



IIT MANDI

Scaling the heights

VISION

To be a leader in science and technology education, knowledge creation and innovation, in an India marching towards a just, inclusive and sustainable society.



INTERNATIONAL YOGA DAY

Celebrating the Physical and
Mental Health Benefits Through Yoga

Theme Description

The transformative power of yoga is its ability to promote physical and mental well-being. It has been well documented. The celebration of International Yoga Day further reinforces this by raising awareness and fostering global unity through the cultural exchange of the practices of Yoga.

We, at IIT Mandi, are keen to actively contribute to this global movement and do our bit for the physically and mentally fit and healthy world.



PROF. PREM VRAT

Chairman, BoG – IIT Mandi



Brief Bio

Prof. Vrat was Founder-Director, IIT Roorkee; Vice-Chancellor, U.P. Technical University, Lucknow (now known as APJAKTU, Lucknow); Professor, Head Centre for Management Studies, Coordinator Applied Systems Research Program, Dean, Dy. Director and Director (Officiating) at IIT Delhi; Professor and Division Chairman of Asian Institute of Technology, Bangkok. He is an Honorary Professor at IIT Delhi and Distinguished Adjunct Professor at AIT, Bangkok.

Prof. Prem Vrat was an Honorary Research Fellow at the Department of Engineering Production, University of Birmingham (U.K.) and as an International Visiting Fellow at University of Western Sydney, Australia. He has extensive experience of more than 50 years in teaching, research, management development and consultancy.



PROF. LAXMIDHAR BEHERA

Director, IIT Mandi



“YOGAH KARMASU KAUSHALAM: YOGA – THE ART OF ALL WORK”

Abstract:

This talk will give an exposition of the holistic mind-body-consciousness paradigm. The term yoga will be explained in this framework, taking cues from the teachings of the Bhagavad Gita. It will be explained how one’s professional excellence is achieved when fixed in yoga. Some historical examples would be revisited. A few of our research works will be presented to outline the scientific temper of yoga. .



DR. RICHA CHOPRA

Core Faculty Centre of Excellence for Indian Knowledge Systems, IIT Kharagpur

“UNIVERSAL IDEAS FROM PATANJALI'S YOGA SŪTRA ON MIND & MENTAL HEALTH: PHILOSOPHY AND PRACTICE”

Abstract:

Mental health is a state of well-being in which an individual realises his or her abilities, can cope with the normal stresses of life, can work productively and can contribute to his or her community. The study of mind and behaviour (encompassing mental health) has evolved under the prescript of 'Psychology', which has increasingly attended more and more to these dimensions with a predominantly positivist and anthropocentric view.

Patanjali's yoga sutras encompassing universal ideas on 'Mind' and 'Mental Health' in terms of their nature, characteristics, function, etc. is also called the science of mental discipline. The yoga sūtras lay down a step-by-step methodology (practice) towards raised levels of awareness, gaining deeper wisdom and a natural state of peace by unleashing the power and knowledge contained within the mind and transcending the same.

The session will deep dive into a few aphorisms (sūtras) from the yoga sūtras of Patañjali with the goal of exploring some of the universal ideas on 'Mind, Mental Health & Beyond Mind' by virtue of its philosophy and practice.



MS PAULOMI MUKHERJEE

Senior Faculty, The Art of Living, Regional
Director Govt Programs & Projects

“MAKING YOGA AS AN INTEGRAL PART OF OUR DAILY LIVES”

Abstract:

The word Yoga comes from the Sanskrit word Yuj, which means union.

Stress is the degree of difference between perception & reality. It's a condition where the mind, memory, intellect & ego cannot function to their optimum & express themselves clearly. It is divided & dissipated.

Yoga is not just a set of exercises...it's a holistic, practical & scientific process of life.



DR. RAJESH SANND

Assistant Director In-charge Regional Ayurveda
Research Institute, Pandoh, Distt. Mandi (HP)

“YOGA AS AN INTEGRAL PART OF AYURVEDA”

Abstract:

Yoga and Ayurveda, ancient disciplines originating from India, have long been intertwined, forming a harmonious relationship that promotes holistic health and well-being. This abstract explores the integral role of yoga within Ayurveda and the synergistic benefits derived from their integration.

In the context of Ayurveda, yoga serves as a powerful therapeutic tool. It helps restore equilibrium to the body's doshas, or bioenergetic forces, facilitating optimal health. Yoga's asanas (postures) and pranayama (breathing techniques) purify the body, improve digestion, and increase vitality while fostering emotional well-being and stress management.

The integration of yoga and Ayurveda is evident in various Ayurvedic treatments, such as Panchakarma, where yoga supports detoxification and rejuvenation. Yoga and Ayurveda provide a holistic approach to wellness, addressing an individual's physical, mental, and spiritual health. By embracing their symbiotic relationship, individuals can unlock the transformative potential of these ancient practices and achieve a state of balance and harmony.



DR. SUVROKAMAL DUTTA

Seinor Expert, Politics and Media

“SPREADING OF UNIVERSAL BROTHERHOOD AND LOVE THROUGH YOGA”

Abstract

How the ancient Indian Knowledge system is helping different societies towards peace and prosperity across the globe. How India was considered a leader of cultural civilisation and ancient philosophy across the world.

Why India was considered to be the mother of all civilisation and philosophies. How India had spread the concept of Universal brotherhood and loved across the world. The role which India needs to play in the modern 21st century for the rekindling of the ancient civilisational concepts of India across the globe and the G20 countries through valuable traditions like yoga, meditation etc., for handling the challenges of modern times.



DR. SAT BIR SINGH KHALSA

Associate Professor of Medicine,
Harvard Medical School

“UNDERSTANDING THE BIOMEDICAL PSYCHOPHYSIOLOGY OF YOGA”

Abstract:

Yoga is an ancient behavioural practice that allows for the development of the skills of mind-body awareness or mindfulness, self-regulation of internal physiological and psychological state, and physical fitness. Yoga is becoming increasingly popular as a behavioural strategy for promoting and maintaining health and wellness, as preventive medicine, and as an adjunct therapeutic intervention.

Research on the benefits of yoga practices on physical, psychological, and spiritual functioning is growing at an accelerating pace. The application of yoga interventions is providing psychophysiological and clinical outcomes that are not currently readily available within the repertoire of modern medicine, including improvements in physical flexibility and self-efficacy, respiratory function, stress reduction and coping, resilience to stress, emotion regulation, mind-body awareness and mindfulness, subjective well-being, quality of life, and life meaning and purpose.

Through its multiple component practices, yoga is therefore providing benefits across a broad spectrum of human functioning from the gross level of muscular functioning to deeper characteristics such as improvements in quality of life and spirituality.



HOLISTIC HEALTH

Exploring the Holistic Approaches to Health
and Well-being

Theme Description

The theme for the G20 S20 summit at IIT Mandi on 23rd June 2023 revolves around "Exploring the Holistic Approaches to Health and Well-being." This conclave on holistic health aims to delve into comprehensive strategies that encompass physical, mental, and emotional well-being. Recognizing that health goes beyond the absence of illness, the conclave will emphasize the integration of traditional and modern healthcare systems, fostering a harmonious balance between evidence-based practices, preventive measures, and personalized care.

Through insightful discussions and exchange of ideas, the conclave will explore innovative approaches, technologies, and policies that promote holistic health, empowering individuals and communities to achieve optimal well-being and a higher quality of life.



SHRI HARSHWARDHAN CHAUHAN

Honorable Minister of Industries,
Himachal Pradesh, India

Brief Bio

Shri Harshwardhan Chauhan: Son of Late Shri Guman Singh Chauhan (Former Cabinet Minister, H.P. State Govt.); born on 14th September, 1964 at Nahan, District Sirmour; B.A., L.L.B.; educated at St. Edward's School, Shimla and H.P. University, Shimla. Elected to the State Legislative Assembly (6th term) in December, 2022; and inducted into Council of Minister as Industries Minister along with portfolios of Parliamentary Affairs & Ayush on 8th January, 2023.

The six-time MLA from Shillai is a law graduate. He was also the chairman estimates committee, general development committee, and petitions committee.



