

# Vivekananda Institute of Professional Studies - Technical Campus

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# Scholarly Spotlight

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*Monthly Newsletter of VRC  
for Recognition of Research*



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## Journal Publications

# Influence of Gender, Age, and Experience on Secondary School Teachers Emotional Intelligence

Dr. Ridhima Sharma; Published in *Journal of Propulsion Technology* [Scopus Indexed]

The study sought to investigate the impact of gender, age, and experience on the emotional intelligence of secondary school teachers. A stratified random approach was used to gather data from 119 teachers from 15 public and private institutions in Bandipora District, Jammu and Kashmir. Data for this descriptive study were collected using the Hyde, Pethe, and Dhar-standardized and cross-validated Emotional Intelligence Scale (EQS). The findings revealed a substantial difference between the mean emotional intelligence scores of secondary school teachers and those of their age cohort. Nonetheless, there was no noticeable difference in emotional intelligence among

teachers based on gender or experience. More information at: <https://propulsiontechjournal.com/index.php/journal/article/view/8012>



# Impact of Emotional Well-being on Job Performance: A Study Based on Service Sector Professionals

Dr. Poonam Khurana; Published in *Letters in International Journal of Experimental Research and Review* [Scopus Indexed]

Emotional well-being is an important part of holistic wellness. Emotional well-being involves an individual's overall positive feelings and their general outlook on life. By investing in the emotional well-being of their employees, firms can get significant business benefits such as improved performance, productivity, and commitment from employees, which in turn lowers attrition rates. The study aims to empirically investigate the factors influencing emotional well-being and their impact on the job performance of service sector professionals. A survey method was employed to gather responses from professionals in the service sector across various industries. The collected data, comprising 318

responses, underwent analysis using the partial least squares structural equation modelling approach. The findings from the study establish personality traits, Mindfulness and Resilience as factors affecting emotional well-being and a positive impact on job performance is observed. This study helps organisations understand that increasing the emotional well-being of professionals is one of the important parameters for their job performance. Future researchers may try to explore the other factors affecting emotional well-being and their impact on job performance. More information at: [https://effulgence.rdias.ac.in/user/article\\_pdf/Artical\\_vol22\\_2\\_111\\_120.pdf](https://effulgence.rdias.ac.in/user/article_pdf/Artical_vol22_2_111_120.pdf)

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# Influence of the Surrogate Advertising of Paan Masala on the Health Perceptions of Delhi's Youth

Dr Sumedha Dhasmana & Ms. Mansi Sharma; Published in *Effulgence* [Peer Reviewed Refreed Journal]

**T**his study aims to investigate the effects of surrogate advertising of paan masala on youth, with a focus on understanding how these promotional messages influence their attitudes and behaviours. The study aims to share its findings with policymakers and educators to help create effective solutions to reduce the potential harm caused by surrogate advertisements of paan masala. The main goal is to determine how much young people are exposed to these ads, and use this information to inform public health initiatives that promote healthy choices. The attempt is to examine channels where such advertisements are shown, including banners, hoardings, newspapers, billboards TV and OTT, featuring prominent brands like Vimal, Kuber, Kamla Pasand and Rajnigandha. The researchers also identified some of the

locations in Delhi NCR where the billboards of Vimal and Rajnigandha are placed, these are in Noida, East Delhi (Preet Vihar), Rohini and Azadpur, Shastri Park metro station and bus stand. Banners of Kamala Pasand, Vimal, Rajnigandha and Kuber have been noticed in public transport like auto-rickshaws, Metro and on DTC buses. A survey of 240 Delhi participants reveals that all respondents are exposed to surrogate paan masala ads. Moreover, it is identified that celebrity endorsements influence consumption. Such ads are identified to have increased youth consumption and 90.1% support stricter regulations. Interviews with dentists highlight significant dental health issues and the need for targeted education and cessation support. More information at: [https://effulgence.rdias.ac.in/user/article\\_pdf/Artical\\_vol22\\_2\\_111\\_120.pdf](https://effulgence.rdias.ac.in/user/article_pdf/Artical_vol22_2_111_120.pdf)

## Role of Online Health Communities in Patient Compliance: A Social Support Perspective

Dr Kritika Nagdev Raisetia; Published in *Journal of Systems and Information Technology* [Scopus Indexed]

