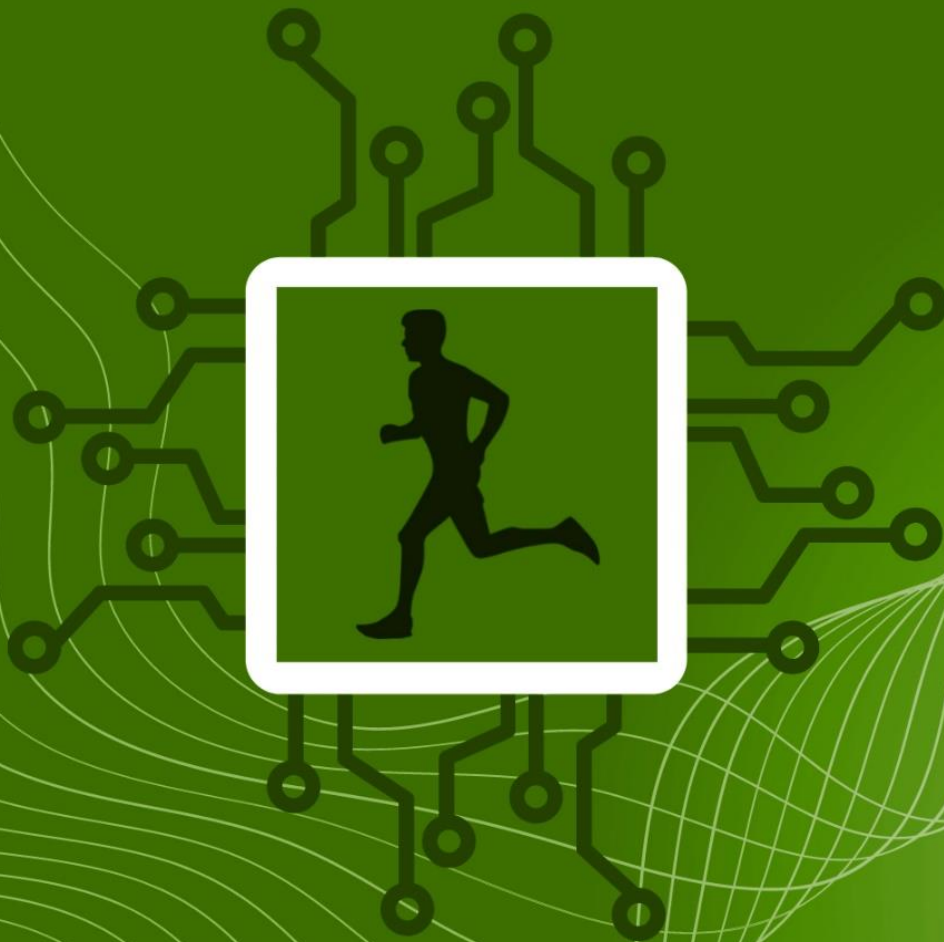


NEWSLETTER

Sports Engineering Association



SportE



Volume . 1

Issue . 3

May 2023

<http://sportsea.org/>

FROM THE DESK OF CHIEF EDITORS



Dr. Abhijeet Digalwar



Dr. Arun Kumar Jalan



Dr. Lalit Sharma

Dear Readers,

We are delighted to announce the release of the third edition of the SEA newsletter, "SportE," for the year 2023. On behalf of the Sports Engineering Association (SEA) members and the editorial team, we would like to express our heartfelt gratitude to the ISEA (International Sports Engineering Association) for their unwavering support and well wishes for this newsletter.

In this edition of SportE, we are excited to provide a comprehensive recap of the various activities in which SEA members actively participated following the release of our second newsletter. We understand the importance of highlighting the accomplishments and contributions of our members, and this section will serve as a testament to their dedication and hard work.

Moreover, we have introduced a dedicated section specifically for full-time students. Here, students will have the chance to participate in a fun-oriented quiz, designed to promote awareness about the fascinating intersection of science and sports. We believe that encouraging students to explore this field will not only expand their knowledge but also inspire them to pursue careers in sports engineering.

Additionally, we have incorporated a student corner, where we will showcase the notable achievements of students who have been involved in various assigned projects. This will not only recognize their efforts but also inspire other students to actively engage in sports engineering projects and make significant contributions to the field.

Lastly, the student section will also provide valuable insights into future opportunities available to student members of SEA. We believe in nurturing the talent and potential of students, and therefore, we are committed to sharing information about internships, research programs, scholarships, and other avenues that can help them advance their careers in sports engineering. The enhanced student section will serve as a valuable resource for students and further strengthen their engagement and involvement within the Sports Engineering Association.

We hope you will enjoy reading this edition and find it insightful. Your feedback and suggestions are invaluable to us as we continue to strive for excellence in promoting the application of engineering in the world of sports.