DR. AJAY P. SANKHE

Director, Bhaktivedanta Hospital & Research Institute

“EXPLORING THE SIGNIFICANCE OF HOLISTIC HEALTH: AN EMPHASIS ON SPIRITUAL WELL-BEING”

Abstract:

Holistic health is a comprehensive approach that recognizes the interconnectedness of the body, mind, and soul in achieving overall well-being. This delves into the concept of spiritual health as an integral aspect of holistic health, shedding light on its significance in fostering a balanced and fulfilling life.

The World Health Organization's stance on spiritual health is examined, highlighting its recognition as a fundamental component of human flourishing. Moreover, it explores the need for specialized care and the methods employed to administer effective spiritual care. Drawing upon research conducted at our esteemed hospital, which has been published in reputable journals, we present key findings that contribute to the understanding and implementation of spiritual care.

Finally, we present concise take-home messages that encapsulate the importance of incorporating spiritual well-being in healthcare practices, underscoring the potential for improved patient outcomes and enhanced quality of life.



PROF. RAMA JAYASUNDAR

Head, Department of NMR, All India Institute of Medical Sciences (AIIMS), New Delhi

“AYURVEDA - A HOLISTIC HEALTHCARE SYSTEM PERFECTED OVER TIME”

Abstract:

The world is going through an unprecedented and extraordinary health scenario. Unprecedented because ill health has become a fact of life and many diseases are vying with each other to take the top slot as a serious health hazard. Extraordinary because despite acquiring nuanced details about human biology, availability of sophisticated technologies to study the most subtle structures in the body and technical skills to manipulate body structures in many astonishing ways, diseases are on the increase. In addition to communicable and non-communicable diseases, mental health issues have also become leading causes of disability worldwide.

The world is in fact facing a long-simmering crisis in health and disease care. At the same time, there is also a growing realisation that conventional Western medicine alone cannot handle the mushrooming of diseases and other health issues, underscoring the need for alternative medical systems. All these inevitably brings into focus ayurveda, one of the longest unbroken healthcare system in the world. Can ayurveda with its hoary past and a different approach to health and disease play a role in the contemporary health scenario?. Now is the perfect time to look back, ask these questions and move forward.



DR. UMESH S

Associate, Professor of Psychiatry,
Central Institute of Psychiatry, Kanke, Ranchi

“APPROACHES TO MENTAL WELLNESS: INTERSECTORAL COORDINATION FOR OPTIMAL SERVICE DELIVERY”

Abstract:

Mental health is a vital component of well-being since it empowers individuals to face challenges in life, reach their full potential, and contribute to society. It is a fundamental human right that is required for personal, community, and socioeconomic development. Intersectoral coordination for mental health and wellbeing refers to collaboration and cooperation among various sectors and stakeholders in order to address mental health and wellness concerns holistically.

It entails combined efforts and resources from a variety of areas, including health, education, technology, employment, social services, and community organizations. It seeks to encourage a comprehensive approach to mental health, recognizing that variables outside of the healthcare system have a substantial impact on mental health. It includes sharing knowledge, skills, and resources to create policies, programmes, and services that promote, prevent, and treat mental illness.

Furthermore, the combination of Vedic texts, yoga, and mindfulness meditation, as well as modern technical breakthroughs like big-data analysis of biological signals in the human body, may provide a quantitative perspective on a holistic approach to mental well-being. Integrating traditional wisdom and practices with 21st-century innovations may be beneficial for nurturing mental health and wellness. The aim of the presentation will be to encompass the above-mentioned approaches to mental health and wellness and more importantly, to provide holistic health for all.



DR. RAVINDRA PN

Associate professor, Center for Consciousness studies
Department of Neurophysiology, National Institute
of Mental Health and Neurosciences (NIMHANS)

“EXPLORING HOLISTIC APPROACHES TO HEALTH AND WELL-BEING: A TRIUMVIRATE APPROACH EXPLORING TRIGUNA PERSONALITY, HEALTHY EMOTIONALITY AND SLEEP”

Abstract:

Exploring the universal testable framework to attain optimal health and wellbeing is still in its infancy. However, considering insights from Indian knowledge system, Sankhya philosophy offers a testable theoretical framework for holistic approach to health and wellbeing surpassing geographic and sociocultural biases. A comprehensive framework with multifactorial intrinsic relationship between Mind-Body complex, desires, motives, actions and its relation to environment is illustrated in Triguna model from Sankhya philosophy.

Evidences from affective neurosciences have demonstrated that the healthy emotionality is a skill that could be intentionally cultivated and nurtured, thereby, developing emotional maturity – A preventable factor for many non-communicable disorders of public health concern like depression, addiction etc. Further, there are emerging evidences that dynamics of Triguna bears a relation with components of healthy emotionality. This brings about a positive regulatory changes in sleep and associated downstream physiological activities (immune modulation) facilitating healing, maintaining health and wellbeing.

Thus, a holistic framework exploring a triumvirate approach with triguna based development of a personality with healthy emotionality and proper sleep to health and wellbeing will be discussed. Further, the author also intends to put forth ideas to explore how this model could be implemented at individual, societal and policy level specifically focusing on mental health and wellbeing.



MS. RADHIKA BHALERAO

Founder, Mohan Ashram, Pune

“THE CURIOUS CASE OF WELLBEING: FOUNDATIONS OF HOLISTIC HEALTH ”

Abstract:

In this session, I draw attention to a key component of cultivating well-being: curiosity. In our hyper stimulated world, we have an onslaught of information on ‘how’ and ‘why’ one should be healthy - superfoods, fad diets, crash courses, lifestyle diseases and more. This session instead aims to draw attention towards a more personalized understanding of health - from ‘why’ holistic health to ‘my’ holistic health. In so doing, we will consider the role of intrinsic motivations and rewards, the concept of ‘tapas’ and ‘satmya’, and other key concepts in cultivating positive change sustainably.



DR. RASHMI MATHUR

Chief Operating Officer, Freedom from Diabetes

“TRANSFORMING HEALTHCARE: HARNESSING THE POWER OF DIGITALIZATION FOR HOLISTIC HEALTHCARE MANAGEMENT”

Abstract:

In the era of digital transformation, healthcare systems worldwide are witnessing significant changes and advancements. We at Freedom from Diabetes (FFD), aim to explore the intersection of digital healthcare and holistic healthcare management. Digitalization is reshaping the healthcare landscape, offering unprecedented opportunities to enhance patient care and revolutionize healthcare management.

This article explores the transformative potential of digital health technologies in achieving holistic healthcare management. By embracing digital innovations, healthcare providers can optimize care delivery, empower patients, and improve overall health outcomes. We delve into the key components and technologies driving digital health, including electronic health records (EHR), telemedicine, wearable devices, and artificial intelligence (AI). These technologies enable seamless communication, remote patient monitoring, and personalized care, facilitating a shift towards patient-centric healthcare.

From remote consultations and virtual care to personalized health tracking applications, we showcase how healthcare providers are leveraging digital tools to deliver high-quality, patient-centered care. The article also discusses the challenges and opportunities associated with integrating digital health technologies into existing healthcare systems. Looking ahead, we explore emerging trends and the future of digital healthcare. We examine advancements in telemedicine, AI-driven diagnostics, blockchain for secure data exchange, and the potential of virtual reality in healthcare delivery.

By harnessing the power of digitalization, healthcare can become more accessible, efficient, and inclusive, ultimately leading to improved health outcomes for individuals and communities.

A vibrant graphic illustration for Skill India. It features a large blue silhouette of a human head in profile, facing right. Inside the head, there are various icons: a gear, a paper airplane, a magnifying glass, a star, and a document. To the right of the head, there are more gears and a rocket ship. In the foreground, three stylized human figures (two men and one woman) are standing and looking at a large globe. One man is pointing at the globe, another is holding a laptop, and a woman is standing next to a whiteboard. The background is a dark blue-purple gradient with various geometric shapes and icons.

SKILL INDIA

Addressing the importance of skill development for inclusive growth

Theme Description

The Skill India Mission, initiated by the government in 2015, aims to empower the country's youth by equipping them with the necessary skills to enhance their employability and overall productivity by developing specific skill sets. The National Education Policy 2020 places significant emphasis on skill-based education, enhancing entrepreneurship and service skills among Indian youth. This campaign seeks to cultivate practical industry skills in alignment with the vision of making India self-reliant (ATMA NIRBHAR).