**P**urpose – Online health communities (OHC) can transform the healthcare industry, particularly in developing economies. Technology advancement and increased health literacy pave the way for these communities to become powerful tools for empowering patients. The purpose of this study was to empirically validate the linkages between social support and how it overarchingly influences patient compliance. Following social support theory, this study delineates how support from the community affects the patient– physician relationship (PERP) and consequently patient compliance regarding the treatment plan. This study also invents the role of patient trust in an OHC in moderating the relationship between PERP and

engagement. Design/methodology/approach – This paper is based on social support and empowerment theories to investigate the importance of social support in improving patients' health behaviours and health outcomes via patient empowerment, patient engagement and patient compliance. The authors surveyed users from three Facebook cancer communities in India to collect data. The authors used partial least squares structured equation modelling and necessary condition analysis (NCA) with 265 participants to support the proposed model. More information at: <https://www.emerald.com/insight/content/doi/10.1108/jsit-12-2023-0329/full/html>

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# Role of CSR in Promoting Happiness, Reducing Workplace Stress and Burnout in Indian Companies: A Study of Selected Indian Companies

Dr Swati Narula; Published in International Journal of Experimental Research and Review [Scopus Indexed]

**T**his research paper analyzes the role of Corporate Social Responsibility (CSR) in promoting happiness and reducing workplace stress and burnout in Indian companies. The rationale behind selecting this topic is that human resources plays a significant role in every business, and effective management helps enhance the chances of the firm's success. However, in the contemporary highly competitive market, the demand from human resources is increasing, which is further creating the issue of long working hours, work-life imbalance, burden on meeting targets, etc., which creates the issue of stress, burnout, anxiety, depression, etc. which not only adversely impact their performance but also creates the issue of employee turnover and absenteeism. Hence, it has become essential for contemporary businesses to be concerned

about taking CSR initiatives to enhance their sense of purpose, sense of belongingness and job satisfaction. For this research, Indian companies are selected for study purpose and their measures to reduce workplace stress and burnout are critically discussed. A secondary data collection method is used to conduct this research. Under this, Case Study Methodology is selected, which has supported the study of the measures taken by various Indian Companies, namely Tata Consultancy Services (TCS), Mahindra& Mahindra, Reliance Industries Limited (RIL) and Infosys in promoting happiness to reduce workplace stress and burnout while improving their organizational productivity and performance. More information at: <https://qtanalytics.in/journals/index.php/IJERR/article/view/4245>

## The Fiasco of the Capital Asset Pricing Model An Empirical Study on the Bombay Stock Exchange for the Period 2008-2022

Dr Sant Kumar; Published in SCMS Journal of Indian Management [Scopus Indexed]

**O**ne of the critical problems in financial economics has been predicting the returns on an asset or portfolio. The Capital Asset Pricing Model (CAPM), frequently used to determine the expected rate of return after taking systematic risk into account, is a well-known model for this purpose. We discover from the existing literature that scholars need more consensus over the model's applicability in India and other economies. Furthermore, although the Indian economy has undergone significant changes from April 2008 through March 2022, including COVID-19, most existing studies belong to prior

2008. This paper looks for empirical support for the CAPM on the S&P BSE Sensex from April 2008 to March 2022. The secondary data was gathered from the ProwessIQ database and the official website of the Reserve Bank of India (RBI). The CAPM has been evaluated using Lintner's (1965) test, Miller and Scholes' (1972) test, Black et al. (1972) test, or BJ&S test. All the tests show that some of the predictions made by the CAPM are consistent with the empirical data, but majorly, the CAPM is not supported empirically. More Information at: <https://scms.edu.in/uploads/journal/January-March.pdf>

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# Quantum Algorithms In NLP: Redefining Language Processing Paradigms

Dr Deepti Chopra; Published in Nanotechnology Perceptions [Scopus Indexed]