MESSAGE



Birla Institute of Technology and Science, Pilani

Pilani | Dubai | Goa | Hyderabad | Mumbai

Prof V Ramgopal Rao, Ph.D.,
Fellow of IEEE, TWAS, INAE, INSA, IASc, NASI
Former Director (2016-2021), IIT Delhi
J. C. Bose National Fellow
Vice-Chancellor & Senior Professor

www.ramgopalrao.in

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rrao@iitd.ac.in

It is my pleasure to write this message of good will for the quarterly newsletter published by SEA and named SportE. It is heartening to learn that the 3rd issue of SportE will be launched in the month of May 2023. SEA takes on a significant obligation to link India's engineering community with the country's sports world. Innovation and development in this area are necessary first steps towards creating a sporting culture in India. When venturing into an uncharted territory, like sports engineering, there is no shortage of difficulties, possibilities, or surprises. I hope the SEA team takes on many exciting new initiatives and finds great success. The SEA newsletter SportE takes on the duty of sharing glimpses of their work and the success they've accomplished in this field. Wishing the newsletter's success and beyond!

Yours sincerely,

V. Ramgopal Rao



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Vidya Vihar, Pilani 333 031
Rajasthan, India

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Web: www.bits-pilani.ac.in

MESSAGE



Dr. Arun Kumar Uppal
Ex. Vice Chancellor, Jiwaji University,
Head & Dean, LNIPE, Gwalior

I am extremely pleased to know that Sports Engineering Association (SEA), India is releasing its third issue of newsletter "SportE". It is a well-known fact that Sports Engineering plays a very significant role in improving the standard of sports at all levels. Sports engineering is the technical application of knowledge of mathematics, physics, bio-mechanics and computer science to solve different problems experienced by the athletes. It also helps in designing equipment, constructing sports facilities, analyzing performance of sports persons, ensuring that safety criteria are met, and providing coaching tools. Best wishes to the team SEA in their remarkable effort.

A handwritten signature in blue ink that reads "Dr. Arun Kumar Uppal".

Dr. Arun Kumar Uppal
Ex. Vice Chancellor Jiwaji University,
Head & Dean, LNIPE, Gwalior

MESSAGE FROM MEMBER



Dr. Lalit Sharma
Life Member, SEA, University of Delhi, India

SEA was established by its founder members with noble intentions and right set of value to do something in the field of engineering for the upliftment of the sports performance. Sports is a highly specialized field where success is only possible, if coach, player, and sports scientist work in a collaborative manner.

Developing SEA into a group of highly professional and motivated people is our collective responsibility and can only yield desirous results, where each one is playing his/her role.

SEA needs to work on various related field from developing equipment, analyzing performance to educating coaches and players.

On field assessment has always being one of the most challenging task for researchers. We do have state of the art laboratories for assessing athlete's parameters, testing athlete's in a laboratory and testing on field by using assessment tools in actual competitive situation is an immediate requirement for athletes. Young researchers should come forward for developing on field assessment tools for assessment and development of indigenous training equipment are two basic requirements of the sportspersons.

I am hopeful that SEA will continue to be guided by its core values.

I wish all success.

NOTE FROM:

Dr. Pintu Modak
Founder - Director, SEA

“Your knowledge never be your power unless you can apply it in a respective field”

A good infrastructure is the backbone of a healthy country. The good infrastructure in sports means to have adequate standard facilities like accredited academies, synthetic/artificial sports flooring/fields, Sports movement analyzing center, sports data science center, sports nutrition, sports performance research center, manufacturing quality equipment among others. Sports infrastructure is one of the important issues in India which we fundamentally depend on import and outsourcing them.

Despite phenomenal growth in Indian Sports, the status of sports infrastructure in India is still not at a desired level. The Govt. has been taking many steps like schemes of grants for creation of sports infrastructure in rural areas, installation of synthetic playing surfaces and promotion of games and sports in universities and colleges. They aim at broad basing of sports and promotion of excellence in sports. Sports is considered to be a state subject and it is primarily the responsibility of the state governments and the National Sports Federations (NSFs) to frame policy for promotion and development of various sports disciplines in the country. The ministry only supplements the efforts of state governments and the NSFs. Sports being a state subject the states have to bear a part of the expenditure on sports so that there is a sense of participation and ownership by the states in this scheme. Hence the funding pattern between center and state is in the ratio of 75:25 in respect of normal states and 90:10 in respect of special category states. However, if a state will give priority to sports development- is a cause of concern.

What we lack is a holistic approach toward the development of sports infrastructure uniformly throughout the country. Towns and villages lack adequate facilities. Sports are meant not only for elite athletes but for everyone in a country. A country cannot sustain itself in any sector as long as depended on imported goods. The basic reasons behind this are understood that we fail to connect engineering with sports development and have our own manufacturing industries supported indigenously by engineering research.

Since Sports Engineering Association (SEA), India is incepted, it has been working to connect engineering with sports by conducting various activities like conferences, workshops, projects, etc. It is indeed very important for researchers from engineering and sports science to work together not only for infrastructure development indigenously but also for reduction of injuries in athletes while they participate in sports. The SEA, India can only grow if the researchers from the engineering faculty join us and apply their expertise in sports. Yes, their application matters in the development of sports in India.