IIT Mandi is dedicated to nurturing skilled professionals in various fields, such as sustainable development, climate-controlled agriculture, AI and robotics, drone technology, cloud computing, cyber-physical systems, manufacturing, and automation. This contributes to national initiatives like Make-in-India and fulfils the vision of our esteemed Prime Minister, Shri Narendra Modi, to establish India as the Skill Capital of the world.

The "Skill India" theme at the G20 | S20 meeting held at IIT Mandi provides a platform for diverse and influential delegates from the public and private sectors to come together for keynote addresses and panel discussions.



PADMA SHRI HEMA MALINI

Member of Parliament, Actor, Director, Producer

Brief Bio

Padma Shri Hema Malini is a politician and actor from India. She has worked as a filmmaker, producer, dancer, director, and politician, among her many accomplishments. She began her acting career in the Tamil film with the movie "Ithu Saathiyam" in 1963. She worked as a co-actress and dancer in the early stages of her career. Sapno Ka Saudagar (1968) was Hema Malini's debut film as an actress in Bollywood, and she went on to star in several popular Bollywood films after that. She has appeared in movies alongside her husband Dharmendra and many other successful actors of that era like Rajesh Khanna and Devanand.

People quickly gave Hema Malini a new title, "Dream Girl," due to her mesmerizing beauty. She has appeared in several films since 1977. Throughout her cinematic career, she has performed a range of roles. She has appeared and worked in around 150 films to date.



DR. VINITA AGGARWAL

Executive Member, National Council for Vocational Education & Training, Ministry of Skill Development, Govt of India.

“CHANGING LANDSCAPE OF VOCATIONAL EDUCATION & TRAINING/ SKILLING IN INDIA: SOME KEY INITIATIVES”

Abstract:

The landscape of vocational education and training (VET) and skilling in India has been undergoing significant changes in recent years. The Indian government has recognized the importance of skill development in driving economic growth, reducing unemployment, and addressing the skills gap in various industries. Given the favourable demographic structure, huge workforce and gigantic unorganized sector, the scope of vocational training and skilling in India is immense and holds great potential for addressing the country's employment and economic development challenges.

Against this backdrop, the GOI envisions to achieve global skill standards for making India “The Skill Capital of the World” and make VET more aspirational, dignified, paying and a life-long career option. To achieve this vision, a roadmap is being developed to effectively address existing and future skill gaps as per Global Skill Needs /Workforce Demands and enhance productivity of the workforce by upskilling, re-skilling and re-aligning.

However, certain challenges existed in the skill ecosystem relating to scale and speed of training programs, quality of training delivered, fragmented governance structure, geographical inequity, and disequilibrium in demand and supply of skilled workforce. Accordingly, a set of major reforms have been initiated in the skill ecosystem to plug the challenges and achieve the vision of VET in India.



DR. NEETA PRADHAN DAS

GM, Strategy and Future of Work,
National Skill Development Corporation (NSDC)

“DEVELOPING FUTURE SKILLS FOR INCLUSIVE GROWTH”

Abstract:

The future of work presents a new world of opportunities, however, the debate on how well we can manage the transition steered by technology enhancement and the changing work contexts to ensure no one is left behind is open ended. This rapidly changing world of work has brought the themes of “skilling”, “future of work” and “inclusive growth” back on the global agenda.

It is widely acknowledged that both individuals and firms are working towards skilling, upskilling and reskilling to stay relevant. While each one is looking to create solutions, the time has come to join hands to develop future skills and make sure everyone has the opportunity to participate in economic growth.



SH. JATIN LAL

MD, Himachal Pradesh Kaushal Vikas Nigam (HPKVN)

“ROLE OF HPKVN IN THE EVOLVING SKILLING ECOSYSTEM ”

Abstract:

Skill development and planning for the future are crucial in today's rapidly changing world. To stay competitive and adaptable, it's essential to continuously acquire new skills and have a clear roadmap for personal and professional growth.

To meet the said objective, Himachal Pradesh Kaushal Vikas Nigam (HPKVN) was incorporated on 14/09/2015 under the Companies Act, 2013 as a State Skill Mission. It is primarily responsible for spearheading the skilling interventions across the state, to deliver quality training aimed at making the trainees employable in the industry as per their needs.

It is implementing the following major projects aimed at imparting training and to strengthen the skilling ecosystem of the state:

- 1) Asian Development Bank funded Himachal Pradesh Skill Development Project (HPSDP)**
- 2) State component under Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**
- 3) SANKALP**



DR. RITA SHARMA

Director, State Council of Educational Research and Training (SCERT)

“EMPOWERING TEACHERS: UNLOCKING INDIA'S POTENTIAL”

Abstract:

The abstract provides an overview of the key points discussed in the speech delivered at the Skill India conclave. It highlights the importance of skilled teachers in the successful implementation of the National Education Policy (NEP) 2020, which emphasizes holistic development and vocational education.

The abstract also stresses the significance of small skill-based trades and the need to change societal perceptions to foster a culture of respect for these trades. It emphasizes the value of skilled artisans and craftsmen, the contributions they make to society, and the importance of creating an ecosystem that supports their growth. By prioritizing teacher training and promoting small skill-based trades, India can unleash the potential of its youth, build a skilled workforce, and achieve prosperity and inclusivity.



PROF. INDERDEEP SINGH

Head Department of Design,
Indian Institute of Technology Roorkee



“PRODUCT DESIGN SKILLS: WAY TO SUCCESS”

Abstract

The success of a product is majorly governed by its design, along with the materials and manufacturing/processing techniques employed for fabrication. A large number of products fail as the design is not appreciated by the customers, whereas there ought to be something special that differentiates a successful product from a failure.

That ‘something special’ are the product design skills of the design team which takes into account the user preferences, applies design thinking and understands the user interface/experience. The talk will highlight the skill-set which can transform an individual into a successful product designer.



PROF. MANISH JAIN

Director RnD, Synopsys Scientist,
Indian Institute of Technology Gandhinagar

“FROM DROPOUTS TO COLLEGE STUDENTS: MAKING SCHOOL EDUCATION MEANINGFUL FOR ALL”

Abstract:

Experiential, Hands-on, Toy based Pedagogy is the Secret Sauce for making education worthwhile for 19,200 Hrs of schooling. Experience the 6 year roller coaster ride of CCL-> Centre For Creative Learning, a unique lab in IIT Gandhinagar with the goal of Making Education Engaging and Inspiring.

CCL has one of the largest STEM channel with 2.5L subscribers and 1CR+ views, and teacher training with 5L+ registrations. CCL has created over 700+ unique recreational toys and highly non-intuitive puzzles, games and models. This experiential pedagogy developed at CCL helps not just in Conceptual Understanding but also Critical Thinking and Creative Problem Solving. Come experience LIVE: Joy of Toy



DR. AKBAR ALI

Assistant Professor in Department of
Agriculture Science Dayalbagh Educational
Institute (DEI)

“SKILLING EDUCATION & ENTREPRENEURSHIP INITIATIVES FOR INCLUSIVE GROWTH AT THE DAYALBAGH EDUCATIONAL INSTITUTE”

Abstract

The Education Policy of Dayalbagh Educational Institute (DEI) is an innovative, comprehensive, and flexible with the mission objective of evolving a complete man (total quality person) which conforms to the concept of total quality management and is geared for the transformation of India to a knowledge society. For the last several years, the DEI has emerged as the largest vocational training provider in the country. DEI has started B.Voc Programme in many trades since 2014-15.

DEI educational system goes beyond a multiple-entry, multiple-exit system, and forms a system with multiple pathways integrated with vocational education and skilling. A lateral entry program allows the brightest students from skilling, vocational and diploma programmes to compete for “lateral entry” into convention higher and technical education programs. DEI has created an eco- system of trans-disciplinary and multi-disciplinary research divisions, which exist in parallel with traditional academic departments.

TECHNOLOGY FOR DEFENCE

Towards enrichment of the defence capabilities
for Aatmanirbhar Bharat

Theme Description

In the recent years, Govt of India has initiated various schemes like “Make in India”, “Start Up India” etc to encourage innovation and entrepreneurship for creating a vibrant ‘Military Industrial Complex’ to propel country towards self-reliance in the field of Defence and Defence Production.