**T**he advent of quantum computing has led to increase in computational capabilities, leading to exponential speedups for problems that takes lot of time when solved using classical computing. Natural Language Processing (NLP), an application of artificial intelligence is concerned with enabling machines to understand, interpret, and generate human language. We may speed up the implementation of Natural Language Processing tasks by the integration of quantum algorithms. This paper shows the impact of quantum computing on NLP, explaining how quantum algorithms play an important role in redefining traditional language processing paradigms. This paper discusses various quantum algorithms applied to NLP, including quantum machine learning approaches for text classification,

clustering, and sentiment analysis, as well as quantum inspired neural networks for advanced language modeling. This paper discusses novel quantum NLP models, such as quantum variational algorithms and quantum enhanced transformers, which promise significant improvements in speed, accuracy, and contextual understanding. This paper also addresses the limitations and challenges of quantum NLP, including the current state of quantum hardware, noise issues, and the need for robust quantum programming frameworks. It aims to provide a comprehensive overview of how quantum algorithms are revolutionizing NLP and what the future holds for this emerging interdisciplinary field. Read more about it: <https://nano-ntp.com/index.php/nano/article/view/2612/1950>

# Stories of Water/Storied Water: Agential Realism and New Thalassology in 21st Century Literary Classroom

Dr. Jasmine Sharma; Published in ANGLICA: An International Journal of English Studies [Scopus Indexed]

**T**he article examines water as a nonhuman agent while discussing the relevance of hydrofiction in a literary classroom. It substantiates storied water as a signifying subject of expressive potential in building a posthuman relationship of care and empathy. This article will attempt to make four contributions: (1) it will describe the concepts of materialist ecocriticism, and new thalassology, and situate the conceptualizations within the broader fields of environmental humanities, (2) it will reinscribe the image of water as a densely plural and a tentacular living organism using Karen Barad's theory of agential realism and Stacy Alaimo's notion of transcorporeality, (3) it will briefly overview hydrofiction as a critically

apt genre for interrogating the disoriented dialectics between humans and nonhumans, and consider Emmi Itäranta's young adult dystopian fiction, *Memory of Water* (2012) as the primary entry point in de-anthropocising wet matter, and (4) it will delineate the relevance of water narratives and the inclusion of such narratives in higher education curricula. In conclusion, the article hopes to academically sacralize water as a medium of planetary commitment endowed with the agency to narrate its story of dispossession and render itself resilient to vulnerability and misuse. Read more about it: <https://anglica-journal.com/resources/html/article/details?id=625745>

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## Conferences

### **Digital Business Model Innovation In The Metaverse: Strategic Approaches To Virtual Economy Opportunities**

Paper Presented by Dr. Ridhima Sharma, Dr Timcy Sachdeva & Dr Priya Sharma, at 5<sup>th</sup> International Conference of Health, Science and Technology (ICOHETECH) "Opportunities and Challenges of Cybersecurity" organized by Universitas Duta Bangsa Surakarta, Indonesia

### **Responsible Digital Transformation for a Sustainable Society**

Paper Presented by Dr. Ridhima Sharma & Dr Timcy Sachdeva, at 5<sup>th</sup> International Conference of Health, Science and Technology (ICOHETECH) Opportunities and Challenges of Cybersecurity organized by Universitas Duta Bangsa Surakarta, Indonesia,

### **Enhancing the Sustainable Development Through Machine Learning- Driven Master Data Management**

Paper Presented by Ms. Ashima Bhatnagar Bhatia & Dr Pawan Whig, at International Conference on Sustainable Development, Apr 2024. More Information at: [https://link.springer.com/chapter/10.1007/978-3-031-71729-1\\_30](https://link.springer.com/chapter/10.1007/978-3-031-71729-1_30)

### **Energy Conservation using Object Detection and Computer Vision**

Paper Presented by Dr. Deepti Chopra, at International Conference on Computing and Communication Networks (ICCCNet-2024)

### **Privacy Preserving Techniques Using Machine learning**

Paper Presented by Dr. Deepti Chopra, at International Conference on Computing and Communication Networks (ICCCNet-2024)

### **AI Constrictions on Artistic Freedom and Cultural Participation- A Human Rights Perspective to AI Version of Vermeer's 'Girl with Pearl Earring'**

Paper Presented by Dr. Tanvi Sehgal, at International Conference on Convergence of AI and Human Rights

