



# **STRATEGIES, TECHNIQUES, APPLICATIONS AND RESOURCES**

**Dr. Arceloni Neusa Volpato**

**Dr. B. Balaji**

**Dr. S. Karthikeyan**

**Dr. Divya R. Panjwani**



# STRATEGIES, TECHNIQUES, APPLICATIONS AND RESOURCES

## **Editors:**

Dr. ARCELONI NEUSA VOLPATO

Dr. B. BALAJI

Dr. S. KARTHIKEYAN

Dr. DIVYA R. PANJWANI

@ All rights reserved with the publisher.

**First Published:** November 2023



**ISBN:** 978-93-91303-83-9

**DOI:** <https://www.doi.org/10.47715/JPC.B.978-93-91303-83-9>

**Pages:** 374 (Front Matter: 18; Inner Content: 356)

**Price:** 700/-

## **Publisher:**

Jupiter Publications Consortium

22/102, Second Street, Virugambakkam

Chennai, Tamil Nadu, India.

Website: [www.jpc.in.net](http://www.jpc.in.net)

Email: [director@jpc.in.net](mailto:director@jpc.in.net)

## **Imprint:**

Magestic Technology Solutions (P) Ltd.

Chennai, Tamil Nadu, India.

## TITLE VERSO

**Title of the Book:**

Strategies, Techniques, Applications and Resources

**Editor's Name:**

Dr. Arceloni Neusa Volpato

Dr. B. Balaji

Dr. S. Karthikeyan

Dr. Divya R. Panjwani

**Published By:**

Jupiter Publications Consortium

Publisher's Address:

22/102, Second Street, Venkatesa Nagar, Virugambakkam  
Chennai 600 092. Tamil Nadu, India.

**Printer's Details:**

Magestic Technology Solutions (P) Ltd.

**Edition Details:** First Edition

**ISBN:** 978-93-91303-83-9

**Copyright:** @ Jupiter Publications Consortium

## CONTENTS

<b>Sr. No</b>	<b>Title and Author</b>	<b>Page No.</b>
1.	<b>Coping Mechanisms and Adaptation Strategies of Entrepreneurs in Economic Uncertainty</b> Dr. P. Anbuoli	1
2.	<b>Fun Classroom Management Strategies: Need of Hour</b> Dr. Smita Srivastava	7
3.	<b>An Analytical Study on Artificial Intelligence and Mental Health</b> J. Sahaya Roselin	10
4.	<b>To study the importance of Gain characteristics in Quantum well region using Type I and Type II nano heterostructures</b> Ayan Mustafa Khan	16
5.	<b>Cloud Security in Healthcare: Compliance and Data Protection Challenges</b> Kashif Asad	21
6.	<b>A Need of Integrating Cyber Security Curriculum in the Indian Education System</b> Uzma Husain Jaisi	27
7.	<b>Faculty Exit from Academia - A Review</b> Apekshita Solomon	33
8.	<b>Influence of Teacher-Student Relationships on Academic achievements: A Review Study</b> Afreen Fatima	38
9.	<b>Mindfulness-Based Programs, Reducing Stress &amp; Academic Performance: A Review Study</b> Dev Verma	44
10.	<b>Psychological Implications of Increased Screen Time</b> Shimaila Rizvi	50
11.	<b>Enhancing Science Education through Multisensory Learning: A Review Study</b> Asfia Athar	53
12.	<b>A study of social values in secondary school students: A review study</b> Rushda Mirza	57
13.	<b>Academic anxiety and mental health among students: A review study</b> Sabira Khanam	60
14.	<b>Conspiracy of Silence against Women: A Study of <i>Behind the Veil</i></b> Dr. Fatima Sahrish	62
15.	<b>Up-skilling and Re-skilling of teachers: A Review Study</b> Shyamili Singh	66
16.	<b>A Study of Achievement Motivation among Secondary School of Lucknow</b> Sana Firdous	70
17.	<b>A Study of High School Students to Teach History Subject with the help of Multimedia</b> Anamika Chand	72
18.	<b>Need of the hour: Involving Brain Breaks in classroom teaching</b> Neeta Bawankule	75