Therefore, to create an ecosystem that fosters innovation and encourage development of ‘Technologies for Defence’, need is engage Academia, R&D institutions, Industries, Startups and Armed Forces to come in active dialogue mode – where free and frank exchange of innovative ideas germinate.

This event, at IIT Mandi, is first and an important step to realise the big dream of ‘Atma Nirbhar Bharat’ in Defence arena.



SH. MUKESH AGNIHOTRI

Hon. Deputy Chief Minister Himachal Pradesh

Brief Bio

Sh. Mukesh Agnihotri (born 9 October 1962) is an Indian politician from Indian National Congress. Since 11 December 2022, he is the first Deputy Chief Minister of Himachal Pradesh. He is also a Member of Legislative Assembly in the Himachal Pradesh Legislative Assembly from the Haroli Constituency in the Una District of Himachal Pradesh.

Son of Late Shri Onkar Chand Sharma; born on 9th October, 1962; Post Graduate Diploma in Public Relations and Advt. & M.Sc. (Mathematics); married to Prof. Simmi Agnihotri; one daughter; Journalist.

Senior Correspondent, 'Janasatta' (Indian Express Group) for ten years at Shimla and three years at Delhi; Member : Press Accreditation Committee (H.P. Govt.), ii) State Press Advisory Committee, iii) Press Gallery Committee State Legislative Assembly, and iv) Govt. Pahari Language Committee; General Secretary: i) Press Club, Shimla ii) PCC; and Chairman, Media Cell PCC.



PADMA SHRI DR. SATISH KUMAR

(Padma Shri), Chairman ARMREB

“DRDO-ACADEMIA PARTNERSHIP- OPPORTUNITIES & CHALLENGES”

Brief Bio:

Dr. Satish Kumar is a distinguished aerospace Scientist of national repute with outstanding contribution to the missiles and strategic systems. He has a unique distinction of leading important strategic establishments over a decade and laying the foundation for futuristic technological growth in critical areas.

A graduate in Aeronautical Engineering from Punjab Engineering College, Chandigarh. He obtained Master's degree in Aerospace from IIT, Kanpur and Doctorate in Mechanical Engineering from REC, Warangal. He played a key role in the development of first ever indigenously developed Liquid propellant (LP) rocket engine for Prithvi missile. He has done pioneering work in the field of Supersonic combustion in India and its related test facility at DRDL, Hyderabad in collaboration with premier institutes.

This has culminated in a major hypersonic technology development program today. He has been honoured with many awards for his outstanding contributions which include the Technology Award by Ministry of Defence, Prime Minister's Special Award for Development of Strategic Weapons and Performance Excellence award by DRDO.



DR. VIKAS KUMAR

Chairman ARDB

“STRUCTURE INTEGRITY & NEXTGEN LIFE CYCLE MANAGEMENT OF DEFENCE PLATFORMS – AN INTEGRATED PERSPECTIVE AND RESEARCH OPPORTUNITIES FOR ACADEMIA UNDER AR&DB / DRDO”

Abstract

In this talk Dr. Vikar kumar will also sensitise audience about funding & CoE opportunities available to academia under various DRDO schemes. A model based on ‘Consortiums-of-Excellence’, integrating academia-MSMEs-R&D Labs has been suggested to develop advanced technologies and thus making it available to Defence Services in fast-track manner by enhancing low to high TRLs.

As per the worldwide experience, academia can play a very important role in developing advanced defence technologies, leveraging its built-in autonomy related to collaborations – both national & international levels, and most importantly backed by motivated young researchers with multidisciplinary mindset, inter-department research culture and available start-ups & incubation centres within the campus. Few latest initiatives taken by the speaker at various institutes to bring out these strategic technologies for benefit of Defence Services and other spin-off sectors will also be highlighted.



DR. PRATEEK KISHORE

Director TBRL

“DETONICS, SHOCK, BLAST & IMPACT: RESEARCH OPPORTUNITIES IN TERMINAL BALLISTICS TOWARDS AATMANIRBHARTA”

Abstract

Effectiveness of the warheads and munitions in imposing required effect on the target is an area of research given the increase in its range, accuracy and rate of fire. Terminal ballistics can be broadly classified into four major research verticals namely, detonics, shock, blast and impact.

Increased effectiveness of the warheads and munitions require characterisation of different types of materials, interface behaviour of materials under different conditions and projectile- target interactions. These events are very fast (micro-second to milli-second) and are single shot destructive phenomena. Diagnostics require special sensors and evolving customised test methodologies. The talk would cover potential research areas for self-sufficiency in these critical technologies.

**DR. PRAMOD
K. SATYAWALI**

Director DGRE



“MOUNTAIN HAZARD MANAGEMENT IN INDIAN HIMALAYA, AN OVERVIEW, CHALLENGES AND TECHNOLOGICAL REQUIREMENTS”

BioSketch

Dr Pramod Kumar Satyawali, Scientist ‘G’ is appointed Director of Defence Geoinformatics Research Establishment (DGRE) w.e.f 30th Sep 2021. Born on 30th June 1968 in Almora, Uttarakhand. He did M.Sc (Physics) from G.B. Pant University of Agriculture and Technology, Uttarakhand in 1991 and Ph.D in Physics from Pune University, Pune in 2010.

He joined DRDO in July 1991 as Scientist ‘B’ at HQ SASE Manali (Now DGRE) and served DRDO dedicatedly for three decades in the area of snowpack modeling, snow metamorphism, thermal conductivity modeling, snow characterization, snow acoustics, radar-based snow pack stratigraphy studies and low grade geothermal energy. He has developed ‘Modeling and Simulation of Snow’, for issuing of Hazard warnings to our troops in collaboration with Swiss Federal Institute for Snow and Avalanche Research at Davos, Switzerland. This work interfaced with remote Automatic Weather Station that provides Hourly-Simulation of snowpack is used by many countries with more than 500 citations.



DR. B N ACHARYA

Head Tech. Cord, DRDE

“CHEM-BIODEFENCE AND DRDE”

Abstract

Defence R&D Establishment (DRDE) has evolved as a centre of excellence with technological core competence in defence against chemical and biological warfare agents. The laboratory has many distinctions of being the only laboratory in India having OPCW (Organization for The Prohibition of Chemical Weapons) designation for off-site chemical analysis of environmental and biomedical samples for CW agents.

Due to its unique mandate, DRDE has developed several products and technologies for detection, protection, and decontamination of chemical and biological agents. DRDE will maintain a network of collaborative scientific expertise related to CBRN threats and countermeasures. DRDE will expand collaboration with academia and industries, focusing on understanding and responding to the intersection of innovation against chem-bio risks. In this lecture, the product portfolio and collaborative research areas of DRDE will be discussed.



TECHNOLOGY FOR SOCIETY

"Highlighting the role of technology in fostering the societal development."

Theme Description

The one-day conclave on the "Technology for Society" theme at the G20 | S20 meet held at IIT Mandi provides a platform for diverse and influential delegates from the public and private sectors to come together for deliberations on the role of technology in fostering the societal development.

Expert lectures will focus on the description of technological details and implementation strategy of successful technologies which has brought grassroots changes in terms of improving access to healthcare facilities, clean water availability, energy access etc. The leaders involved in the successful implementation of these technologies will present a roadmap for the implementation of such transformation in all G20 nations. A distinguished panel of heads of technological institutions of higher learning will brainstorm to devise a scalable strategy for leveraging the technology and resources available in these institutions for solving societal challenges.



SHRI SHIV PRATAP SHUKLA

Hon. Governor Himachal Pradesh

Brief Bio:

Shri Shiv Pratap Shukla was born on 1.04.1952 in the village Rudrapur Post-Khajni of Gorakhpur district. Currently, he is the Governor of Himachal Pradesh. Sh. Shukla was elected as a member of Legislative assembly of Uttar Pradesh in 1989.

He was elected as Member of the Legislative Assembly four consecutive times in 1989, 1991, 1993 and 1996. He was appointed a state minister in Bharatiya Janata Party (BJP) led governments in Uttar Pradesh. He was appointed the cabinet Minister for Jails in 1996–1998 under Bharatiya Janata Party–Bahujan Samaj Party a short-lived coalition government of Mayawati & Kalyan Singh & later on appointed Minister for Rural Development in year 1998–2002 under BJP government of Rajnath Singh. He was the Minister of State for Finance in the First Modi ministry.