ARTICLE:
Audience experience enhancement Technologies in sports today

You obviously had a great time watching the IPL this year. Digitizing the live action and presenting it in a way that improves the on-field and off-field experience for spectators requires a vast array of cutting-edge technology. A couple of the technology you might encounter at a modern international match are briefly discussed here. Curious people can always find more information online.

[Compiled from various web based resources]

Drone flight and camera movements

It's been a long road from those tiny small reel cameras to enormous flash DSLRs. Whenever we watch a sporting event, we frequently see a variety of camera shots. The most stunning is when the camera takes off and provides a 360-degree view of the stadium or even a close-up of your favorite athlete. It's all thanks to flying drones and spider cams run by TV broadcasters, which provide stunning images on our televisions. They have a 360-degree viewing angle and can capture images from the ground to the skyline.

Edge detecting software

You've probably heard commentators mention snicko metres; they're used in cricket and are pretty useful. Real-time Snicko (from BBG Sports) and Ultra-Edge (from Hawk-Eye innovations) employ sound waves to assess if the ball has made contact with the bat before being caught by the other team. It uses a sensitive stump microphone connected to an oscilloscope to measure sound waves. The sounds are then processed to remove background noise, synced with video streams, and replayed in slow motion for the third umpire to make a decision.

VAR stands for Video Assistant Referee.

Prior to this, goal-line technology was adopted in football to help assess whether or not the ball passed the goal line. It was only used when the referee was unable to rule on a goal and a third opinion was required.

VAR was later used in a friendly game between France and Italy, and following a successful trial, a pitch-side monitor was used in the FIFA Club World Cup. The A-league was the first professional league to use VAR, followed by the MLS, Bundesliga, and Serie A. VAR was first seen in an FA Cup game in England, and La Liga adopted it for the 2018-19 season, with the Premier League and even the Champions League adopting it for what FIFA refers to as "game-changing decisions," such as goal validity, penalty kicks, red cards, and offside, beginning in the 2019/20 season.

Accessibility and Disability

Spectators of all types, including disabled fans who may have previously struggled with barrier aspects of events and venues, can now enjoy sports thanks to modern innovation. E-ticketing and other contactless or automated technologies can also help impaired spectators. This allows them to avoid the difficulties associated with a location that may lack wheelchair accessibility or disabled parking spaces near fan locations. Several venues have even started offering "in-seat delivery." It allows spectators to buy food and drinks and have them delivered to their seats while they watch the game. Many football clubs, for example, have begun to use large television displays near the pitch, where fans may engage with players and even have a full in-stadium experience.

AI stands for Artificial Intelligence.

In the field of sports, artificial intelligence (AI) is a result of today's ability to collect detailed and timely data on players' performances. Experts expect that AI will have the greatest impact on improving team outcomes and finding more valuable athletes around the world in the area of sports technology. Artificial intelligence and other algorithms assist in decision making. The use of artificial intelligence improves the accuracy of forecasting athletic event outcomes.

Neuroscience

Training the mind is just as important as training the body. The Options group may create customized action plans using cutting-edge neuroscience and unique technology. And specialized prescriptive advice that thoroughly optimizes an athlete's brain function. Applied neuroscience now allows us to assess, train, and enhance the brain in the same manner that elite athletes have done so for generations 'below the neck.' In 2017, the Halo headband was first made available to the general public. The device prepares athletes' brains for workout and a major race by providing pulses that make neurons fire together.

UNVEIL OF SECOND NEWSLETTER



Third newsletter of SEA "Sport-E" unveiled by Col. Soumyabrata Chakraborty (Retd), Registrar BITS Pilani, on 28th February 2023.

NSNIS PATIALA, SAI VISIT FOR COLLABORATIVE DISCUSSION



A team of SEA members visited NSNIS Patiala on 1st March 2023 for interaction with coaches for collaborative research

NEW MEMBERS, LIFE TIME, SEA



L/2023/24/04/10054
Dr. Amit Dua
Assoc. Professor, Computer Science,
BITS Pilani, Rajasthan, India



L/2023/30/05/10055
Dr. Atul Dubey
Assistant Professor, NCRT, Rajasthan

NEW MEMBERS, ANNUAL MEMBER, SEA



A/2023/03/02/10028
Dr. G. Kumaresan Gurusamy
Professor, Department of Physical Education,
Bharathiar University, Coimbatore, India



A/2023/04/14/10030
Dr. Saugata Sarkar
Assistant Director, Physical Education
and Sport, Mizoram University, India



A/2023/05/22/10031
Prof. Madhavendra Saxsena
Professor. Mechanical Engineering,
Roorkee Institute of Technology, Roorkee, India

NEW MEMBERS, STUDENT MEMBER, SEA



S/2023/03/17/10007
Mr. Ishwar Bhaykatte
Student, ROORKEE INSTITUTE OF TECHNOLOGY, India



