

A Brief History of a Science Initiative in India - ICTS-TIFR

Spenta R. Wadia

16 December 2023

Alladi Ramakrishnan Centenary Conference, IMSc Chennai

Prehistory - String Theory at TIFR

String Theory at TIFR - 1

String theory, a theory in making, has its origins in the high energy physics of strongly interacting particles (1960s). It is an attempt to answer questions about the origin and future of our universe, about the conundrums of black hole physics and about the unification of gravity with the weak, strong and electromagnetic forces.

In the summer of 1984 it became clear that String theory may be able to describe elementary particle physics including the weak interactions. Around the time some of us at TIFR had started working on String theory as a continuation of our work in the theory of strong interactions...hence we hit the ground running!

The first thing we did was to grow the local community: train students and postdocs, our first batch of students were postdocs at Stanford, IAS Princeton, Brown, Harvard, and we inducted our earliest students as faculty to build a nucleus - Avinash Dhar and Gautam Mandal. By then Sunil Mukhi had also joined TIFR.

String Theory at TIFR - 2

The second thing we did was to go abroad every summer and inform the world what we were doing at the Tata Institute (I learned this from Ludvig Faddeev, on a train ride in 1982 from Saclay to Paris - “Every summer I go out and tell the world what we are doing in Leningrad”).

ICTP and Abdus Salam played a very important role in the early years of string theory in India. I was myself a Staff Associate and a regular annual visitor at ICTP for about 10 years 1985 onwards. Over the years most members of the string theory group became associated with ICTP. We lectured there and helped organise activities. ICTP supported our visits to other institutions in the world when we did not have travel funds from the home institution.

During these visits, I went looking for faculty, visited Sumit Das and Ashoke Sen in Fermilab, asking them to join the Tata Institute and they did.

When I was at IAS, Princeton during 1990-91, I encouraged Sandip Trivedi and Atish Dabholkar to join the Tata Institute and they did so a few years later!

So we had assembled a strong group by the end of the 1990s: Atish Dabholkar, Sumit Das, Avinash Dhar, Gautam Mandal, Sunil Mukhi, Ashoke Sen, Sandip Trivedi and myself.

String Theory at TIFR - 3

We started organising international conferences and summer schools at the Tata Institute...Mahableshwar and TIFR-Mumbai.

A lot of important and impactful work came out of the Tata Institute in String Theory that encouraged us to organise **Strings 2001** at TIFR, Mumbai which hosted Stephen Hawking, Edward Witten and David Gross and other eminent people in String Theory (David Gross made sure that we invited Stephen!). We had 3 public lectures in a single day! This meeting was organised by Atish Dabholkar, Sunil Mukhi and myself. The visit of Stephen Hawking was supported by Mr Shibulal of Infosys Technologies, and Mr Murthy and Mr Gopalakrishnan had also come over.

Strings 2001 was a watershed moment for String theory in India! We had arrived on the national and international stage. In the years that followed Sumit Das, Ashoke Sen and Atish Dabholkar relocated to other institutions for personal reasons, however in 2004 we could attract Shiraz Minwalla to join TIFR.

String theory at TIFR grew mainly due to the support and encouragement of Prof Virendra Singh who recognized the importance of the questions string theory attempts to answer. In the early 1990s, Prof S.S. Jha, Chair of the Department of Theoretical Physics created a new unit in the Department of Theoretical Physics: **String theory and Mathematical physics.**

2001: The idea of the ICTS

- University of Chicago (1978-1982)
- Strings 2001 in TIFR, Mumbai
- Visit to Infosys Campus, Bangalore on 12 Jan 2001 with Edward Witten, and the memory of my visit to TIFR in 1967

The idea to create a Centre such as the ICTS, where ‘Science is one story’, took shape in 2001, after the success of the Strings 2001 conference at TIFR Mumbai and a visit to the Infosys Campus in Bangalore.

The former boosted our confidence based on our achievement in fundamental physics and the latter assured us that Institutional infrastructure and management of the highest international quality was possible in India.

The visit to the Infosys campus happened at the insistence of Edward Witten who was keen to visit the ‘temples of modern India.’ This combination of highest quality science within a modern state of the art campus, managed along modern lines inspired the basic idea of the ICTS.

