



# INTERNATIONAL CONFERENCE

On

**“CONTEMPORARY RESEARCH, INNOVATIONS AND  
TRENDS IN ENGINEERING, APPLIED SCIENCES,  
MANAGEMENT & HUMANITIES - 2023”**

**(IC-CRIT-2023)**

**Date: 07-09 October 2023**

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Research Foundation of India & RFI-CARE



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I would like to thank my family, who supported and encouraged me in spite of all the time it took me away from them. This conference could see the light of day due to generous support from the WFST.

The readers and beneficiaries vary from academicians, professional engineers and scientists, to undergraduate and graduate students from all over the country.





# Conference Proceedings



**RESEARCH FOUNDATION OF INDIA**  
**रिसर्च फाउंडेशन ऑफ इंडिया**  
*Research Towards Innovation*



## MESSAGE

I welcome you in the **International Conference on “Contemporary Research, Innovations and Trends in Engineering, Applied Sciences, Management & Humanities - 2023 (IC-CRIT-2023)”** scheduled on 07-09 October 2023.

On behalf of the Executive Committee of RFI, I wish to thank all the authors, invited lecturers, session chairman, members of the International Scientific Committee, National coordinators and numerous others who helped to shape the content of this conference. I would also like to thank organizational committee members, whose administrative and organizational works were the prerequisite for a successful conference.

Thank you for joining us on this momentous occasion.

**DR. SOURABH JAIN**  
**CHAIRMAN & CEO**  
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## **MESSAGE**

**Dear Distinguished Colleagues, Precious Academicians and Our Research Professionals**

As Chief managing Director of Research Foundation of India, firstly, it is my pleasure to welcome one and all to participate in this significant and prestigious event. On behalf of the Organizing Committee, it is honours of the hosting you at Indore (MP) India.

Conferences have a great platform for global networking. I want to thank all of you who have worked on putting our extraordinary conference together; I would also like to express my appreciation to the Research Foundation of India for elegant configuration.

**PROF. (DR.) ASHOK KUMAR GUPTA**  
**CHIEF MANAGING DIRECTOR**  
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## **MESSAGE**

Dear Attendees,

I am delighted to welcome you for the **International Conference on “Contemporary Research, Innovations and Trends in Engineering, Applied Sciences, Management & Humanities - 2023 (IC-CRIT-2023)”** scheduled on 07-09 October 2023 which brings together experts and academics from around the world. New trends and challenges to Research are being put forward by the rapidly changing social and economic situation in many parts of the world. At the present the implementation of an appropriate control programs towards the reduction of infection in man will be discussed.

I extend my warm greetings and felicitations to all participants and wish the Conclave all success.

**DR. RAJESH VYAS**  
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## MESSAGE

It is my immense pleasure to invite you to attend the **International Conference on “Contemporary Research, Innovations and Trends in Engineering, Applied Sciences, Management & Humanities - 2023 (IC-CRIT-2023)”** scheduled on 07-09 October 2023.

This year’s conference will attract attendance from all around the world; the distinguished speakers are from the top-notch academic institutes as well as from the leading industries all around the globe. This conference will provide the opportunity to exchange ideas as well as highlight the challenging issues in the various fields of Science, Technology and Management.

Participation from successful entrepreneurs and industry leaders at the Conclave would act as a guiding light to the enterprising youth, who would be soon embarking on their career paths.

I wish you all the success for this Indore Education Fest.

**DR. AJAY JAIN**  
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Dear Distinguished Colleagues, Precious Academicians and Our Research Professionals,

On behalf of the organizing committee Member, we are thrilled to extend our warmest invitation to you for the **International Conference on “Contemporary Research, Innovations and Trends in Engineering, Applied Sciences, Management & Humanities - 2023 (IC-CRIT-2023)”** scheduled on **07-09 October 2023**.

The **Indore Education Fest** aims to foster collaboration, share groundbreaking research, and facilitate insightful discussions on the most pressing issues that our world faces today. With the overarching theme of "International Conference" our event will provide a platform for academics, researchers, industry leaders, policymakers, and professionals to exchange ideas and solutions that have the potential to shape the future.

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**IC-CRIT/RFI-2023/117****ENABLING IMMEDIATE DATA-DRIVEN PREDICTIVE MAINTENANCE IN SMART INFRASTRUCTURE USING AI****Megha Potdar**Department of Computer Science, Soundarya Institute of Management and Science,  
Bangalore, India

**Abstract** - This research pioneers an innovative approach to predictive maintenance in smart infrastructure by integrating AI-driven analysis directly within embedded sensor chips. By processing data locally, the system eliminates the need for remote data transmission, resulting in immediate insights for maintenance needs. Redundant sensors equipped with embedded processing chips continuously monitor critical parameters, enabling real-time analysis. AI algorithms extract pertinent features, triggering local alerts when thresholds are surpassed. This immediate data-driven strategy significantly reduces response times and enhances maintenance efficiency.