SCQ/2023/04/12/10008
Mr. A Nitin Kumar Reddy
Student in BE-CSE, VTU, India



SCQ/2023/04/12/10009
Mr. Supreeth S Gulgule



SCQ/2023/04/12/10010
Mr. Aditya Saraswat

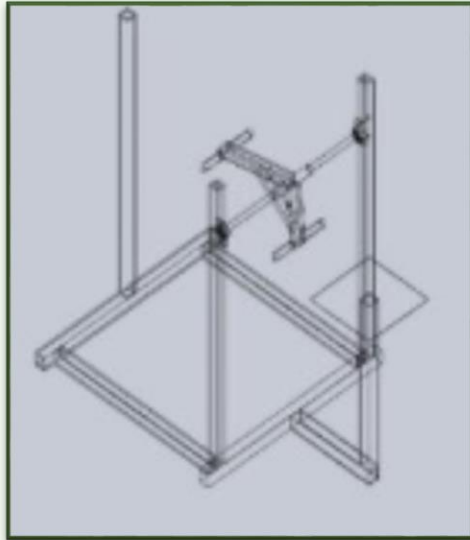
Student in Exercise Physiology, RVITM, India

Student in BE-CSE, VTU, India

STUDENT CORNER

STUDENT PROJECTS

Project 1: Development of low cost Iso-Kinetic Biceps Muscle Training & Rehabilitation Machine



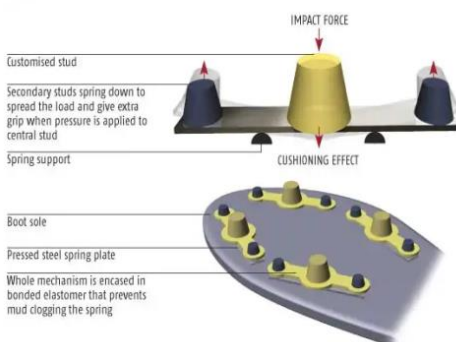
Master's Degree students Mr. Saumya Modi, Mr. Avanish Kumar, Mr. Sanjeev S.S. from Mechanical Engineering Department, BITS Pilani, Pilani campus designed and developed a technology demonstration model for a low cost Iso-Kinetic Biceps Muscle Training & Rehabilitation Machine. The development is based on simple principle of counter balance of force as the length of moment arm changes.

An iso-kinetic machine is a type of exercise equipment commonly used for muscle training and rehabilitation purposes. The basic principle of this machine is to provide constant torque through the full range of motion. The objective of this machine is to allow the user to perform movements at a constant speed with consistent resistance regardless of the amount of arm motion and is often used in physical therapy settings to help patients recover from injuries or surgeries, or for muscle endurance building and enhancing effective range of motion for specific sports.

Project 2: study on Improving the performance of soccer boots on artificial and natural soccer pitches

WHAT A STUD

Spring-action football boot studs can reduce the shock to the foot by 30%



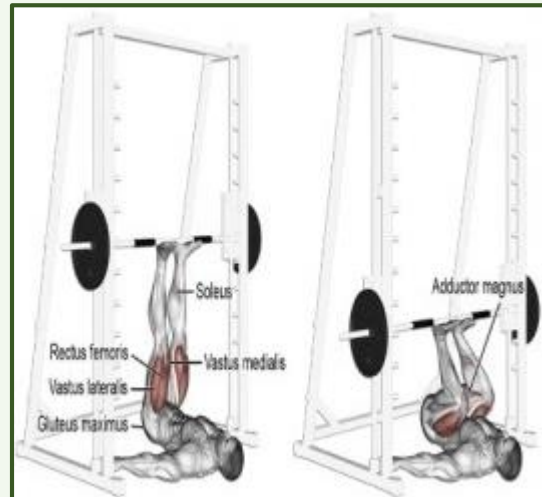
Mr. Eklavya and Mr. Satyam Saxena from BITS Pilani's Pilani campus wrote an intriguing assessment of the study paper: Improving the performance of soccer boots on artificial and natural soccer pitches, J.D. Clarke and M.J. Carré;2010. They also concentrated on the issue of developing comparable testing techniques and standards in India. The usage of a specialized football simulator is an innovative method that can be reproduced in India in order to build similar testing regimens. The creation of such testing protocols will necessitate the involvement of a variety of parties, including researchers, sports equipment makers, and football players.

AI and machine learning can also be used to create a protocol based on data obtained from other countries. These data can be adjusted to match the qualities found on Indian football fields.

Manufacturers should consider manufacturing customizable shoes with removable and replaceable outsoles in addition to designing

shoes for both surface types. This feature would allow players to change outsoles based on the type of surface they are playing on. This can also lower the expense of two distinct boots, easing the financial load on amateur players.

Project 3: comparison study between traditional inclined and vertical and leg press machines.



Mr. Eklavya and Mr. Satyam Saxena from BITS Pilani, Pilani campus developed an interesting comparison between traditional inclined and vertical and leg press machines.