What would make ICTS unique in India was that it was to be an international science hub that would transform the ways of doing scientific research and advanced science education in India.



Management: = NOT TATA

The model institute may be run along progressive management lines

1. that recognizes that people working in the institute are assets and does its best to provide a supportive administration for researchers to function. Also researchers should get a feeling that they can bring about positive changes when needed,
2. that is non-hierarchical and democratic and at the same time recognizes merit,
3. that does not necessarily discourage collective and team performance,
4. that has enough flexibility to allow the institute to innovate and evolve with time: Incorporating positive ideas and suggestions and responding to new situations,
5. that pays adequate attention to performance rewards (the definition of 'performance' in basic research is not simple but can be adequately formulated in terms of peer reviews)
6. that recognizes the fact that science is global. The institute can have a council which has a global representation and a regular mandatory review of its performance by an international committee every few years.

(IS=?) 1st → 10th 45%

Funding:

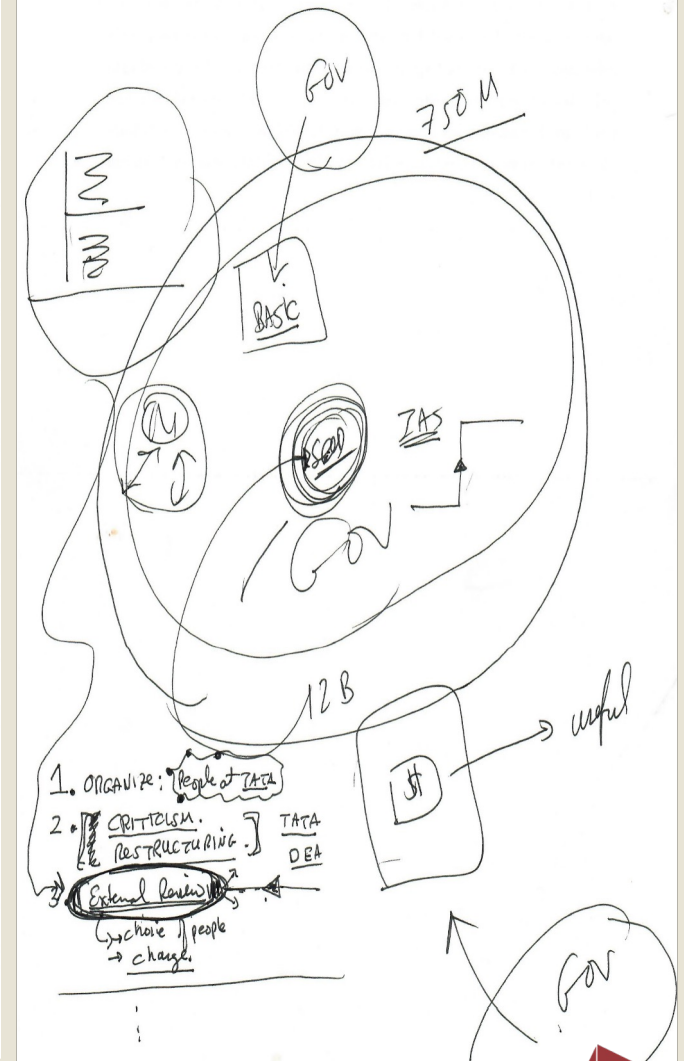
It is desirable to have sustained financial support and hence long term financial planning is necessary. Given the concerns I have expressed about government funding in India I would think that the proposed institute should be largely funded by the private sector. Here again I believe that you and your colleagues are best equipped to help evolve a working model. In fact I would leave this matter for further discussion and your careful consideration and advice.

↑ MATCHING SCHEME. ↑ 25%

Epilogue:

When I was being taken around Infosys the other day I was in a state of a pleasant shock. What was encouraging to me was that an institution like Infosys exists in India and it was built by people with humble beginnings, who exercised great and timely vision, perseverance and team work to succeed at the international level. It also occurred to me that just as the Tatas had laid the foundation of IISc Bangalore way back in 1912 and later TIFR in 1945, Infosys may well be able to seed a new culture of scientific

institution-building in the new millennium. These initial thoughts, on which our conversation of January 14 was based, have now grown into this preliminary proposal. I am aware that there is a great challenge in adapting to scientific research, management principles (typically guided by definitive criteria like market and customer satisfaction) that ideally suit the business world. However, I believe that with the right vision the challenge can be met and we can succeed in building a working model that other institutes can emulate.



