



International Conference on

# Open and FAIR Data Ecosystem Principles, Policies, and Platforms

11th - 13th September 2023  
IIC, New Delhi

## Knowledge Partners

CODATA- Committee on Data of the  
International Science Council (ISC), Paris  
Open Health Systems Laboratory (OHSL), USA

## Mentors

Amb. Shyam Saran, President, IIC  
Prof. Ajit Kembhavi, PI, PKC  
Prof. O. P. Kalra, Vice Chancellor, SGT University

## Organisers

India International Centre (IIC), New Delhi  
Indian National Science Academy, India  
Pune Knowledge Cluster (PKC), Pune  
Shree Guru Gobind Singh Tricentenary  
(SGT) University, Gurugram



## ABOUT THE CONFERENCE

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Rapidly evolving digital technologies are transforming the way in which research is conducted globally, with data science becoming the most important element across all domains. But the extensive use of data science brings its own challenges. A major issue in data science is in the analysis of vast quantities of heterogeneous data, both in formats and content. To mitigate this and numerous other anticipated issues, nations, regions, and disciplines have begun to build research infrastructures to aid data management, stewardship, and analysis. Open science policies and practices have further galvanized these developments by various key stakeholders. Understanding these policies, adapting them to domain-specific and regional requirements and revising them with changing technologies and aspirations, and developing suitable practices are crucial for realising the full potential of data analysis.

This conference will provide a forum for sharing expert insights on the above issues and enable intense community interaction to better understand global trends. Conclusions from the meeting should be useful in identifying existing impediments in some of the major socio-economically relevant disciplines, and mobilising efforts for better data harnessing and data capture. Most importantly, the meeting should help significantly to chart a roadmap, suitable for the Indian ecosystem, to guide the further course of action on Open Data.

The themes included in the conference will broadly focus on open science and open data, FAIR, research data management, data ethics, data licensing, data stewardship, data science education and training, data research infrastructures and data platforms.

A special reference will be made to four verticals: National Health, Agri-Tech, Ocean & Atmospheric Science, and Digital Humanities, which includes Social Sciences.



## NATIONAL HEALTH

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India's healthcare sector is highly dependent on data-driven decision making. While it has great scope for further growth and expansion, it is currently hampered by inadequate policies. It would help to take appropriate measures urgently, particularly in areas of health data management and exchange, with a focus on patient data privacy and security, for future sustainability.



## AGRI-TECH

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The agri-tech business in India is expected to grow significantly in the coming years as it is driven by rising food demand and a need to improve agricultural productivity. Data science and machine learning offer valuable support to the industry as there exist possibilities for extensive data analysis. The important challenges in the field can be better addressed by learning from successful models existing in global ecosystems.



## OCEAN & ATMOSPHERIC SCIENCE

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Recent initiatives like Blue Economy have given a great boost to research and innovation on marine resources. Having a vast coastline (7500 km), India itself has several research institutes for ocean sciences and a significant population thriving on ocean-based industries like fisheries, shipping, etc. These establishments are heavily dependent on data for routine operations and produce significant data sets on their own. Managing the enormous data sets coming from global research and business, and using them for addressing challenging problems will require advanced applications of data science. This meeting will help in bringing experts together, to discuss and perhaps resolve some of these key impediments.



## DIGITAL HUMANITIES

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Technological advancements are rapidly remodelling Digital Humanities, which includes disciplines like social sciences, and cultural & natural heritage. Digital methodologies and platforms foster interdisciplinary collaboration to resolve complex issues and/or develop innovative solutions while AI/ML-mediated proficient analysis provides better insights into social phenomena. In studies of cultural & natural heritage, data science has led to many positive changes to promote newer avenues of research. However, a wide chasm exists in the field arising from highly heterogeneous sources of data in terms of both formats and contents. This conference aims to provide insights to researchers and stakeholders on how to organise and resolve data using digital technology. It will help formulate data capture and storage methods that are compatible with multiple sources and to develop more effective methods for preservation, vigilant maintenance, and exhibition.