19.	<b>Inner Technology: Need of The Hour for Secondary School Students: A Review Study</b> Prensha Devi	79
20.	<b>Adaptive Learning: How Technology is Shaping the Future of education</b> Arisha Mahmood	84
21.	<b>A parallel CNN approach to detect brain tumors in fMRI images</b> Roshan Jahan	87
22.	<b>Developing a personal Philosophy of Education</b> Zaid Imran	92
23.	<b>Comparative Study of Scientific Logic and Religious Logic among Adolescents</b> Rinki Saroj	95
24.	<b>Relevance of Teaching Social Science at School Level</b> Saba Parveen	98
25.	<b>Deciphering Connections: Exploring the Role of Advanced Glycation End Products in the Pathogenesis of Diabetes</b> Zeeshan Rafi Saheem Ahmad	103
26.	<b>Analysing the Trade Direction and Commodity Composition of IBSA Nations</b> Dr. Shujaiddin Khan	108
27.	<b>Analysis on Parentel Involvement on Their Children Academi</b> P. Anbarasan Dr. P. Priyadarsini	116
28.	<b>An Approach to Detect the Land Cover Change Using Histogram Based Thresholding for Landsat-8 OLI Images</b> Harish Chandra Verma Tasneem Ahmed	119
29.	<b>A study of the Role of Mindfulness in Enhancing Academic Performance</b> Azka Fatima Dr. Sadia Shakeel	127
30.	<b>Predicting Student Feedback on Teaching Processes with Machine Learning Classifiers: A Systematic Approach</b> Helaria Maria Dr. R. Subhashni	130
31.	<b>Maximizing Efficiency and Sustainability in Concrete Building Frames through Multi-Objective Simulated Annealing</b> Tabish Izhar Dr. Syed Aqeel Ahmad	136
32.	<b>From nature to drug discovery: The Indole scaffold as a 'privileged structure'for breast cancer</b> Dr. Mohammad Imran Ahmad Dr. Tahmeena Khan	143
33.	<b>A Comprehensive Study on Just-In Time Systems</b> Dr. V.P. RameshKumaar V. Sri Jothika K. Aishwarya	150

34.	<b>Narrative Accounts of Strategies Exciting Entrepreneurial Innovation</b> Dr. Anuja Sehgal Dr. Neelam Saxena Dr. Yagbala Kapil	154
35.	<b>The Impact of Negative Word of Mouth on Customer Retention: A Brand Portfolio Perspective</b> Monu Dihingia Dr. R. S. Rai Dr. Jonardan Koner	168
36.	<b>Customer Perception Towards Purchase of Gold Among Middle Income Investors in Bangalore</b> Lakshmi Eshwar Dr. G. Selvalakshmi	178
37.	<b>The use of Formative and Summative Assessment in Classroom</b> Tasneem Fatimah	189
38.	<b>Enhancing Road Safety: A Survey of Cost-Effective Machine Learning-Based Collision Prediction &amp; Detection Methods</b> Nahin Nadeem Dr. Shailendra Kumar	192
39.	<b>A Comparative Study of Esther and Ruth in Bible: A Feminist Perspective</b> G. Chella Grace	202
40.	<b>A Study of Women Education in India: A Modern Perspective</b> G. Shakila	209
41.	<b>Impact of Technological Advancement on Job Satisfaction of Prospective Academic Intrapreneurs in Higher Educational Institutions</b> Rajani Mariam K Korah Dr. Subhasree Kar	218
42.	<b>Impact of Hybrid Workforce Strategies: GenZ vs Millennials</b> Rajani H Pillai Jyotsana Choudhary	225
43.	<b>A Study of the Exploration themes of Isolation and Beauty in Snow Country by Kawabata Yasunari: A Spiritual Perspective</b> R. Nandini	230
44.	<b>A Study of the Psychoanalytic theory in the Character of Job in the Bible: A Spiritual Perspective</b> K. Priyanka	238
45.	<b>A Study of Eco-Sabotage in The Death of Nature by Carolyn Merchant: An Ethical Perspective</b> M. Jagadeeswari	246
46.	<b>Applications of Explainable AI for Healthcare 5.0: A Survey</b> Muskan Khan Dr. Shailendra Kumar	252
47.	<b>Mechanization of Manual Scavenging: A Path towards Dignity and Efficiency</b> Warisha Fatima Dr. Shailendra Kumar	260
48.	<b>Multicultural Education: A Review Study</b> Prabhakar Verma	266