The Vertical Leg Press Machine can be considered as a variation of the traditional leg press machine, and can be designed by modifying the orientation. While the traditional leg press machine has the user lying on their back and pushing against a weighted platform that is angled at 45 degrees or so, the vertical leg press machine has the user seated and pushing directly upwards against the weight. Vertical Leg press we can get a mechanical advantage of 1:1. According to electromyography study, during a vertical leg press, the quadriceps muscles are heavily engaged as they work to push the weight up against gravity. Additionally, the Gluteus Maximus and the Adductor Magnus are also involved to a lesser extent. The specific muscles targeted during a vertical leg press include: Rectus Femoris: This muscle is the most superficial muscle of the quadriceps group and is responsible for hip flexion and knee extension. Vastus Lateralis: This muscle is located on the outer side of the thigh and is responsible for knee extension. Vastus Intermedius is located in the middle of the thigh whereas Vastus Medialis is located on the inner side of the thigh and both of them are also responsible for knee extension. Hence a Vertical Leg Press with mechanical advantage 1:1 can be a better choice for an athlete to build up their Quadriceps.

Winner announcement for Quiz 2 {February 2023}

Congratulations to all the winners of Quiz-2! As a reward, each winner will receive a one-year student membership in the Sports Engineering Association (SEA) free of charge. This membership will provide them with the opportunity to work closely with the SEA team.

Name	Institute
Vishal S K	RV Institute of Technology and Management
Prajwal Kulkarni	RV Institute of Technology and Management
R.Teja	RV Institute of Technology and Management
Tejas Hegde	RV Institute of Technology and Management
Supreeth S Gulgule	RV Institute of Technology and Management
Aditya Saraswat	RV Institute of Technology and Management
Prasanth V V	TNPESU
Surmani Thounaojam	National Sports University
A Nitin Kumar Reddy	RV Institute of Technology and Management
Nakshatra Khatri	National Sports University

Project financial support

We encourage students from engineering and science disciplines to actively participate in various activities such as product design, movement analysis, app development, and software development. To support their involvement, we are announcing a cash support program. All student members are eligible to apply, and the application process is open throughout the year. To apply, please submit a one-page summary of your project along with your student membership number to sportsengineeringindia@gmail.com.

Additionally, SEA (Sports Engineering Association) provides funding opportunities to student members for undertaking small projects in sports technology. We also strive to offer them a nationwide platform to showcase their development work through newsletters and conferences.

Student Project Scheme

The objective of this scheme is to encourage students to explore innovative technology applied in sports. Under this scheme, individual student members or groups of student members of SEA can apply for financial support of up to Rs. 10,000/- to undertake minor research projects or develop prototypes, models, or products. The duration of the projects should not exceed six months. The details of the application procedure can be found on the SEA website, <http://sportsea.org>. Full-time students in undergraduate or postgraduate programs in engineering, science, or sports science are eligible to apply after becoming student members of SEA.

Online Quiz for Students: Quiz 3

This Quiz is designed for students and only students can participate in the quiz. Purpose of the quiz is just to promote awareness about science and sports among the student community. No data will be stored on the website regarding your responses.

Students are required to follow the guidelines before attempting the quiz

- Students are required to furnish his/her personal details.
- The quiz will comprise Objective Type Multiple Choice Questions (MCQs).
- Each question has four options, and the student has to click the appropriate option.
- Students can attempt the quiz only once.
- A quiz will open on June 1, 2023, and will close on July 10, 2023.
- Winners will be informed by email in fifteen days after the quiz closes.
- All winners shall be issued E-Certificates.
- The first ten winners (first attempters) will be given student memberships in the Sports Engineering Association (SEA) for one year and can work closely with the team of SEA.
- Decisions of the quiz organizing team will be final and binding in case of any discrepancy or dispute.

Use the following link to participate in the online quiz

<https://forms.gle/P89Uxv99bmnvGe9J7>

OUR ASSOCIATES

1. International Sports Engineering Association (ISEA), England
2. Wool Research Association (WRA), Pune, Maharashtra, India
3. Qualisys India
4. Kistler, India
5. Shiv Naresh Sports Pvt Ltd
6. Great sports, India
7. European College of Sports Science, Germany

THE RESOURCE PERSONS, ICSE 2023



BITS Pilani
Pilani | Dubai | Goa | Hyderabad | Mumbai



ICSE 2023

3rd INTERNATIONAL CONFERENCE ON SPORTS ENGINEERING

2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

KEYNOTE SPEAKERS (3rd Nov 2023)

 Prof. Rajat Moona Director IIT Gandhinagar, India Topic: Embedded system Development in sports application	 Prof. Lloyd Smith Professor Washington State University, USA Ex Professor at International Sports Engineering Association Topic: Exploration of research for Engineers in Sports	 Prof. David James M.D. Labosport Ex Professor at Sheffield Hallam university, UK Topic: Technological advances in synthetic surfaces for sports	 Prof. Kazuya Seo Professor Mechanical Engg. Kogakuin University, Tokyo, Japan Topic: Application of aerodynamics in sports
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2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

PANEL DISCUSSION (2nd Nov 2023)