PROF. ASHUTOSH SHARMA

Guest of Honour
S20 Chair and Former DST Secretary

Brief Bio:

Prof. Ashutosh Sharma is a visionary academician who has made exceptional interdisciplinary contributions in nanosciences and nanotechnology fields and currently serving as Chair of S20 and President of INSA. From 2015-2021, he served as the Secretary, Department of Science and Technology, Government of India.

He is also the Institute Chair Professor & Founding Coordinator of DST Thematic Unit of Excellence on Soft Nanofabrication and Chairman of Center for Environmental Science and Engineering at IIT Kanpur since 2006. He is a recipient of the prestigious Shanti Swarup Bhatnagar award in engineering sciences for his "original pioneering contribution to the understanding of the behavior of thin films and other highly confined nanoscale systems." He was selected as the President of Indian National Science Academy in 2022.



PROF. VIRENDRA KUMAR VIJAY

Centre for Rural Development and
Technology IIT Delhi, National Coordinator,
Unnat Bharat Abhiyan – A flagship program of
Ministry of Education, Govt of India

“UNNAT BHARAT ABHIYAN: TRANSFORMING HIGHER EDUCATIONAL STUDENTS/ FACULTY AND VILLAGES FOR ATMNIRBHAR BHARAT THROUGH SOCIETAL INTERVENTIONS”

Brief Bio

Prof. Vijay is actively engaged in cutting-edge research in rural energy technologies for developing rural communities and has made a great contribution to the academia, industry and society through research and education. He is working for a sustainable energy supply from locally available resources in villages.

Prof. Vijay's work on biogas technology, particularly biogas Upgradation is well recognized at global level. He is also the national coordinator of two major national programmes of the Govt. of India, Unnat Bharat Abhiyan (UBA), that aims to utilize knowledge institutions of the country to help villages in their development and Scientific Utilisation through Research Augmentation (SUTRA) – Prime products from Indigenous Cow (Panchgavya) of ministry of science technology which will help in reinstating the cow based rural economy supported by critical scientific validation and research. He has about above 150 publications in journals and conferences, 7 books and one lab manual to his credit.

Prof. Vijay has successfully developed and patented Biogas Enrichment and bottling for Vehicular Application and transferred it to the industries and field. He is fellow life Member of various scientific and professional societies/ bodies. He is also Indian coordinator of Sustainable Energy and Environment Forum (SEE Forum) working in Asia with head quarter in Japan and General Secretary of Biogas Forum (India). Prof. Vijay has received Prakriti Bharati National Award in 2005 for S&T Application for developing biogas enrichment and bottling technology for rural sector and many more. He also headed CRDT, IIT Delhi from July 2015 to Sept 2019.



PADMA SHRI JANAK PALTA MCGILLIGAN

Founder Director, Jimmy McGilligan
Centre for Sustainable Development

“SOCIO-ECONOMIC DEVELOPMENT OF SOCIETY WITH SUSTAINABLE TECHNOLOGIES: HANDS-ON LEARNING AND EXPERIENCE”

Brief Bio

Dr. Janak Palta McGilligan is an Indian Padma Shri recipient social worker and the founder-director of Jimmy McGilligan Centre For Sustainable Development, an Indore-based non governmental organisation working for sustainable community development. She is also a former founder-director of Barli Development Institute for Rural Women. Has been member of the management board of Chitrakoot University. Has also been associated with UNICEF as resource person for the National Institute of Public Cooperation and Child Development IIM Indore, IIT BHU, Prestige Institute of Management Indore, Indus World School, Choithram International School, Pragya Girls School, MGM Medical College, Indore Dental College and Hospital. McGilligan has written a book on Barli Development Institute for Rural Women. which has been published by GR Books in Oxford, London.



DR. BISWAROOP ROY CHOWDHURY

Member, Ayush Ministry Expert Panel

“GRAVITY AS MEDICINE FOR REVERSAL OF CHRONIC KIDNEY DISEASE”

Brief Bio:

Dr. Biswaroop Roy Chowdhury is an engineering graduate with a post-graduation in Diabetes and PhD (Hon.) in Diabetes and Chronic Kidney Disease.

In the field of Medical Engineering his innovations include mathematical model of nutrition, now hugely popular the DIP diet" and the law of gravity and heat-based "GRAD system" to reverse Chronic Kidney Disease. He is the author of 25 books, and successfully runs the HIIMS group of hospitals with major activities in India, Vietnam and Malaysia.



PROF. MANOJ GAUR

Director, Indian Institute of Technology Jammu

Brief Bio:

Professor Manoj Singh Gaur assumed the charge of founder Director of Indian Institute of Technology, Jammu on June 29, 2017. Before joining IIT Jammu, he was a Professor and Head of the Department of Computer Science and Engineering at Malaviya National Institute of Technology (MNIT) Jaipur, India.

Prof. Gaur also served as Professor-In-Charge (Coordinator) of IIIT Kota, which was mentored by MNIT Jaipur. He has been Dean, Students Affairs, and Head, Central Computer Centre at MNIT Jaipur as well. He also served as Chairman, Senate UG Board at MNIT Jaipur. He completed his Master's degree in Computer Science and Engineering from the Indian Institute of Science Bangalore and Ph.D. from the University of Southampton, UK.

In his teaching and research career of more than two decades, he has been an Investigator of several research projects in the area of Information Security and Networks on Chip. He has been part of the core group of Project ISEA (Information Security Education and Awareness) which is a major multi-institutional project in the domain of Information Security in India.

His current research interests include Computer and Network Security (Network Attack Models and Countermeasures), Mobile Platform Security, Cloud Security, Malware Analysis, Networks-on-Chip, and Software-defined networking (SDN).



RENEWABLE ENERGY

Advancing Skills and Entrepreneurship in the PV System Circular Economy

Theme Description

The goal of this session is to shed light on the critical role of skill development and entrepreneurship in unlocking the potential of renewable energy, specifically in the circular economy of photovoltaic (PV) systems. With India's ambitious goal of achieving a significant share of renewable energy in its overall energy mix, this session will investigate how developing skilled professionals and encouraging entrepreneurship can accelerate PV system adoption and growth. The discussion will focus on the challenges and opportunities for large-scale deployment of renewable energy sources, particularly solar energy.

It will delve into the significance of circular economy principles, emphasizing resource optimization, recycling, and sustainable practices, in order to ensure the long-term viability and sustainability of the PV industry in India. The session will highlight solutions for increasing sustainable energy availability and opportunities for skill-building and entrepreneurial endeavors in this transformative sector to all G20 nation citizens through insightful discussions with industry leaders, academic experts, administrators, and decision-makers from various Government bodies.



SH. SUKHVINDER SINGH SUKHU

Hon'ble Chief Minister, Himachal Pradesh

Brief Bio

Sh. Sukhvinder Singh Sukhu is the present Hon. Chief Minister of Himachal Pradesh. He is a 4-time and incumbent MLA from Nadaun assembly constituency of Himachal Pradesh. He also served as the president of the Himachal Pradesh Congress Committee of the Indian National Congress from 2013 to 2019.

By education, he is a lawyer, having been graduated from Himachal Pradesh University. He did his graduation from the Center of Excellence, Sanjauli, where he started his political journey as well. He raised through the ranks of NSUI, and state Youth Congress; finally becoming the Chief Minister of the hill state.

Mr. Sukhu is a grassroots politician who has wide organizational experience in the hill state.



SH. BHUPINDER SINGH BHALLA

Secretary, Ministry of New and
Renewable Energy

Brief Bio

Sh. Bhupinder Singh Bhalla holds an honors degree from Shri Ram College of Commerce, an ICWA, and an MBA from the Indian Institute of Management, Bangalore. Prior to joining the Indian Administrative Service (IAS) in 1990, he spent three years navigating corporate finance.