## INTERNATIONAL ADVISORY COMMITTEE\*

**Chair: Prof. Ajit Kembhavi**

Name	Country	Designation
Dr. Anurag Acharya	India	Distinguished Engineer, Google scholar developer, Google, California
Prof. Toshihiro Ashino	Japan	Member of Science Council of Japan (SCJ) & Secretary of the International Data Committee and the chairperson of the CODATA Sub-Committee of SCJ from 2018, Professor at Toyo University, Tokyo
Dr. J. K. Bajaj	India	Chairman, Indian Council of Social Science Research, New Delhi
Dr. Vint Cerf	US	VP, Chief Internet Evangelist, Google, California
Dr. Sindura Ganapathi	India	Visiting PSA Fellow Office of the Principal Scientific adviser to the GoI
Prof. A. B. García	South America	Chair, AmeliCA, Open Knowledge for Latin America and the Global South, Autonomous University of Mexico State UAEM, Toluca
Dr. Simon Hodson	France	Executive Director, CODATA International, Paris
Prof. E. D. Jemmis	India	Honorary and Emeritus Professors, Theoretical Chemistry, Indian Institute of Science, Bengaluru
Dr. (Mrs.) N. Kalaiselvi	India	Director General, Council of Scientific & Industrial Research, New Delhi
Prof. Ajit Kembhavi	India	Principal Investigator of the Pune Knowledge Cluster, and Chair, CODATA National Committee, & Executive Member, CODATA International, Pune
Shri R. S. Mani	India	Deputy Director General (Scientist-G), New Delhi
Prof. Virginia Murray	UK	Head of Global Disaster Risk Reduction, UK Health Security Agency and Co-Chair the IRDR Data project, London
Dr. Himanshu Pathak	India	Director General, Indian Council of Agricultural Research, New Delhi
Dr. M Ravichandran	India	Secretary, Ministry of Earth Sciences
Dr. Alena Rybkina	Russia	Chief of the Innovation Technologies Sector of the Geophysical Centre of the Russian Academy of Sciences (GC RAS), Moscow
Prof. M. Sami	India	Centre for Cosmology and Science Popularisation (CCSP), SGT University, Gurugram
Shri K. N. Shrivastava	India	Director, India International Centre, New Delhi
Dr. Anil Srivastava	US	Open Health Systems Laboratory, USA
Dr. Neeta Verma	India	Former DG, National Informatics Centre, New Delhi

\*Members of the committees and keynote speakers are yet to be confirmed.

## CONFERENCE DIRECTOR

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**Dr. Usha M. Munshi, IIC, New Delhi**

## ORGANISING SECRETARY

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**Prof. Prabir G. Dastidar, SGT University, Gurugram**

**Dr. Priya Nagaraj, PKC, Pune**

## PROGRAM COMMITTEE

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Name	Organisation
Dr. Jagdish Arora	National Board of Accreditation (NBA), New Delhi
Prof. Prabir G. Dastidar	SGT University, Gurugram
Shri Rajesh Gera	NIC, New Delhi
Dr. Sridevi Jade	CSIR-4PI, Bengaluru
Prof. J. P. Singh Joorel	INFLIBNET Centre, Gandhinagar
Dr. Sachidanand Joshi	IGNCA, New Delhi
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Dr. G. Mahesh	CSIR, New Delhi
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Dr. Priya Nagaraj	PKC, Pune
Shri. N.V. Sathyanarayana	Chairman & MD, Informatics (India) Ltd., Bengaluru
Dr. Anindya Sinha	NIAS, Bengaluru
Shri G. Srinivasan	Director, Department of Science & Technology, India



## NATIONAL ORGANISING COMMITTEE

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### Planning and Execution

Prof. Prabir G. Dastidar

Prof. Ajit Kembhavi

Dr. Usha M. Munshi

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Dr. Ritika Ganguly

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### Registration and PR Management

Ms. Manjari Desai (Corporates)

Ritika Ganguly

### Publication and Website Production Management

Ritika Ganguly

# SCOPE OF THE CONFERENCE

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## Plenary lectures:

National Health | Agri-Tech | Ocean and Atmospheric Science | Digital Humanities

## Breakout Sessions on:

### Implications and Implementation of open data policies

- Cooperation and management for research data policies at international, national and institutional levels
- Incentives and metrics for research-oriented data sets/ data licensing and Database copyrights /Data ethics
- Responsible data collection practices
- Data policies towards the next-generation open science community

### Business models for Open Science, FAIR data, research infrastructures and data stewardship

- Case studies highlighting any type of FAIR metrics or certifications.
- Models that offer insight into data FAIRification for integration and FAIR-linking of public data with proprietary data in public-private partnerships (PPPs)
- Examples of current business models that offer data stewardship solutions with advantages for data-intensive sectors
- Examples of current business models exemplifying breaking down barriers for data reuse and offering incentives to get over market failures

## Open Data

- Government data openness
- Data influenced policy decisions
- Academic Data generation and availability beyond publications

## Standards and disciplinary practices in data applications

- Practices of FAIR data, interoperability, data integration in multi-disciplinary research

## Data-driven practices supporting core global issues

- Data influence in SDGs (Sustainable Development Goals)/ disaster risk reduction/ resilient cities/ biodiversity/ climate change adaptation/ agriculture/ hydrology/ research areas in green energy

## Data-driven scientific discoveries and decision-making

- Explorations in data to evidence
- Initiatives in data sharing/ dissemination in India
  1. Status of data science policy in India (Current challenges/ reforms/ facilitating entities)
  2. Putting down structure for Future of data sharing method and standards that are relevant within and outside the country.

## Data Science Education and Training

- Initiatives/ reforms/ openings

## Building capacity for harnessing digitalization

- Increasing and creating avenues for Data Science professionals for the enrichment and/or retention of skilled workforce for industry and academia.

## Data cleaning and other Standard Data practises relevant to BIG DATA

- Understanding challenges in handling Big-data; from collecting to storage and analysis & repurposing of data. New insights from population data from different demographic regions to fill caveats on a global scale.

# Conference Schedule

The inaugural session will be held on 10th September, at 4:00 pm.

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- A tentative schedule has been planned for the three-day event.
- There will be VY 'd'YbUfmgY ggcbg'VfYU\_ci higY ggcbgfH'YfY 'k J' VY 'Hk c 'VfYU\_ci higY ggcbg'YUW 'XUnž' 'k J' H' H'fY 'd'UfU'Y'gY ggcbg'YUW'U'UbX 'd'UbY'XjgW ggcbg'c'b 'U' H'YgY 'XUmj'
- The last day of the conference program will include an open house and a concluding session.
- Poster sessions are planned for interested candidates on all three days.

## SPECIAL PROGRAM FOR 10th September

Special session on 'Digital Twins' ----- 08:30 am - 3:00 pm

Welcome Dinner and Cultural program ----- 05:30 pm – 09:30 pm

## PROGRAM FOR 11th – 12th September (DAY 1 & 2)

Plenary Session ----- 08:30 am - 10:00 am

Tea Break ----- 10:00 am - 10:30 am

Break-out Sessions 1 ----- 10:30 am - 12:00 pm (Three parallel sessions)

Lunch Break ----- 12:00 pm - 02:00 pm

Break-out Sessions 2 ----- 02:00 am - 03:30 pm (Three parallel sessions)

Tea Break ----- 03:30 pm - 04:00 pm

Panel discussion----- 04:00 pm - 05:30 pm

Poster Session-----05:45 pm - 07:30 pm

Product demo by start-ups-----All evening (extensively data-driven)

Dinner ----- 07:45 pm - 9:30 pm

## PROGRAM ONLY FOR 13th September (DAY 3)

(Last day of the conference)

Plenary Session ----- 08:30 am - 10:00 am

Tea Break ----- 10:00 am - 10:30 am

Break-out Sessions 1 ----- 10:30 am - 12:00 pm (Three parallel sessions)

Lunch Break ----- 12:00 pm - 02:00 pm

Break-out Sessions 2 ----- 02:00 am - 03:30 pm (Three parallel sessions)