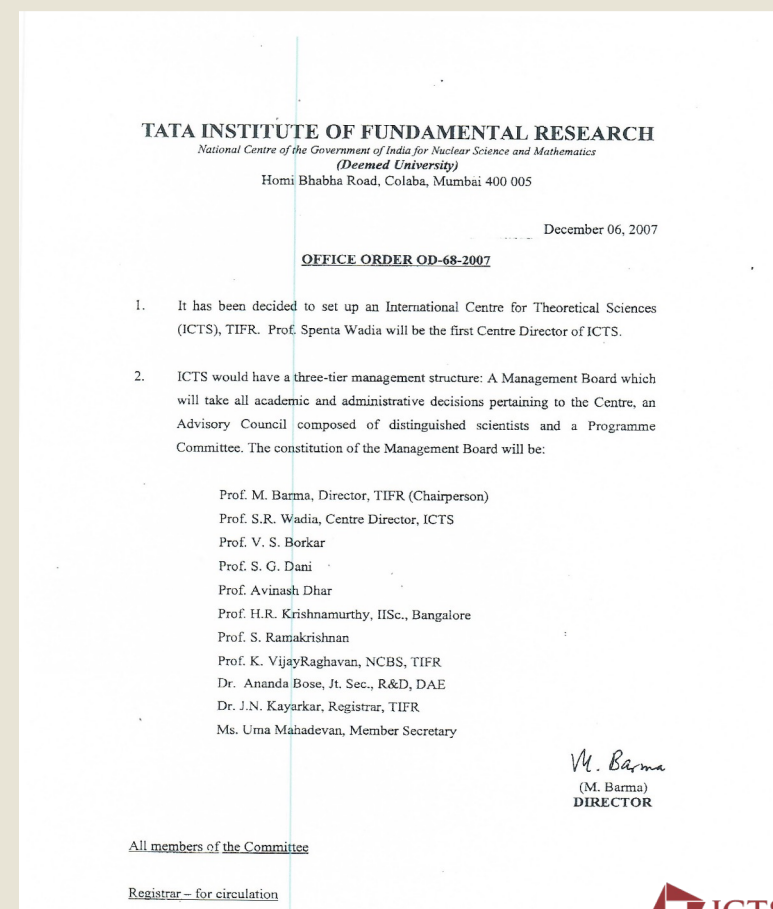
2006-7: ICTS approved by the TIFR Governing Council

On 13 October 2006, I made a presentation to the Council of Management of TIFR, outlining the concept of a 'National Centre for Theoretical Sciences'.

On 2 August 2007, the Council of Management of TIFR recommended the setting up of a Centre with the name (suggested by CNR Rao), "International Centre for Theoretical Sciences of TIFR", at a suitable location in India with 3 main missions:

- **PROGRAMS** that bring together physicists, astronomers, cosmologists, mathematicians, biologists, students and researchers from all over the world, under one roof, to work together to solve the most challenging questions posed by nature;
- **RESEARCH** by highest quality faculty in the theoretical sciences;
- **SCIENCE OUTREACH** that stimulate and harness young minds of India and connects with members of the public who are interested in the latest scientific developments.

ICTS would have three tier management structure with Advisory Council, Management Board and Program Committee.