### **Relative Importance of the Determinants of CO2 Emissions in the Selected Emerging Economies**

Paper Presented by Dr Sachin Gupta, at 23 IASSI Annual Conference

### **Security Analysis of Contemporary Password Storage Techniques: Strengths, Vulnerabilities, and Best Practices**

Paper Presented by Dr. Dimple Chawla, at International Conference on Data-Processing and Networking (ICDPN-2024), **Received Best paper award**

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## Book Chapters

# From Screens to Streets: Volunteered Geographic Information's Impact on Travel Choices

Author: Dr. Shikha Sharma; Published in IGI Global [Scopus Indexed]

**G**eo-tech transforms travel with real-time traffic, weather, and attraction updates. Travelers can personalize plans for safer, more convenient journeys. Volunteered Geographic Information (VGI) empowers them further with user-generated reviews, geotagged content, check-ins, location sharing, social media posts, hashtags, vlogs, collaborative travel itineraries, community forums, and crowdsourced maps. These advancements make travel more accessible, inclusive, and enjoyable for everyone. However, VGI faces hurdles: data accuracy, information overload, privacy concerns, biased reviews, and tech dependence. To address these challenges,



improved verification processes, advanced filtering options, offline features, user education on privacy, and AI-driven fraud detection are necessary to enhance the reliability and trustworthiness of VGI in travel planning. Read more about it: <https://www.igi-global.com/chapter/from-screens-to-streets/358244>

# Advancing Mechatronics Through Artificial Intelligence

Authors: Dr Pawan Whig & Ms. Ashima Bhatnagar Bhatia; Published in John Wiley & Sons, Inc.

**T**his chapter investigates the emerging trends and presents compelling case studies in the realm of computational intelligent (CI) techniques applied in mechatronics. Mechatronics, an interdisciplinary arena integrating mechanical engineering, electronics, and computer science, faces complex challenges in system design and control. To address these challenges, CI techniques, like artificial neural networks, evolutionary multi-objective optimization, reinforcement learning, swarm intelligence, explainable artificial intelligence (AI), human-robot interaction (HRI), and biologically inspired robotics, are becoming increasingly predominant. The chapter highlights the real-world applications of these techniques in various mechatronic tasks, including robotic

control, adaptive systems, and autonomous vehicles, demonstrating their latent to improve system performance and adaptability. Furthermore, the chapter highlights the significance of explainable AI in safety-critical mechatronics, ensuring transparency and trust in AI-driven decisions. Furthermore, it delves into the intriguing area of HRI and emotional intelligence, showcasing how AI enhances interaction and emotional understanding between humans and machines. Through these illustrative case studies, this chapter offers valuable insights into the transformative impact of CI techniques, shaping the future of intelligent and pioneering mechatronics systems. Read more about it: <https://onlinelibrary.wiley.com/doi/10.1002/9781394175437.ch13>

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# AI for Secure and Resilient Cyber-Physical Systems

Authors: Dr. Pawan Whig, Ms. Ashima Bhatnagar Bhatia, Dr. Ankit Sharma, Dr. Amit Channa; Published in Auerbach Publications- Taylor & Francis



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control, adaptive systems, and autonomous vehicles, demonstrating their latent to improve system performance and adaptability. Furthermore, the chapter highlights the significance of explainable AI in safety-critical mechatronics, ensuring transparency and trust in AI-driven decisions. Furthermore, it delves into the intriguing area of HRI and emotional intelligence, showcasing how AI enhances interaction and emotional understanding between humans and machines. Through these illustrative case studies, this chapter offers valuable insights into the transformative impact of CI techniques, shaping the future of intelligent and pioneering mechatronics systems. Read more about it: <https://onlinelibrary.wiley.com/doi/10.1002/9781394175437.ch13>



# Patents

S.NO.	Faculty Name	Year of Patent	Details	Department
1.	Dr Anand Kumar Singh	2024	Optically Interconnected Electronic Chips	VSE&T
2.	Dr. Shivanka Dr Adeel Hashmi Dr Priyanka Maan Dr Chaitali Bhowmik Dr Nivedita Palia Ms Nishi Jain	2024	AI Based battery management system for Electric Vehicle	VSE&T
3.	Dr Jatin Vaid	2024	Investment Awareness in Financial Asset and Preference of Financial Intermediaries in Equities Trading	VSBS

**"Don't go where the path may lead, go instead where there is no path and leave a trail."  
– Ralph Waldo Emerson**