He has worked in key positions at the Government of India as well. As Director (Banking), Ministry of Finance, he played a role in several major initiatives in India's banking sector. He was then deputed as Counsellor (Economic) in the Indian Embassy in Washington, DC, USA, where he was actively involved in India-US bilateral engagements in finance, energy, and agriculture for over three years. He later worked in the Ministry of Commerce and Industry as Joint Secretary, and then as Additional Secretary, for over five years, where he was responsible for India's trade relations with the neighboring countries and Iran, as well as the worldwide export promotion, world-wide, of engineering products. During his tenure, he also worked as Director General, Trade Remedies, and led the India Brand Equity Foundation as its CEO.

He is currently responsible for planning and executing India's ambitious goals for the renewable energy sector as the Secretary of the Ministry of New and Renewable Energy.



DR. KINGSHUK BANERJEE

Director, Hitachi India

Brief Bio

Dr. Kingshuk is the Director of Hitachi India Pvt. Ltd. and heads the R&D division in India.

Hitachi is committed to societal development and the creation of social, environmental, and economical values for its customers and eco-system partners. It is actively engaged in developing an ecosystem of government, industry, and universities for business alliances in India and around the globe. Kingshuk leads the effort in India through quantitative research and innovation.

Prior to Hitachi, Kingshuk was a partner in IBM Consulting, where he led the delivery of Cognitive-Business-Decision-Support (CBDS) services worldwide. A computer science graduate by training, he earned his doctorate in engineering management from George Washington University, USA. Kingshuk is certified by Cornell and Harvard Universities in executive leadership and change management.



PROF. K. K. PANT

Director, IIT Roorkee

Brief Bio

Prof. Kamal Kishore Pant received his PhD (Chemical Engineering) degree from the Indian Institute of Technology Kanpur in 1997. He took over as the Director of the Indian Institute of Technology Roorkee on October 12, 2022. Prof. Pant previously held the positions of Petrotech Chair and Federation of Indian Petroleum Industries (FIPI) Chair Professor, Chairman GATE & JAM, Chairman, Library, Head of the Department of Chemical Engineering, and Dean Faculty at the Indian Institute of Technology Delhi.

He is Adjunct Faculty at the University of Saskatchewan in Canada. He is also a Fellow of several national and international academies, which include the National Academy of Science India (NASI) and the Indian National Academy of Engineering (INAE). His area of interest is futuristic technologies of national and international importance, e.g., hydrocarbon conversion processes, biomass conversion and biofuel production, CO₂ conversion technologies, e-waste, and plastic management.



PROF. NARINDER MEHRA

Vice-president INSA

Brief Bio

Dr. Narinder Mehra is the former Dean (Res) and National Chair of the prestigious All-India Institute of Medical Sciences (AIIMS) New Delhi and currently holds the Honorary position as Emeritus scientist. He is also mentor to SRL Laboratories and the Reliance Life Sciences.

He is an internationally acclaimed expert in the area of Transplant Immunology and Clinical Immunogenetics, for which his singular efforts culminated in establishing this specialty for the first time in India in the 1980s, thus facilitating solid organ and hematopoietic stem cell transplants (HSCT) in the country.

Prof Mehra has been the President of the Indian Immunology Society, four terms councilor for the International Union of Immunological Societies, co-chair of the IUIS Gender equality committee and founder Secretary-General of the Federation of Immunological Societies of Asia-Oceania.

He is a Fellow of several science academies including the Indian National Science Academy, Member Honoris Causa of the Hungarian Academy of Sciences and 'Fellow' of The World Academy of Sciences (FTWAS).



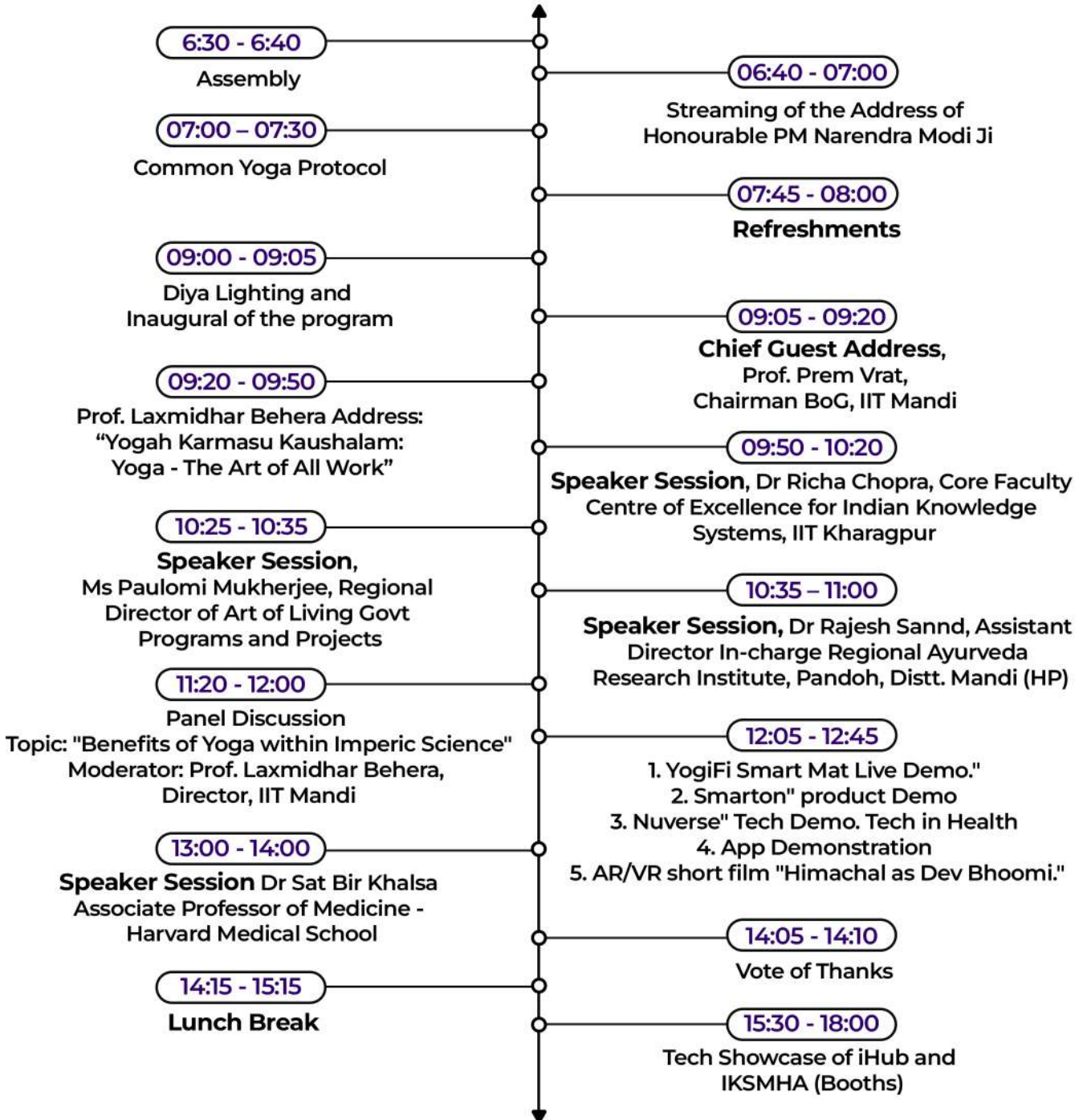
वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

INTERNATIONAL YOGA DAY

"CELEBRATING THE PHYSICAL AND MENTAL HEALTH BENEFITS THROUGH YOGA"

EVENTS TIMELINE





भारत 2023 INDIA

SCIENCE 2023 INDIA

वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

HOLISTIC HEALTH

"EXPLORING THE HOLISTIC APPROACHES TO HEALTH AND WELL-BEING"