Setting up of the Advisory Board and various committees: for guidance and accountability

International Advisory Board - 2007

Michael Atiyah (University of Edinburgh)
Manjul Bhargava (Princeton University)
Roger Blandford (KIPAC, SLAC)
Edouard Brezin (ENS, Paris)
Michael Green (Cambridge University)
David Gross (KITP, Santa Barbara), Chair
M. S. Narasimhan (CAM-TIFR, Bangalore)
T.V. Ramakrishnan (IISC Bangalore)
Subir Sachdev (Harvard University)
Ashoke Sen (HRI, Allahabad)
K. R. Sreenivasan (Abdus Salam ICTP, Trieste)
Raman Sundrum (Johns Hopkins)
S. R. S. Varadhan (CIMS, New York University)
Spenta R.Wadia (ICTS-TIFR) Centre Director

Management Board - 2007

Mustansir Barma, Director TIFR (Chair)
Vivek S. Borkar, TIFR
S.G. Dani, TIFR
Avinash Dhar, TIFR
J.N. Kayarkar, Registrar, TIFR
H.R. Krishnamurthy, IISc
Uma Mahadevan, TIFR, Member Secretary
P. Mukherjee, Joint Secretary (R&D), DAE
S. Ramakrishnan, TIFR
V.R. Sadasivam, Joint Secretary (Finance)
K. VijayRaghavan, TIFR, Director NCBS
Spenta R. Wadia, TIFR, Director ICTS

In addition, a Program committee and an Appointments committee were also formed.

2007 - Program activities began

Now that the Centre was approved, the woods cleared and the true mountains appeared: Centre started operating from TIFR Mumbai.

Began programs within institutions (TIFR Mumbai, IUCAA, IISc, IITs...) and other locations in India.



Lyman Page in IUCAA, Pune



The inauguration of the programs of ICTS on Dec. 2, 2007 during its first program, 'Correlated Electrons and Frustrated Magnetism' and Unfurling of the ICTS logo by T.V. Ramakrishnan at the International Centre in Dona Paola, Goa.



Peter Sarnak in TIFR, Mumbai

Next steps...

The next tasks were to find the government resources and land to build the campus, work with the architect for a design suitable for the ICTS mission, see through the execution of the architectural design, create a modern administrative support system, choose the research areas and attract outstanding faculty within each!

This complex task involved a huge collective effort by members of TIFR (most notably Avinash Dhar), the Indian science community, and the Govt of India.

CAMPUS

2008: Site for Campus in North Bangalore



24 October 2008, the Government of Karnataka approved the ICTS request and allocated land for setting up the campus on a long lease for a nominal lease amount.

The new ICTS campus is located in north Bangalore and spread over 78,000 square metres.



2009: Centre approved by Atomic Energy Commission (took 2 meetings!!)

2 November 2009, the Atomic Energy Commission gave a final approval with a budget for construction of the campus in Bangalore.



L to R: M.R. Sreenivasan, Secretary (GOI), Anil Kakodkar, C.N.R. Rao, P. Rama Rao (Lunch after AEC meeting).

2009: Foundation Stone unveiled during “Science without Boundaries” inaugural event



Spenta Wadia, Mustansir Barma, CNR Rao, David Gross, Sreekumar Banerjee

The ICTS Inaugural event was organized during 27-31 December, 2009 in the campus of IISc, Bangalore.

On 28th December 2009, the foundation stone of the new Centre, the ICTS of TIFR, was unveiled by Prof. C.N.R. Rao in the presence of Prof. David Gross, Dr Sreekumar Banerjee and Prof. Mustansir Barma, in the J.N. Tata Auditorium, IISc, Bangalore.

Foundation Stone Remarks by Michael Atiyah

(Read out by Spenta Wadia during the Ceremony)

I very much regret not being with you for the laying of this Foundation Stone for the International Center for Theoretical Sciences, but I am with you in spirit and send my best wishes for the future success of this important Center. Science has the noble aim of trying to understand the natural world in human terms : to make sense of what we see. This brief phrase encapsulates both theory and experiment. What we see, in the broad sense, covers experiment and making sense is the task of theory. As the great French mathematician Henri Poincare said, science is no more a collection of facts than a house is a collection of bricks: it requires theory to hold it together.

Theory needs a framework in which to develop and, as a mathematician, I believe that mathematics provide that unifying framework. As Galileo said the book of nature is written in the language of mathematics. Galileo was thinking primarily of mechanics and astronomy but, increasingly since his time, mathematics has provided the essential underpinning of ever-widening branches of science. As soon as a science moves from the qualitative to the quantitative, mathematics becomes indispensable.

Not only does mathematics provide the technical tools that all sciences require but, by its very nature, it acts as a unifying principle, integrating the diverse aspects of nature into an organic whole.

