NAAC 2024/Metrics Level Deviation/Cr3.3.2

Criteria 3.3.2	**Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years**
Findings of DVV	Values have been updated as the ISBN no. not found and book without ISBN no. has not been considered; HEI to provide Cover page, content page, and the first page of the publications/chapter claimed highlighting the name of HEI, author name, year of publication /addition of the following books: 1) Book(Architectural wireless Networks solution and Security issues) , (2020-21) 2)Book(Nature-Inspired Computing for smart application design), (2020-21) 3)Book(Nature-Inspired Computing for smart application design), (2020-21) 4)Book(Nature-Inspired Computing for smart application design), (2020-21)
Response/Clarification	Cover page, content page, and the first page of the publications/chapter claimed, author name, year of publication /addition of the following books: 1) Book(Architectural wireless Networks solution and Security issues) , (2020-21) 2)Book(Nature-Inspired Computing for smart application design), (2020-21) 3)Book(Nature-Inspired Computing for smart application design), (2020-21) 4)Book(Nature-Inspired Computing for smart application design), (2020-21) **has been attached.**

IQAC Coordinator

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Bokaro, Jharkhand-827013

Director

GGSESTC,Bokaro

DVV Clarification

HEI to provide Cover page, content page, and the first page of the publications/chapter claimed highlighting the name of HEI, author name, year of publication /addition of the following books:

1) Book (Architectural wireless Networks solution and Security issues) , (2020-21)

2)Book (Nature-Inspired Computing for smart application design), (2020-21)

3)Book (Nature-Inspired Computing for smart application design), (2020-21)

4)Book (Nature-Inspired Computing for smart application design), (2020-21)

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HEI Responses

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Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Calendar Year of publication	ISBN number of the proceeding
1	Dr.Arun Prasad Burnwal	Book(Architectural wireless Networks solution and Security issues)	Analysis of Network Parameters for Network lifetime in WSN: A Fuzzy Quadratic Programming approach	Apr-21	978-981-16-0386-0
2	Dr.Arun Prasad Burnwal	Book(Architectural wireless Networks solution and security issues)	Fuzzy Rule-Based system for Route selection in WSN Using Quadratic Programming	4/24/2021	978-981-16-0386-0
3	Dr.Arun Prasad Burnwal	Book(Nature-Inspired Computing for smart application design)	Fuzzy Qyadratic Programming Based conflicting strategy Management Technique for company	Mar-21	978-981-16-0386-0
4	Dr.Arun Prasad Burnwal	Book(Nature-Inspired Computing for smart application design)	Fuzzy-Based optimal solution for Minimization of Loss of company based on uncertain Enviroment	3/18/2021	978-981-16-0386-0
5	Dr.Arun Prasad Burnwal	Book(Nature-Inspired Computing for smart application design)	Maintaining Manpower in Technical college Using Fusion of Quadratic Programming and Fuzzy Logic	Mar-21	978-981-33-6195-9