EVENTS TIMELINE





Skill India
कौशल भारत - कुशल भारत

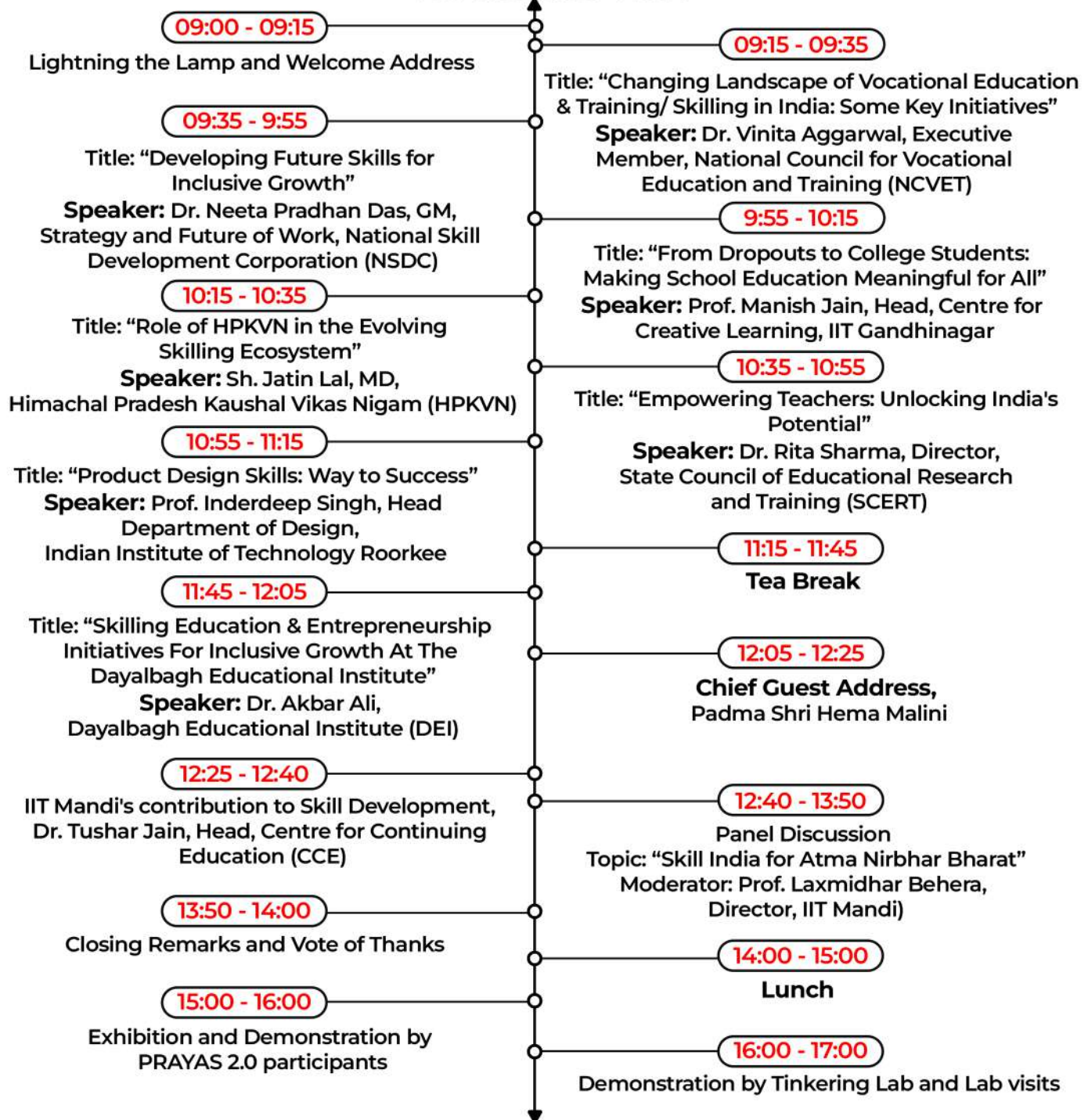
वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

SKILL INDIA

"ADDRESSING THE IMPORTANCE OF SKILL DEVELOPMENT FOR INCLUSIVE GROWTH"

EVENTS TIMELINE





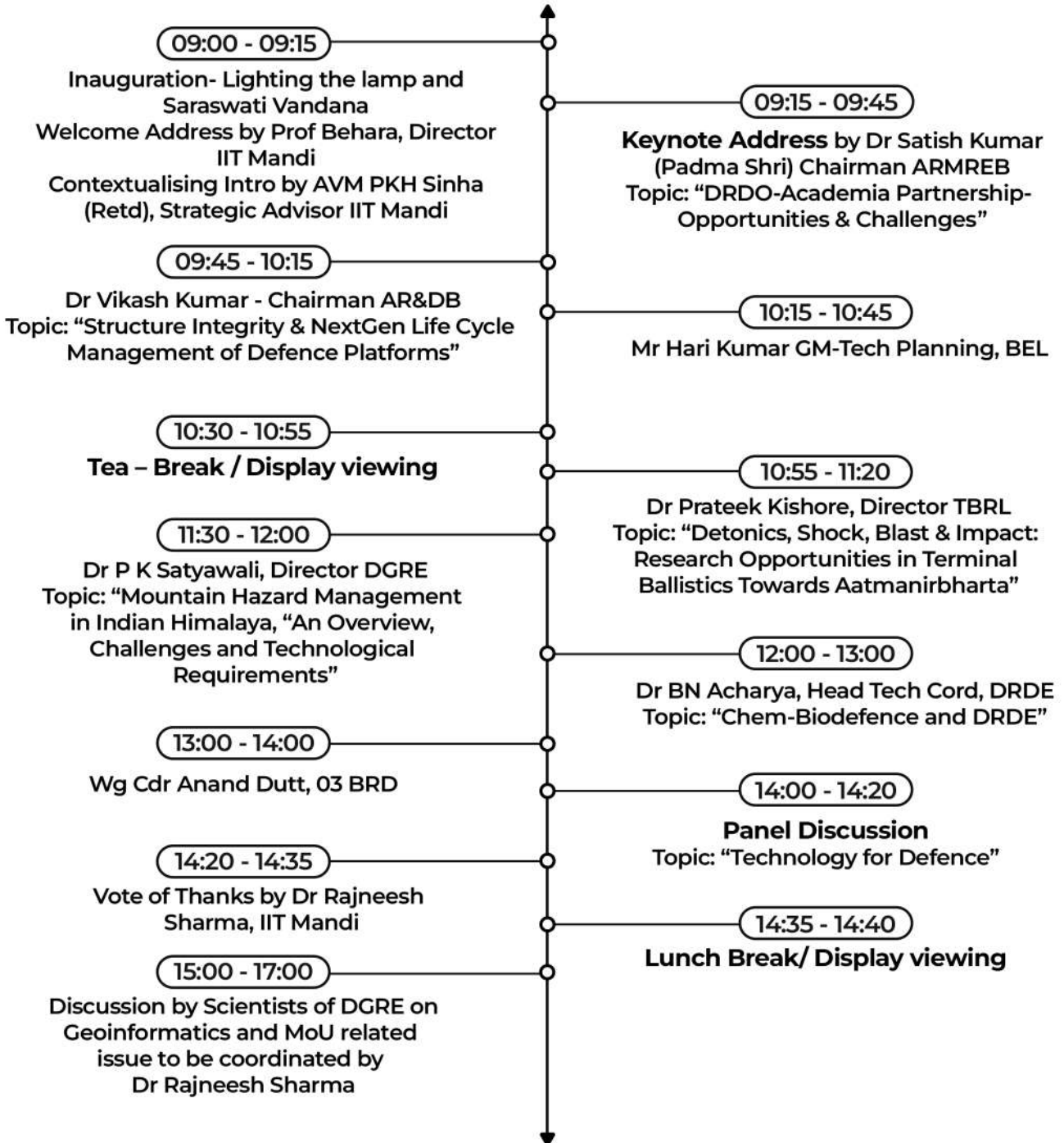
भारत 2023 INDIA
वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

TECHNOLOGY FOR DEFENCE

“TOWARDS ENRICHMENT OF THE DEFENCE CAPABILITIES FOR AATMANIRBHAR BHARA”