I am sure that mathematics, in all its various aspects, will play an important part in the future activities of this Center. In the complex modern world with the enormous challenges that we face, from climate change to energy, from poverty to water shortages, science provide the bedrock on which we can build our future. I am sure that this Center will play its part in guiding both India and the wider world in the years ahead.



Avi Wigderson



R Shankar, Sriram Ramaswamy, Madan Rao



S.R.S. Varadhan



Shiraz Minwalla, Andy Strominger



Yamuna Krishnan



Elias Kiritsis, CNR Rao



K. VijayRaghavan, Ajay Sood, Ajay Salve, Albert Libchaber



Eitan Tadmor, Mukund Thattai, Sriram Ramaswamy, Subir Sachdev



Édouard Brézin (Chair), Naama Barkai, Albert Libchaber, Govindan Rangarajan, Avichai Wigderson



Upinder Singh Bhalla

2010: Moving to Bangalore: Activities at the “One Corridor Institute” at IISc...to build the campus, induct faculty and organize programs



This was made possible by P. Balam (IISc Director), H.R Krishnamurthy (Chair of Physics Dept, IISc) and several members of the Physics Department of the Indian Institute of Science as well as TIFR-CAM.

K. VijayRaghavan and the NCBS team provided enormous support to the fledgling institution in its initial stages.



Sydney Brenner's visit during the Turing Centenary Lecture



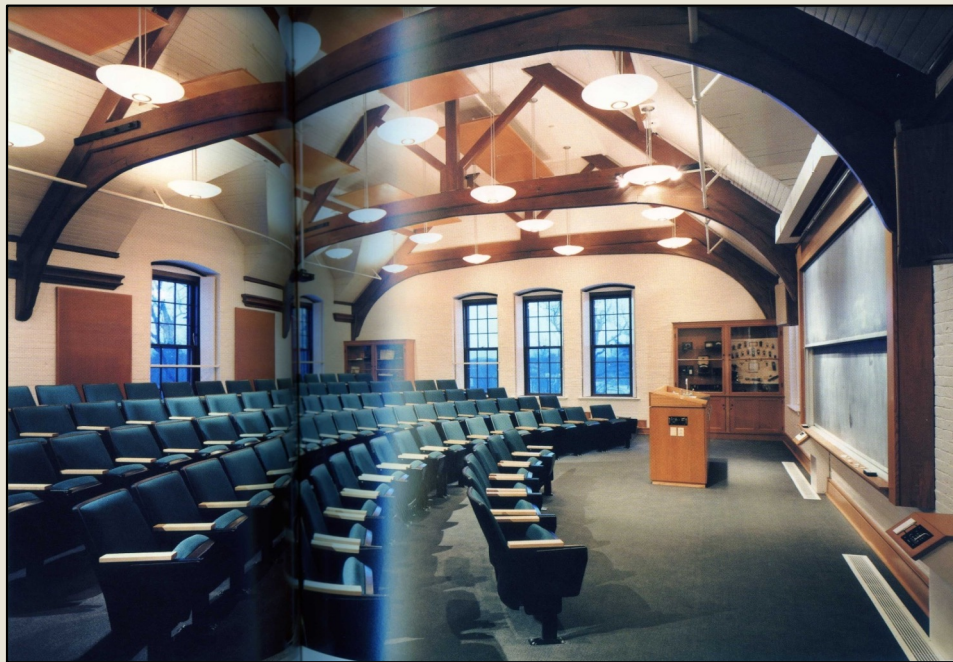
Sydney Brenner, Obaid Siddiqui, Mukund Thattai, Madan Rao, Sandeep Krishna, Spenta Wadia



Sydney Brenner, Mukund Thattai

CAMPUS DESIGN AND ARCHITECTURE 2010-12

We visited several places to learn about the architectural design that would fit the purpose of the ICTS. This involved visits to several institutions in India and abroad.



New Lecture Hall, Bowdoin College, Brunswick, Maine



Archaeological and Ethnological Museum Granada, Spain
(1539)



Floating Restaurant, Infosys Campus, Mysore



Guest House units, Infosys Campus, Mysore

2010: Competition of Architects for designing the campus

Architectural design submitted by M/s Venkataramanan Associates Pvt. Ltd., Bangalore was selected by a jury after evaluating the designs and concepts of a total of 6 competing agencies on 2nd Dec 2010 at TIFR-Mumbai.