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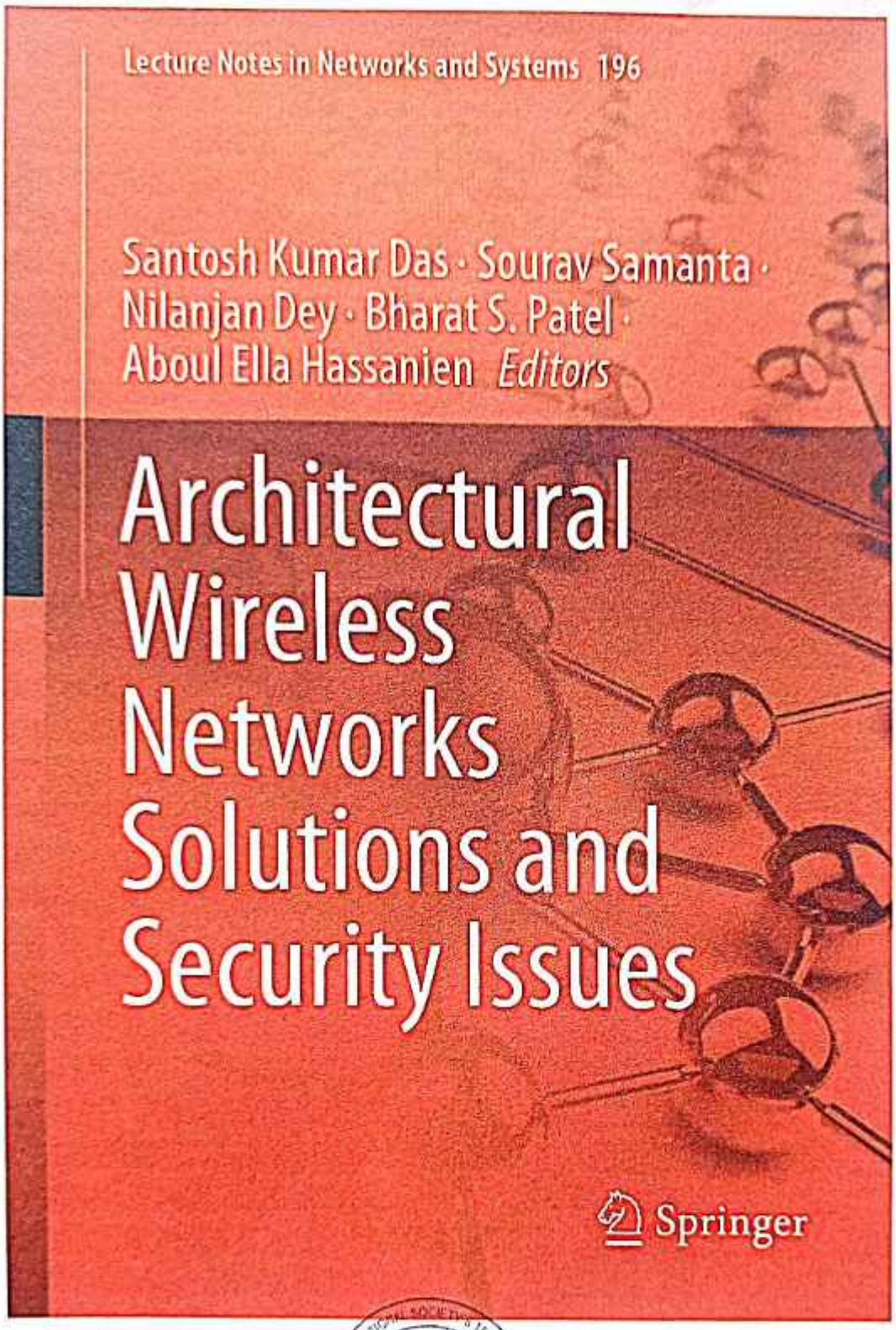

Springer Tracts in Nature-Inspired Computing 1

Santosh Kumar Das
Thanh-Phong Dao
Thinagaran Perumal *Editors*

Nature-Inspired Computing for Smart Application Design

Springer

SECTION 1 Energy Resources Management

SECTION 2 Modelling and Aggregation

Fuzzy Quadratic Programming Based Conflicting Strategy Management Technique for Company

Chapter | First Online: 18 March 2021
pp 219–247 | Cite this chapter

Manoj Kumar Mandal, B. K. Mahatha, Arun Prasad Burnwal, Abhishek Kumar, Vishwas Mishra & Nikhil Saxena

Part of the book series: Springer Tracts in Nature-Inspired Computing ((STNIC))

Abstract

In modern era, due to several variations of user requirements, number of company and start- up increases rapidly. Each company has its own strategy and rules for maintaining company profit and loss. Market condition is one parameter for this situation. Sometime, different crisis or pandemic situation are raised in the society which become crucial for handling and managing. So, company manage their productivity and sales in chronological order that maintain the equilibrium based on customer requirements and market conditions. This chapter is based on conflicting strategy management technique for company using quadratic programming. In this chapter, quadratic programming plays the role of mathematical optimization based on desire objective function along with constraints. In this model, fuzzy logic is used to makes the quadratic programming flexible which is used to maintain variations of the customer requirements and demands efficiently. The proposed method simulated and validated in LINGO optimization software in terms of conflicting strategies of the company.