EVENTS TIMELINE





भारत 2023 INDIA

SCIENCE 2023 INDIA

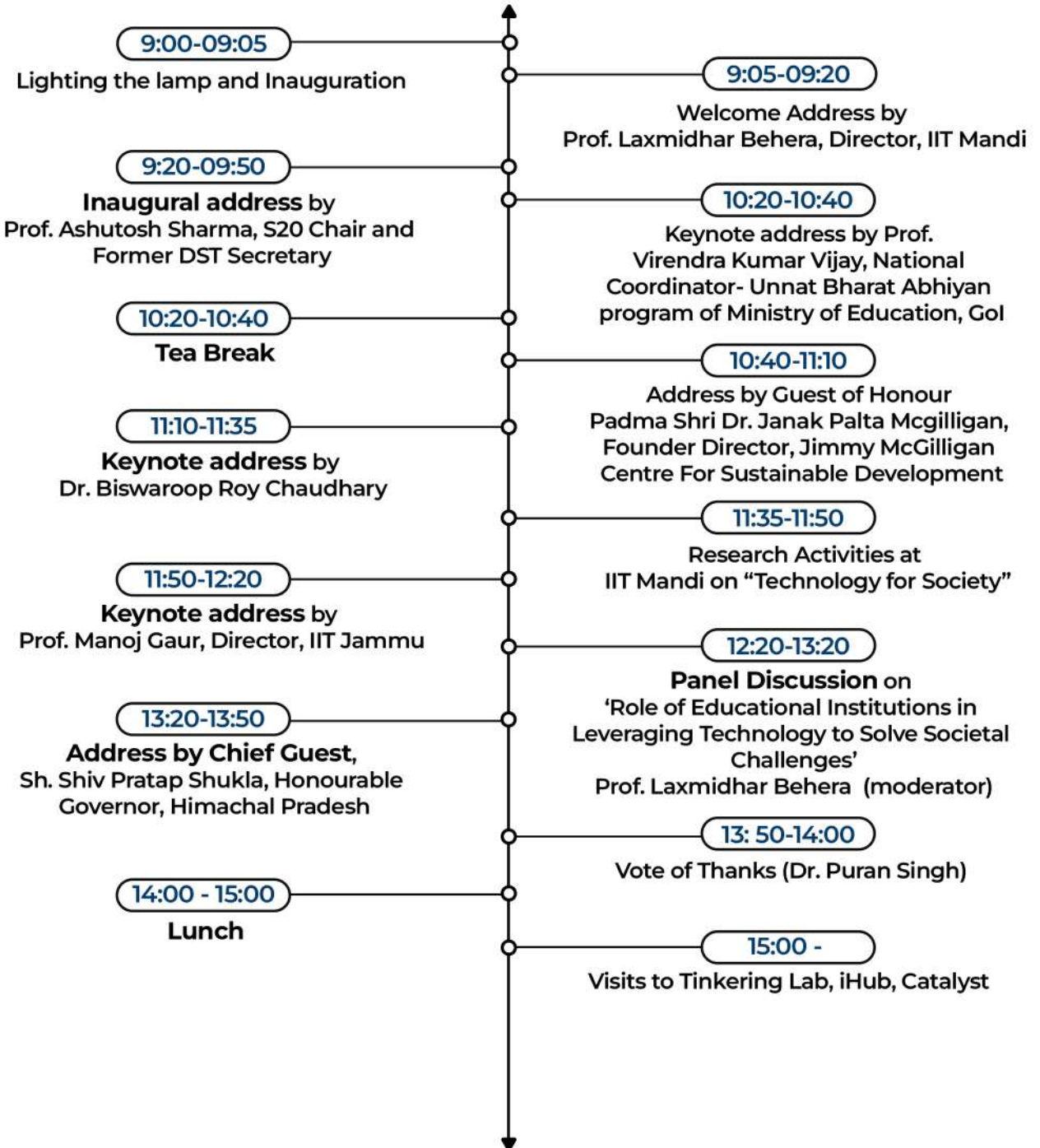
वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

TECHNOLOGY FOR SOCIETY

"EXPLORING THE HOLISTIC APPROACHES TO HEALTH AND WELL-BEING"

EVENTS TIMELINE





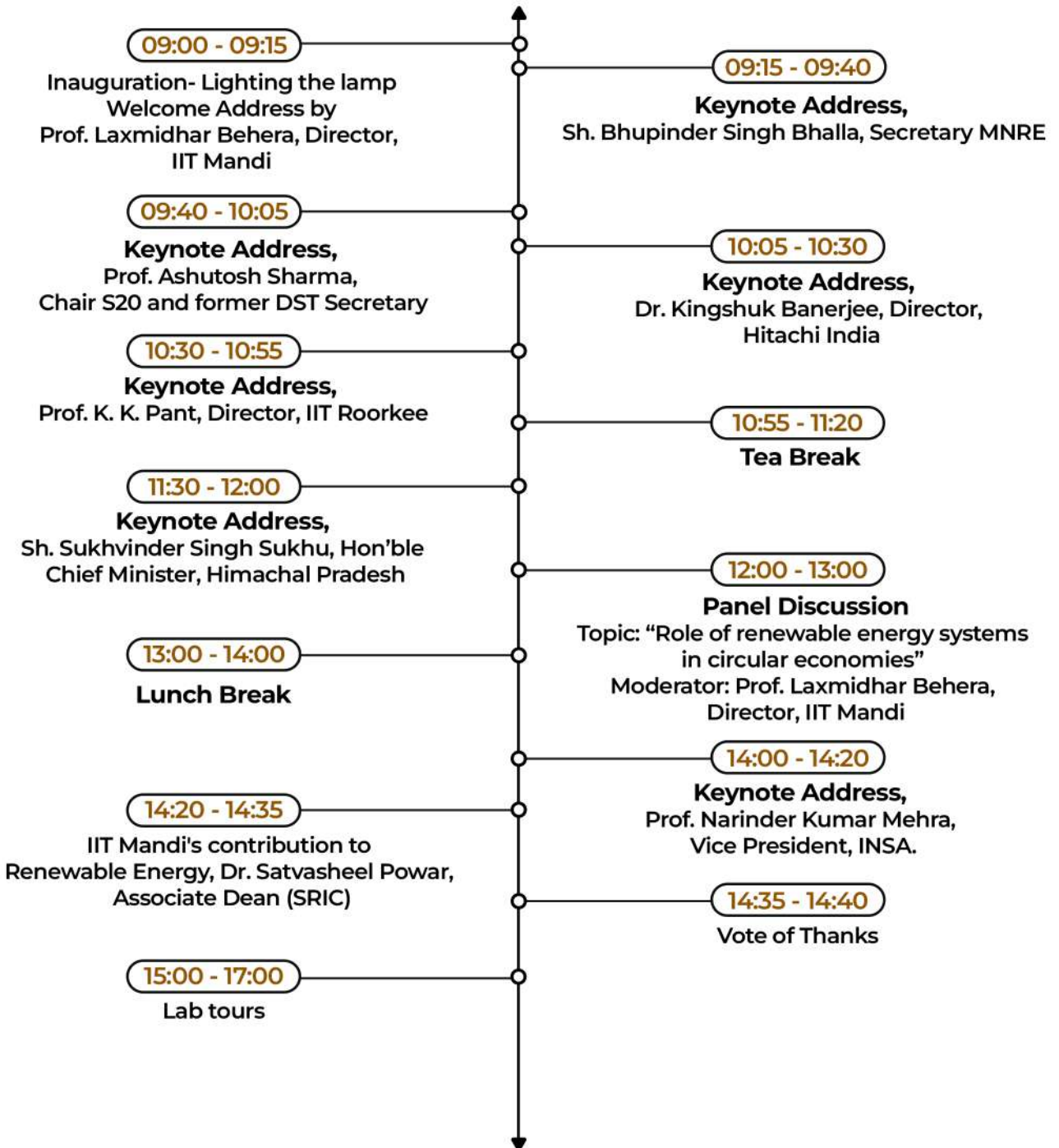
भारत 2023 INDIA
वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

RENEWABLE ENERGY

“ADVANCING SKILLS AND ENTREPRENEURSHIP IN THE PV SYSTEM CIRCULAR ECONOMY”

EVENTS TIMELINE





IIT MANDI

invites to



भारत 2023 INDIA

SCIENCE 2023 INDIA

वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

G20 || S20

MEET 2023

21st June - 30th June

EVENTS SCHEDULE



**21ST
JUNE**

- **DAY 1**
World Yoga Day

- **DAY 2**
Holistic Health

**23RD
JUNE**



**25TH
JUNE**

- **DAY 3**
Skill India

- **DAY 4**
Technology for Defence

**27TH
JUNE**



**29TH
JUNE**

- **DAY 5**
Technology for Society

- **DAY 6**
Renewable Energy

**30TH
JUNE**