**Keywords:** Predictive Maintenance, Smart Infrastructure, Embedded Sensors, AI Analysis, Immediate Insights.

**IC-CRIT/RFI-2023/121****CONTEMPORARY INNOVATIONS IN ORTHODONTICS****Ragini Ogale**MDS - 1<sup>st</sup> Year, Rural Dental College, Maharashtra

**Introduction** - "Oral health is a reflection of physiological, social and psychological factors that are essential to our quality of life". Poor oral health reflects an impaired general health. Innovation is the creation, development and implementation of a new product, process or service with the aim of improving efficiency, effectiveness or competitive advantage. Dentistry is an ever-evolving industry. Digital technology is transforming the conventional designing and manufacturing in clinical practice. Digitization has added to the precision and accuracy with which treatment can be imparted to the patient. 3D assisted diagnosis and treatment planning has helped the clinician to reduce post-operative complications to minimal. Holistic treatment approach works to activate the body's natural healing power towards an ailment. Holistic dentistry goes beyond teeth and gums, it aims at curing entire body physically, mentally emotionally and spiritually. New solutions to old problems have resulted in advancements in orthodontic materials and their cascade effect on the appliance design and treatment modalities. Interactive self-ligating brackets are yet another innovative prescription in orthodontics. Flash free adhesive coated appliance system has reduced errors in bracket placement and orientation.

**IC-CRIT/RFI-2023/122****CONTEMPORARY RESEARCH IN ORTHODONTICS****Col. (Retd.) Dr. Ravindra Manerikar<sup>1</sup>, Dr. Abhishek Malage<sup>2</sup>, Dr. Shubhangi Mani<sup>3</sup>, Dr. Sumeet Mishra<sup>4</sup>, Dr. Sameer Parhad<sup>5</sup>**<sup>1</sup>Principal and Professor in Department of Orthodontics and Dentofacial Orthopaedics, Rural Dental College, Loni<sup>2</sup>Postgraduate student in Department of Orthodontics and Dentofacial Orthopaedics, Rural Dental College, Loni<sup>3</sup>Professor in Department of Orthodontics and Dentofacial Orthopaedics, Rural Dental College, Loni<sup>4</sup>Reader in Department of Orthodontics and Dentofacial Orthopaedics, Rural Dental College, Loni<sup>5</sup>Professor and Head in Department of Orthodontics and Dentofacial Orthopaedics, Dr. R. R. Kambe Dental College, Akola**1 INTRODUCTION**

Development is closely related with technology, which has widened the normal limits to human perception. "Paradigm shift" in the field more focuses on the soft tissue compared to the hard tissue. In this article we have broadly divided the recent trends into recent diagnostic aids, appliance design and the treatment strategies using accelerated orthodontics in adult patients.

**IC-CRIT/RFI-2023/125****DESTROKE****Paragee Sharma**<sup>7</sup>th Sem CSE, Department of Computer Science Engg., Bhilai Institute of Technology, Durg**Vibhore Jain**

Assistant Professor, Department of Computer Science Engg., Bhilai Institute of Technology, Durg

**Abstract-** With the increasing prevalence of cyber threats and malicious activities, ensuring the security of personal and sensitive information has become paramount. Key loggers pose a significant threat by capturing keystrokes and compromising user credentials.

**Objective:** The primary objective of this project is to enhance the security of user systems by detecting and preventing key logger attacks.

**Keywords:** Key logger, real-time, user-credentials.

**IC-CRIT/RFI-2023/126****A NEW ERA DEMAND FOR WOMEN SAFETY: IOT****Aditi Sharma**

5<sup>th</sup> Semester Student, Department of Computer Science, Bhilai Institute of Technology  
Durg (C.G.)

**Vibhore Jain**

Assistant Professor, Department of Computer Science Bhilai Institute of Technology  
Durg (C.G.)

**Abstract-** In present state of affairs security is the maximum critical criteria for every woman because feminine harassment instances are increasing unexpectedly. Many regulations and guidelines made by way of the authorities for prevention of crime and securities for women, but for implementation of it, there are some boundaries. Now an afternoon by the usage of enhance era and technological know-how we can make sure the better way of protection. IoT (internet of factors) is one of the maximum famous generations to remedy this case. This software program is available for assisting the women in unfavorable occasions with the aid of better way. IoT is used for making theme to generate the assignment that can be act as regenerate tool and better way of in security in various kinds. The prevailing paper explains the development of an app that facilitates the girls in the course of crime and unusual conditions.

**Keywords:** Women harassment, women security, Internet of Things (IoT), remedy, development of an app.

**IC-CRIT/RFI-2023/137****STRESS MANAGEMENT IN ADOLESCENT CRICKET AND VOLLEYBALL PLAYERS:  
PROMOTING PHYSICAL AND MENTAL WELL-BEING****Sudhanshu Shekhar**

(Research Scholar) Department of Physical Education, Rabindranath Tagore  
University, Bhopal, M.P.

**Dr. Vikash Saxena**

(Supervisor) H.O.D. Department of Physical Education, Rabindranath Tagore  
University, Bhopal, M.P.

**Abstract -** This paper examines stress management strategies in adolescent cricket and volleyball players with the aim of promoting their physical and mental well-being. Adolescence is a critical period marked by various stressors, including academic pressures, social expectations, and sports performance demands. Cricket and volleyball, being highly competitive sports, can add to these stressors. Effective stress management techniques are crucial for maintaining optimal health and performance in young athletes. This paper explores different stressors encountered by adolescent cricket and volleyball players, discusses the impact of stress on their physical and

mental health, and reviews various stress management strategies employed by athletes, coaches, and sports organizations. It emphasizes the importance of holistic approaches to stress management that address both physical and mental aspects of well-being. Additionally, the paper provides practical recommendations for athletes, coaches, and stakeholders to promote the overall wellness of adolescent cricket and volleyball players.

**Keywords:** Stress Management, Adolescent Athletes, Cricket, Volleyball, Physical Well-being, Mental Well-being.