Theme: Roadmap toward Indigenous sports technology

 Prof. A. K. Uppal Former Chancellor, Jiwaji University, Former Dean LNIPE, India	 Mo. Ayaz Memon Sports writer & Journalist India	 Prof. Virender Ku. Dabas Retired Prof LNIPE, Chief coach Indian para swimming team, India	 Prof. Sudhirkumar Barai Director BITS Pilani, Pilani Campus, India
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2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

WORKSHOP (2nd Nov 2023)

Theme: Advances in Sports Performance Analysis and Applied Technologies

 Mr. Adhitya VJ Iyer Senior Producer - Disney Star, Sport broadcaster & Analyst, India	 Dr. Kamlesh Tiwari Prof. Computer Science, BITS Pilani, India	 Dr. Ashutosh Bhatia Prof. Computer Science, BITS Pilani, India	 Mr Anil Kumar (Moderator, Founder Director SEA) MD Great Sports Infra
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2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

ATTENDING THE WORKSHOP WILL BENEFIT:

- Using mobiles in their institutions and colleges to analyse sports movements.
- Analysing sports data to make smart judgements during or before games.
- Evaluating the performance of athletes and assessing to improve the team performance.
- Evaluating the strong and weak areas of the opponents to make the right decision on tactics.

2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

IMPORTANT DATES

Conference Dates: 02-04 Nov 2023
 Abstract submission last date : 30 May 2023
 Last date for Registration: 30 July 2023

Queries related to submission

Dr. Suvarjan Bhattacharyya:
suvarjan.bhattacharyya@pilani.bits.pilani.ac.in

Dr. Arun Singh:
dr.arunsingh68@gmail.com

Dr. Gagan Deep Meena
gagandeep.ee@nitp.ac

2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

IMPORTANT LINKS & CONTACTS

Conference Home Page: <http://icse.sportsea.org/>
 Abstract Submission: <https://forms.gle/a9wHWuV2VbXkYsn6>
 Registration: <http://icse.sportsea.org/>
 General Enquiry: sportsengineeringindia@gmail.com

2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

Registration is open. Publication partner → Springer



2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

Our Associates







2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

Conference Venue
BITS Pilani
Pilani Campus



2nd to 4th November 2023
at BITS Pilani, Pilani Campus, Rajasthan, India

BROCHURE OF 3RD INTERNATIONAL CONFERENCE**ORGANIZERS**

ICSE 2023 is jointly organized by **Sports Engineering association (SEA) India**, and **Birla Institute of Technology & Science, Pilani**, under the auspices of the **Ministry of Youth affairs and Sports, New Delhi**, with technical support from **International Sport Engineering Association, UK (ISEA)**.

CENTRAL THEME

Engineering Application and Sports Performance

RESEARCH TRACKS

Computational: Sports data analysis, Biomechanical Signal Processing, Human-Computer Interaction, Artificial intelligence, Machine learning, Match and technique analysis, Coding and app development, Predictive analytics, Sports statistics, Computer vision AI-ML for Sports; Image and video Analysis, Sporting action recognition, Internet of things etc.

Analysis and modelling: CFD, FEM, Aerodynamics, Thermodynamics and heat transfer, Modelling of sports equipment, Motion analysis, Testing of sports equipment, Performance measurement, Image and video Analysis, Sporting action recognition, Machine learning, Match and technique analysis etc.

Design and development: Sports equipment, Wearable devices. Synthetic sports flooring/surfaces, Coding and app development, Sports attires, Sports shoes, Training equipment, Sports facilities, Synthetic sports flooring, Sports teaching aids, Equipment for para athletes etc.

Sports Performance: Technology in sports training & performance, Talent identification, Injury prevention, Sports nutrition & technology, Computers in sports Psychology, Sports fitness, Sports management, Application of advanced tools in performance tracking etc.

CALL FOR PAPERS

We invite original research work in all Engineering, Technology or Data science applications in sports and Scientific analysis or application oriented research in sporting domain for the conference. All accepted abstracts with author registration will be published in ICSE-2023 proceedings and these proceedings shall become part of the ICSE Science and Technology series.

Abstract may be submitted immediately or at any point until abstract submission deadline. Submissions made electronically using [Abstract Submission Link](#) are only acceptable. Acceptance are communicated on-going basis.

BEST PAPER AWARDS

Each Track will have First and Second Best paper cash award of ₹15,000 and ₹10,000 respectively.

STUDENT DESIGN AND HACKATHON CONTEST PRIZE

The 1st, 2nd, 3rd, and 4th position for student design contest winners will receive certificate and cash award of Rs. 25,000, 15,000, 10,000 & 5,000 respectively.

PRE-CONFERENCE WORKSHOP

Pre-conference workshop shall be organized on the first day of the conference. The Workshop shall cover hand-on on latest developments in sports training, performance measurement and enhancement.

JOURNAL PUBLICATION

Reputed publication houses like: Materials Today Proceedings (Elsevier), IOP Conference Series: Materials Science and Engineering (IOP Publishing), European College of Sports Science Journal are approached for publication of conference papers. ICSE-2023 Journal publication committee can be [contacted for more details](#).