49.	<b>A Study on Impact of Leadership Style on Employee Retention in a Hybrid Model</b> Rajani H. Pillai Nooren Fatima	270
50.	<b>Impact of Big Data Analytics in Healthcare</b> Dr. Mohd. Suhaib Kidwai	276
51.	<b>A Comparative Study of Multidimensional Poverty between EAG and Non-EAG States of India</b> Dr. Rashmi Shukla	281
52.	<b>Implications and Challenges of Incorporating Emotional Intelligence in Personnel Hiring</b> Nida Iqbal Dr. Yasir Arafat Elahi	287
53.	<b>A study on Problem faced by Higher Education students in Tamil-Nadu</b> Dr. S. Saranya	293
54.	<b>Contextual marketing and its effects on Bangalore city's online customer purchasing behavior for organic food products</b> Monica Janet Clifford	300
55.	<b>An Analytical Study about Teachers' Professionalism and Teachers as Professionals</b> Wahida Rais Dr. Vivek Rogers	308
56.	<b>High Gain Low power (Non-Isolated) DC-DC Converter Review</b> Mohammed Asim Anas Ahmad	312
57.	<b>Social Hierarchy in Buchi Emecheta's the Joys of Motherhood and P. Sivakami's the taming of women</b> Athira S Kumar	319
58.	<b>Assessment of cumulative effect of modified atmosphere packaging, packaging material and chemical treatments on post-harvest life of button mushroom (Agaricus bisporus)</b> Dr. Pallavi Srivastava	324
59.	<b>Synthesis of opposites in Bhabani Bhattacharya's Music for mohini</b> Deepshikha Upadhyay	328
60.	<b>Portrayal of the Predicament of Individual and Society in so many hungers! of Bhabani Bhattacharya</b> Dr. Puneet Kumar Upadhyay	330
61.	<b>A Study on Human Capital Development on Firm Performance</b> Dr. R. Alagesan	332
62.	<b>Portrayal of Class Struggle, Poverty in Aravind Adiga's The White Tiger Through The Lens of Class Consciousness</b> Mamta Chaudhary	334
63.	<b>Application of Artificial Intelligence in Education: Advantages and Disadvantages</b> Shabana Tasnim	336
64.	<b>Learning, Unlearning and Relearning: A dynamic process of knowledge management under different development stages</b> Dr. Divya R. Panjwani	341

65.	<b>Role of Government Officials and Politicians in the Development of a Nation</b> Dr. S. Saravanakumar Dr. M. L. Gnanadasan	347
66.	<b>Role of Personal Affluence of Individuals towards Selection of Housing Apartments to Invest</b> Dr. S. Saravanakumar	352



## High Gain Low power (Non-Isolated) DC-DC Converter Review

**Mohammed Asim**

Associate Professor, Department of Electrical Engineering, Integral University, Lucknow-226016, India

**Anas Ahmad**

Research Scholar, Department of Electrical Engineering, Integral University, Lucknow-226016, India

### Abstract

The increasing electricity demand is being met by photovoltaic energy conversion. Rural areas can be powered by energy from renewable energy sources when used in conjunction with existing power lines. Grid-connected photovoltaic systems have emerged widely, due to the advancement in DC-DC converter topology and inverter control techniques. The appropriate selection and operation of the DC-DC converter stage determines the efficiency of supplying power to the grid. Therefore, the efficiency of existing DC-DC converter topologies needs to be carefully analyzed. The conversion and design of high-gain low-power (HGLP) DC-DC converters, that can be used in solar photovoltaic supply systems are assiduously reviewed. For DC grids/microgrids, the basic characteristics and possibilities of the connection obtained from the topologies are pivotal. Different HGLP topologies has been reviewed and their performance in terms of voltage gain, number of components and application has been analyzed in this work.

**Keywords**—*PV system, (HGLP) high gain low power, DC-DC Conversion, high step-up converter.*

### I. Introduction

In recent years, there has been raise in the capability of electricity production from renewable energy sources (RES). Interest in renewable energy has been increasing because of increment in non-renewable fuel source prices and new regulations to reduce carbon dioxide exhalation. Photovoltaic (PV) is profitable approach around the world as a renewable energy technology. This upshot in recent years has been contributed by severe pollution rules sanctioned on coal. traditional strategies of power generation and improvements in electricity conversion technologies. [1-3] DG (Distributed generation) systems powered by micro assets like PV structures have also widely adopted to meet the growing demand for energy in the allotted era. High-boost DC-DC converters commonly link between PV panels and the inverter load because the output voltage of individual PV panels is approximately 20-60 V. We require a high-efficiency, high-boost DC-DC converter to step up the low PV voltage to a high voltage of approximately 380 V to match the input of a full-bridge inverter on a 1-  $\Phi$  240 V AC grid. [4]

Connect power supply, to meet the DC bus voltage of grid-connected inverters, PV series structure as shown below fig (1) is the traditional solution. However, In the case of tandem PV design, the power generation output drops significantly due to irregular material and partial shading conditions, noticeably in cosmopolitan sector. [4-5]

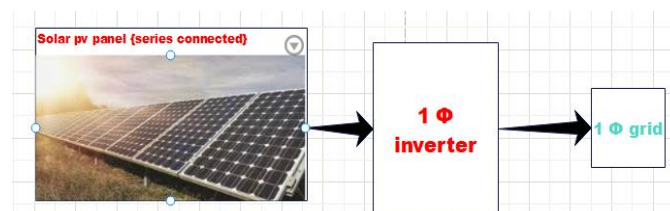


Fig (1) 1- $\Phi$  Conventional grid connected PV systems.

You can use large efficiency solar interactive photovoltaic systems with Generation Control Circuit to drive entire series of photovoltaic arrays, but they require a lot of electricity. Additionally, the cost of obtaining a 240 V power grid is higher for these solutions.[5]

Therefore, the balanced PV composition presented below in Fig. 2 is more adequate than the series composition due to finer PV efficiency.