Tea Break ----- 03:30 pm - 04:00 pm

Panel discussion----- 04:00 pm - 05:30 pm

Open House/ Poster Session ----- 05:30 pm - 06:30 pm

Concluding session ----- 06:30 pm - 07:30 pm

(Valedictory lecture, Conference report)

Dinner ----- 07:45 pm - 09:30 pm

## Participation

- The conference will be open to all for participation with prior registration. Presentations will be made by invited speakers only. Practitioners, advocates, and enthusiasts of Open Data and Open Science will be encouraged to submit their abstracts to get invited.
- Submission of abstracts for poster sessions will open tentatively on 1st May, 2023 and close by 31st July, 2023. (The topics for the poster session could be any but not limited to the above indicated themes in Open Data).

\*Members of the committees and keynote speakers are yet to be confirmed.



## ABOUT THE ORGANISERS

### The India International Centre (IIC)



A cultural and intellectual center located in New Delhi, India. It aims to promote greater understanding and cooperation between India and other countries and serves as a platform for the exchange of ideas and knowledge on a wide range of topics. IIC stands for a vision that looks at India as a place where it is possible to initiate dialogues in an atmosphere of amity and understanding. The Centre's dedication to the values of liberal humanism is best reflected in its activities and calendar of events. These cover a wide range, from lectures, seminars, panel discussions, international and national conferences to a variety of cultural events of music, cinema, performing and visual arts, both classical and folk.

### Shree Guru Gobind Singh Tricentenary (SGT) University, Gurugram (SGT University)



A private university located in Gurugram, Haryana, India. It offers undergraduate and postgraduate programs in a variety of fields, including engineering, management, law, medicine, and more. The university is known for its strong academic programs, cutting-edge research facilities, and commitment to student success. It provides students with a supportive and challenging learning environment and offers opportunities for professional growth and personal development.

### The Pune Knowledge Cluster



Established by the Office of Principal Scientific Adviser, Govt. Of India in 2020 under The City Knowledge and Innovation Cluster Initiative (CKIC). The goal of the PKC is to create a collaborative and interdisciplinary environment where ideas, knowledge, and expertise can be shared and leveraged to drive innovation and economic growth. This is achieved through partnerships between the different institutions, organizations, and businesses in the cluster, and through the development of programs and initiatives that support research, education, and entrepreneurship.

### The CODATA - Committee on Data of the International Science Council (ISC)



An international non-governmental organization that was established in 1966 in Paris, France. The organization focuses on promoting policies and practices for Open Data and Open Science, advancing the frontiers of data science, and building capacity for Open Science by improving data skills and the functions of national science systems needed to support open data. By promoting the policy, technological, and cultural changes that are essential to promote open science, CODATA helps advance ISC's vision and mission of advancing science as a global public good. CODATA achieves its objectives through many standing committees and strategic executive-led initiatives, and through its Task-Groups and Working-Groups.

### Indian National Science Academy (INSA)



INSA acts as a resource pool of knowledge, promotes Science in India, and harnesses scientific knowledge for National welfare, while identifying and nurturing scientific talent in the country. It acts as an interface and represents the Indian Science and Scientists, globally on behalf of Government of India. INSA is an adhering body to the International Science Council (ISC) on behalf of the Government of India. The National Committee-CODATA appointed by INSA officially represents India in the activities of CODATA. The National Committee promotes the responsible and sustainable use of scientific data and information. It is focused on advancing the frontiers of data-driven research and innovation that support policies, practices, and infrastructure for decision-making. The National Committee-CODATA also plays an active role in promoting international collaboration and partnerships. It works closely with government agencies, academic institutions, research organizations, and industry.

### Open Health Systems Laboratory (OHSL)



OHSL has been conceived to build global team science consortia by leveraging the best in biomedical informatics, information, and communication technology. OHSL has technical expertise to utilize the latest developments in information technology, including informatics, natural language processing, and data collection and mining to bring solutions to our clients. In addressing the key questions of medical science, OHSL consortia are able to provide timely and focused global public health responses. We accomplish this by actively engaging participants to shape specific agenda and goals, and encourage collaboration for collective action to resolve targeted problems.