, December 12-14, 2014
17. 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
18. **Jothimani D**, Shankar R, Yadav SS. Stock selection in Indian stock market: An analysis using DEA, *14<sup>th</sup> Global Conference on Flexible Systems Management (GLOGIFT 14)* organized jointly with *7<sup>th</sup> International Conference on Contemporary Business*, Curtin University, Singapore, October 15-17, 2014
19. **Jothimani D**, Shankar R, Yadav SS. Sustainability analytics: Ornamental design or real need, *An International Workshop on Global Sustainable Business Practices in Freight Logistics and Related Issues*, IIT Delhi, India, August 19, 2014
20. **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
21. 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
22. **Jothimani D**, Shankar R, Yadav SS. Modeling of supply chain coordination enablers in flexible environment, *13<sup>th</sup> Global Conference on Flexible Systems Management (GLOGIFT 13)*, December 13-15, 2013, IIT Delhi, New Delhi, India
23. Bhadani A, Kumar A, **Jothimani D**, Pandey R. Modeling the operations of telecom service adoption inhibitors using ISM and MICMAC analysis, *16<sup>th</sup> Annual International Conference of the Society of Operations Management (SOM)*, December 21-23, 2012, IIT Delhi, New Delhi, India

#### **IT SKILLS**

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

**EMPLOYMENT**

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

**ACADEMIC ACTIVITIES AND MEMBERSHIP**

<b>Awards/Travel Grants</b>	
<ul style="list-style-type: none"> <li>▪ <b>Full travel grant</b> 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</li> <li>▪ <b>Full travel grant</b> 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</li> <li>▪ <b>Full travel grant</b> 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</li> <li>▪ Recognized as an <b>Outstanding Reviewer</b> for Journal of Advances in Management Research in the Emerald Literati Network 2016 Awards for Excellence</li> <li>▪ <b>Research Scholar Travel Award</b> from IIT Delhi to present at 2015 INFORMS Annual Meeting, Philadelphia, Pennsylvania, USA</li> </ul>	
<b>Reviewer for Journals</b>	
<ul style="list-style-type: none"> <li>▪ International Journal of Emerging Markets</li> <li>▪ Benchmarking: An International Journal</li> <li>▪ Journal of Advances in Management Research</li> </ul>	
<b>Roles in Conferences</b>	
<ul style="list-style-type: none"> <li>▪ Program Committee Member <ul style="list-style-type: none"> <li>○ 11<sup>th</sup> Annual Midwest Association for Information Systems (MWAIS 2016) Conference, Milwaukee, Wisconsin, USA</li> </ul> </li> <li>▪ Session Chair <ul style="list-style-type: none"> <li>○ Annual Meeting of Decision Sciences Institute (DSI) 2016, Austin, Texas, USA</li> <li>○ 2015 INFORMS Annual Meeting, Philadelphia, Pennsylvania, USA</li> </ul> </li> <li>▪ Reviewer <ul style="list-style-type: none"> <li>○ Annual Meeting of Decision Sciences Institute (DSI) 2016, Austin, Texas, USA</li> <li>○ International Conference on Information Systems (ICIS) 2014, Auckland, New Zealand</li> </ul> </li> <li>▪ Facilitator <ul style="list-style-type: none"> <li>○ 13<sup>th</sup> Global Conference on Flexible Systems Management (GLOGIFT 13), IIT Delhi, India</li> <li>○ International Conference on Advances in Supply Chain and Manufacturing Management (ASCMM 2011), IIT Kharagpur</li> </ul> </li> <li>▪ Associate Editor <ul style="list-style-type: none"> <li>○ Proceedings of XVI International Conference of Society of Operations Management, IIT Delhi, India</li> </ul> </li> </ul>	
<b>Teaching Assistant at IIT Delhi</b>	
<ul style="list-style-type: none"> <li>▪ SML 873: Security Analysis and Portfolio Management</li> <li>▪ SML 849: Current and Emerging Issues in Manufacturing Management (Focus on Supply Chain Analytics)</li> <li>▪ SML 875: International Financial Management</li> <li>▪ SML 719: Statistics for Management</li> </ul>	
<b>Membership</b>	<ul style="list-style-type: none"> <li>▪ Institute for Operation Research and Management Science (INFORMS)</li> <li>▪ Association of Information Systems (AIS)</li> <li>▪ Decision Sciences Institute (DSI)</li> <li>▪ American Finance Association (AFA)</li> <li>▪ Production and Operations Management Society (POMS)</li> <li>▪ Production Engineering Association (PEA) (2006-2010)</li> </ul>
<b>Workshops Attended</b>	<ul style="list-style-type: none"> <li>▪ Leadership through self discovery, organized by IIT Delhi Alumni Association, IIT Delhi, Aug 1-3, 2014</li> <li>▪ Introduction to intellectual property, organized by Rajiv Gandhi School of Intellectual Property Law, IIT Kgp, Dec 13-15, 2010</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Soft computing, organized by Department of Mechanical Engineering, IIT Kgp, Dec 2010</li> <li>▪ Introduction to game theory, organized by Department of Industrial Engineering and Management, IIT Kgp, Dec 8-10, 2010</li> <li>▪ CAD workshop, organized by Department of Production Engineering, NIT, Trichy, April 12-13, 2008</li> <li>▪ Automobile assembly, organized by Department of Production Engineering, NIT, Trichy, April 12-13, 2008</li> </ul>
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**OTHER INFORMATION**

<ul style="list-style-type: none"> <li>▪ Active member of <b>R meetup group</b> in National Capital Region, India since 2012</li> <li>▪ Selected for <b>Young Students' Scientist Programme (YSSP)</b> organized by MHRD</li> </ul>
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**LIST OF REFERENCES**

Dr. Surendra S. Yadav Professor Department of Management Studies Indian Institute of Technology Delhi E-mail: <a href="mailto:ssyadav@dms.iitd.ac.in">ssyadav@dms.iitd.ac.in</a>	Dr. Ravi Shankar Professor Department of Management Studies Indian Institute of Technology Delhi Email: <a href="mailto:ravi1@dms.iitd.ac.in">ravi1@dms.iitd.ac.in</a>	Dr. S. P. Sarmah Professor Department of Industrial and Systems Engineering Indian Institute of Technology Kharagpur Email: <a href="mailto:spsarmah@iem.iitkgp.ernet.in">spsarmah@iem.iitkgp.ernet.in</a>
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**LANGUAGES:** English, Hindi, Tamil

**PERSONAL INTERESTS:** Yoga, Reading