Campus design finalized



Ravindra Kumar, Design Architect

13 Dec 2012: Ground-breaking Ceremony at Shivakote



CONSTRUCTION

2012-15: Campus construction project managed by DCSEM, DAE and constructed by JMC Pvt. Ltd.



The ICTS team was constantly monitoring the construction and its quality

ICTS started functioning from its campus since June 2015.

Spread over 78,000 square meters in North Bangalore, this beautiful world-class residential campus serves as an outstanding environment conducive to research and learning in India.



The campus has been planned to be self-contained and includes academic, housing and recreational facilities for more than 150 academic members, including 75 visitors. The architectural design provides space for maximum academic interactions. It contains lecture halls with enough capacity for meetings with hundred plus participants, an auditorium, recreation spaces and comfortable living quarters for staff and visitors. The academic and residential blocks, labs, seminar halls and the data centre are named after distinguished scientists.

2015: Inauguration of the Campus on 20 June 2015



The new ICTS campus was inaugurated on June 20, 2015 with an event “Science at ICTS”



CNR Rao



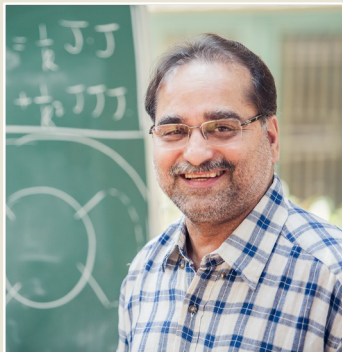
K Kasturirangan



Anil Kakodkar



David Gross



Avinash Dhar



Mukesh Dodain



Uma Mahadevan

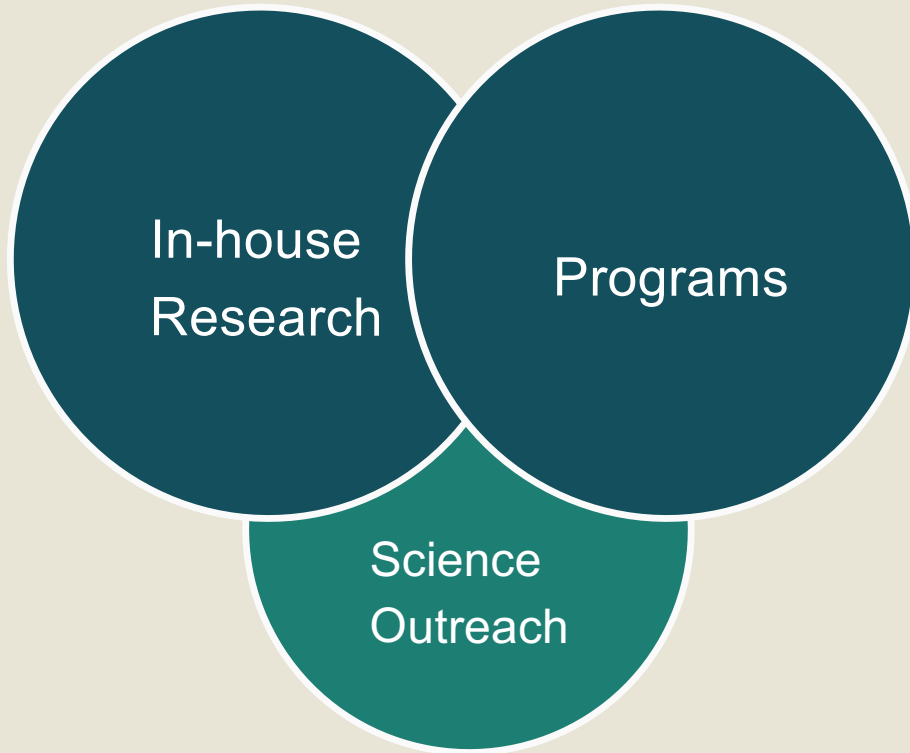


K VijayRaghavan



Leena Chandran-Wadia

ICTS Mission and its People



3 pronged mission of ICTS

People

- Faculty, Associates, Students, Postdocs
- Administration



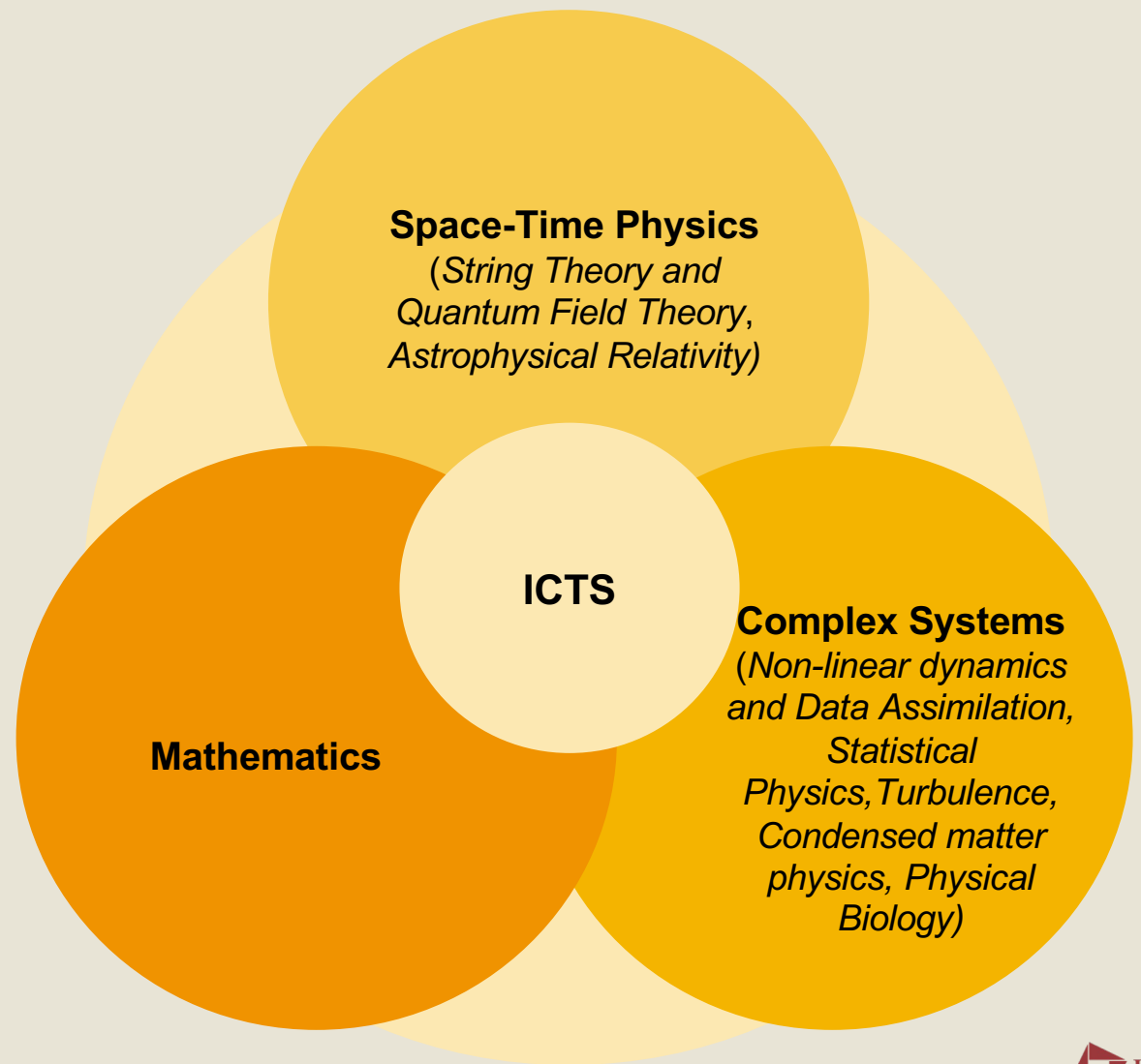
Research Areas

'ICTS has no departments'

Buildings can be made but prospective faculty has to be available; even if they are available they should want to join the very young institute.