RESEARCH METHODOLOGY

To promote quality research in the area of Sports Engineering and Science in India, an on-line session on "Research Methodology in Sports Engineering" will be organized in the month of February 2023 for the students and budding researchers. This session will be addressed by accomplished researchers and entrepreneurs from around the globe. It will cover Cutting edge on-going research works at various Universities. Scholarship options, Study abroad, Internship opportunities and scope of Higher studies in sports engineering will also be deliberated. The session will also cover Scientific communication skill, Modern aspects of research methodology and tools like Bibliometric, as well as Literature survey and Data gathering methodology in sports engineering. Date of the workshop will be intimated to the registered participants soon.

Register right away and free for the Research Methodology workshop: [Research Methodology workshop](#)

REGISTRATION

	By 30 July 2023		After 30 July 2023	
	India (₹)	Foreign (US \$)	India (₹)	Foreign (US \$)
Delegates	5000	200	6000	250
Students	3000	150	4000	200

-A group of students (>5) can request for concession

-Faculty who don't get financial assistance from their colleges can write to the organizer for special concession

-Bulk Registration: (College authorities can contact ICSE-2023)

-Delegates from SAARC Countries can avail Indian rate

Registration charges include conference kit, admission to workshops and Key note addresses, Penal discussion, 3 working lunch, and welcome dinner. Accommodation is not included in registration charges.

Scan QR & Pay online to Register

**IMPORTANT DATES**

All deadlines refer to Indian Standard time, that is 5 hours & 30 minutes ahead of GMT.

Conference Dates: 02 – 04 Nov 2023

Abstract submission last date: 30 May 2023

Notification for accepted abstract by: 15 June 2023

Last date for registration: 30 July 2023

Submission of full paper will be asked once abstract accepted for publication by the journals

IMPORTANT CONTACTS AND LINKS

- Conference Home Page: <http://icse.sportsea.org/>
- Abstract Submission: <https://forms.gle/a9wHWuV2vVbxKVsn6>
- General Queries Email: sportsengineeringindia@gmail.com
- Surface Mailing Address: SEA office, Room No. 2103, BITS Pilani, Rajasthan-333031 (INDIA)

SPONSORSHIP

ICSE-2023 and associated events will be a unique opportunity for business houses and Government agencies to showcase their products and services. The congregation will provide opportunity to network with decision makers at various Universities across India and also Sport's governing body members. The Pan-India student design contest, as part of the conference, will also be closely watched by technical campuses all over India.

Feel free to contact us for further details at:

sportsengineeringindia@gmail.com Mob: +91-9636575446

ACCOMMODATION**Student Accommodation:**

Limited number of accommodations in Boys' and Girls' Hostel are available for accommodation of student delegates of the conference on first come first serve basis. These can be offered free of charge for full time student participants from other Indian Universities for 3 nights during the conference and is based on early registration. Dinner and Breakfast coupons at nominal charges can also be provided. Make specific request for the same during registration payment and you will be communicated confirmation message for the hostel accommodation.

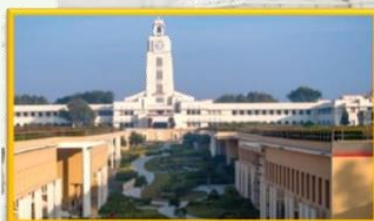
Delegates Accommodation:

In and around Pilani (Rajasthan) there are a number of Hotels, Guest houses and Heritage *Havelies*. Delegates can find suitable accommodation of their choice and need. The Conference organizing committee maintains an updated list of such accommodations and their contacts who have track record of hosting Institute guests. Make specific request for the same during registration payment and you will be shared with the accommodation options along with special conference discounted price list. There is also limited accommodation available within the university campus.

BITS PILANI CAMPUS

You can expect to find a very pleasant cold and dry climate at BITS Pilani during November with day and night time temperatures around 30°C and 16°C respectively. The campus has beautiful monuments, water body, museum etc. and is itself a tourist attraction. There are well-endowed conference rooms, playgrounds and other facilities within campus. Pilani is a small educational township with many schools and colleges. By road, it is about 200 km west of New Delhi, the capital city of India, and 225 km north of Jaipur, the capital city of Rajasthan. Pilani is connected by good road and rail links with both the metro cities with International Airports. Public transport buses ply at regular interval from ISBT New Delhi and Sindhi Camp Jaipur. Taxis on hire from these cities or nearby other cities to Pilani or return are available aplenty. These days' bookings can be made using various popular cab hiring apps. The nearest railway station from University campus are Chirawa (CRWA) about 18 km and Loharu (LHU) about 23 km. that connects with Jaipur and New Delhi respectively.