5. Murmu, S., Jha, S. K., Burnwal, A. P., & Kumar, V. (2015). A proposed fuzzy logic based system for predicting surface roughness when turning hard faced components. *International Journal of Computer Applications*, *125*(4).

Google Scholar

6. Kumari, N., & Burnwal, A. P. (2017). Interactive fuzzy programming model in multi objective inventory control problem using various operators. *International Journal of Students' Research in Technology & Management*, *5*(4), 18 - 26.

Article Google Scholar

7. Kumari, P., Jain, P. K., & Pamula, R. (2018, March). An efficient use of ensemble methods to predict students academic performance. In *2018 4th International Conference on Recent Advances in Information Technology (RAIT)* (pp. 1 - 6). IEEE.

Google Scholar

8. Das, S. K., & Tripathi, S. (2015). Energy efficient routing protocol for manet based on vague set measurement technique. *Procedia Computer Science*, *58*, 348 - 355.

Article Google Scholar

9. Das, S. K., & Tripathi, S. (2016). Energy efficient routing protocol for MANET using vague set. In *Proceedings of Fifth International Conference on Soft Computing for Problem Solving* (pp. 235 - 245). Springer, Singapore.

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Analysis of Network Parameters for Network Lifetime in WSN: A Fuzzy Quadratic Programming Approach

Chapter | First Online: 24 April 2021
DOI 10.1007/978-981-16-0171-2_61 | Cite this chapter

Manoj Kumar Mandal, Arun Prasad Barnwal, Abhishek Kumar, Divya Mishra & Nikhil Saxena

Part of the book series: Lecture Notes in Networks and Systems ((LNNS,volume 196))

Abstract

Wireless sensor network (WSN) is a collection of sensor nodes that are attached with base station (BS) and sink node to achieve a specific purpose. The main purpose of the WSN is sensing environmental parameters such as energy, temperature, and humidity. There are several parameters of the WSN that changes time to time and frequently based on the operation. Each sensor node contains limited capacity of battery that is insufficient during any operation and fails to send the data packet to the BS. So, there is need of some modeling using some intelligent technique. In this paper, a fuzzy quadratic programming (FQP) is used to optimize network parameters efficiently. FQP is the fusion of fuzzy logic and quadratic programming. Fuzzy logic is a multi-values logic which is used to reduce uncertainty and estimate imprecise parameters efficiently. Quadratic programming is a nonlinear programming based on second order of mathematical polynomial for reducing the main objective. The combination of both helps to analyze conflicting network parameters and decide the optimal objective value along with constraints. The proposed method is validated in LINGO optimization software in terms of several rounds to predict the optimal solution.

Fuzzy-Based Optimal Solution for Minimization of Loss of Company Based o Uncertain Environment

Chapter | First Online: 19 March 2021
pp 73-83 | Cite this chapter

Manoj Kumar Mandal, B. K. Mahatha, Arun Prasad Burnwal, Santosh Kumar Das & Aditya Shan

Part of the book series: Springer Tracts in Nature-Inspired Computing ((STNIC))

Abstract

In modern era, technology increases rapidly due to numerous requirements of the use customer. There are various products and applications produced by the company with context of requirement. One product is manufactured by several companies with som variants. So, several companies are competitor one to another. In this paper, an optim solution is designed to minimize the losses of the company in uncertain environment Here, uncertain environment indicates the environment that consists of several impr information. This information is created based on conflicting requirement of the user in this paper, loss of company is minimized by reducing uncertainty. Quadratic programming is used to model the main objective and its related constraints in the fo nonlinear. In this model, decision variables are in the form of square. Fuzzy logic is us reduce the imprecise information efficiently. The combination of both quadratic programming and fuzzy logic helps to model the main goal of the paper. Finally, the proposed method is formulated into LINGO optimization software to validate the mai problem efficiently and effectively.

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