Some Pictures from BITS Pilani Campus

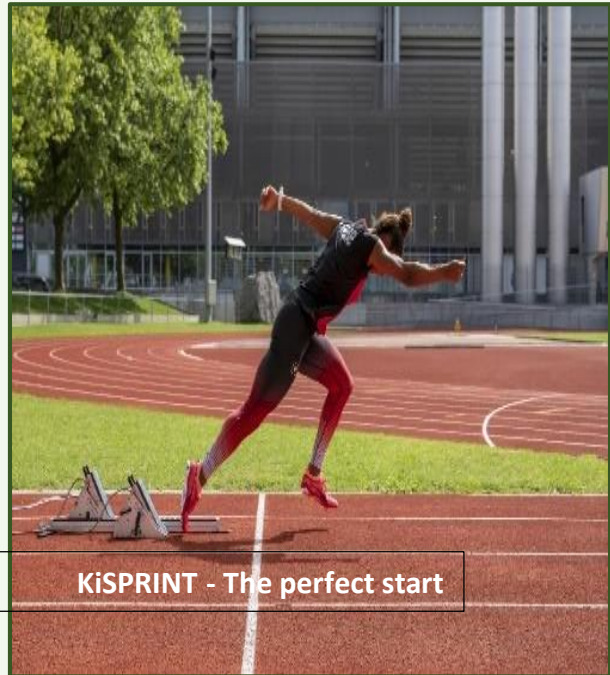


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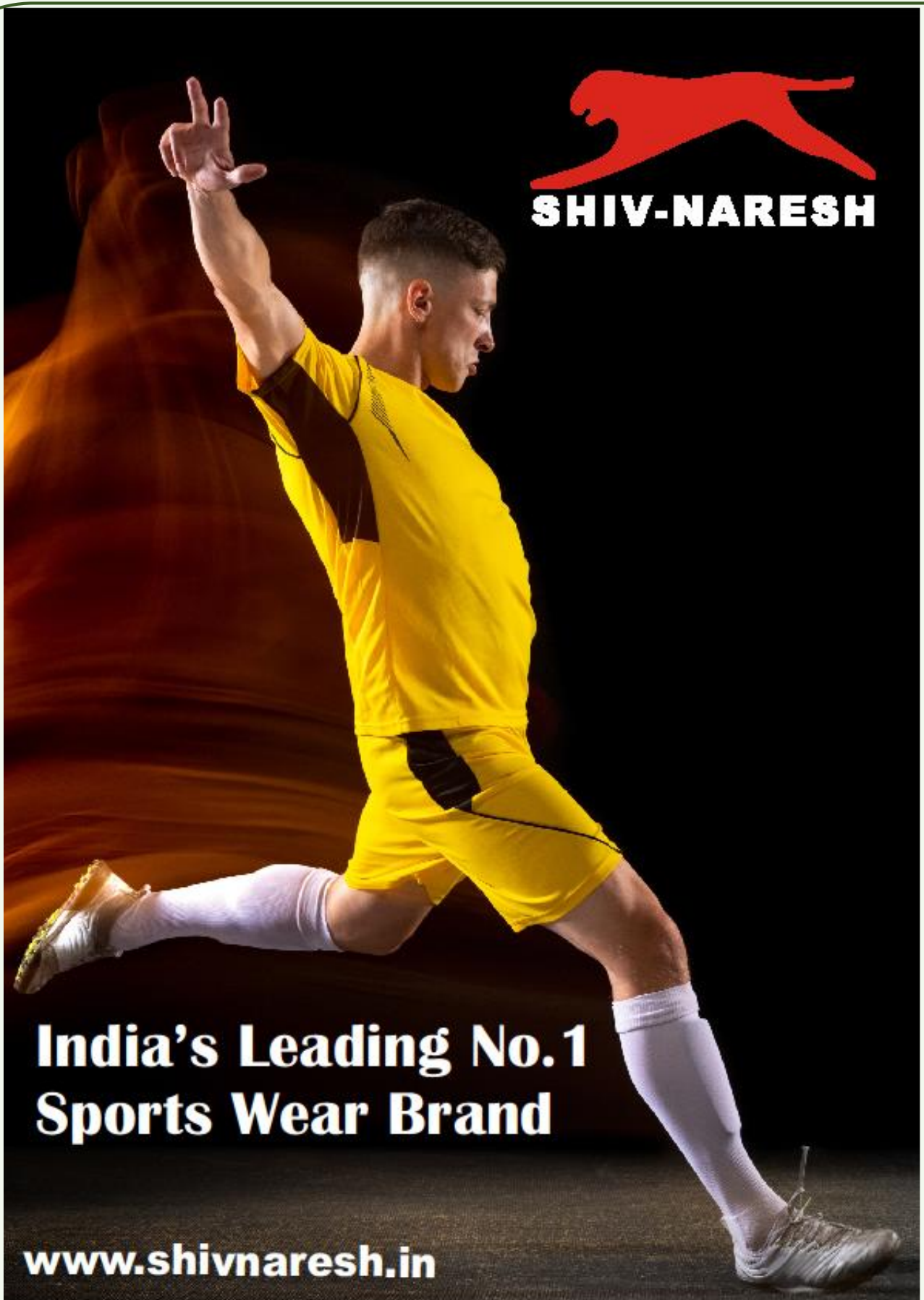
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