Also the areas you can grow depends on the the availability of faculty.

The ICTS Appointments Committee made a determined and bold effort and succeeded!



2007: Faculty induction began A most difficult and crucial task!

Abhishek Dhar (2012)

Suvrat Raju (2012)

Amit Apte (2013)

P. Ajith (2013)

Pallab Basu (2013)

Vijay Kumar Krishnamurthy (2014)

Samriddhi Sankar Ray (2015)

Vishal Vasan (2015)

Anupam Kundu (2015)

Sivaram Ambikasaran (2015)

Rajesh Gopakumar (2015)

Rukmini Dey (2015)

Subhro Bhattacharjee (2015)

R. Loganayagam (2015)

Students and Postdocs

First batch of 4 graduate students joined in Aug 2013.

First post-doc Tapan Mishra joined in Oct 2011.

Rich and vibrant post-doctoral fellowship programme included, apart from the usual institute post-doctoral fellows, special highly competitive prized positions, namely the **Airbus** (2013) and the **Simons** (2015) Postdoctoral Fellowships, and those supported through **Max-Planck partner groups** of individual faculty members.

Sample of early programs across disciplines

1. Correlated Electrons and Frustrated Magnetism (Nov-Dec 2007)
2. Monsoon Workshop on String Theory (June-Aug 2008)
3. Cosmology with the Cosmic Microwave Background (Jul-Aug 2008)
4. Scientific Discovery through Intensive Data Exploration (Feb 2011)
5. Random matrix theory and applications (Jan 2012)
6. The Role of Theory in Biology (Oct 2012)
7. Mathematical Perspectives on Clouds, Climate and Tropical Meteorology (Jan 2013)
8. Numerical Relativity (June-July 2013)

ICTS as a Platform for New Initiatives

Within India:

IndiaLight (India Open Research Exchange Facility for Global Scientific Cooperation in Bangalore), a large data, high speed network for Bangalore institutions at TIFR-CAM (pilot phase) with international connectivity e.g. GLORIAD (was available till October 2013) via a grant from Tata Communications and NSF (USA). 7.3 tbs of data were downloaded and mirrored in biology and the earth sciences during this period.

Nodal Centre of LIGO-India in Bangalore; LIGO tier-2 data centre

Internationally:

- ICTP-ICTS Biology Program (Dec 2013-)
- Asian Winter School on Strings, Particles and Cosmology (Jan 2010-) (KAWS since 2018)
- Mathematics of Planet Earth 2013 Programs and Math Exhibition (22 Nov-1 Dec 2013)
- UIUC-STRAND-ICTS Discussion Meeting on Computational Genomics, July 2013

Named Lecture Series with associated Discussion Meetings

Subrahmanyan Chandrasekhar Series (Physical sciences):

Ashoke Sen, Andrew Strominger, Lyman Page, Ludwig Faddeev, Subir Sachdev, Dam Than Son, Uriel Frisch, Satya Majumdar, Nima Arkani Hamed, Sankar Das Sarma, Antoine George, Robert Myers, T. Senthil, Itamar Procaccia, Herbert Spohn..

Srinivasa Ramanujan Series (Mathematics):

Peter Sarnak, Andrew Majda, Peter Scholze, Chandrashekhar Khare, Giovanni Jona-Lasinio..

Alan Turing Series (Biology, computer science, engineering and related areas):

Sanjeev Arora, Robert Schapire, Ravi Kannan..

These series have been very successful especially because a discussion meeting is organized around the theme of the lectures

Special Lectures

Abdus Salam Lecture (to commemorate the memory of Salam a great physicist and a champion of science for the developing world):

Fernando Quevedo, R. Ramaswamy, K. VijayRaghavan...

ICTS Distinguished Lectures:

Ashoke Sen, Valery Rubakov, Manjul Bhargava, Jennifer Chayes,,
M.S.Narasimhan, Pierre Hohenberg, Philip Candelas..

Science Outreach

ICTS Public Lectures:

Juan Maldacena, Francois Bouchet, Marc Kamionkowski, Joseph Silk, Lyman Page, Avi Wigderson, David Gross, Albert Libchaber, William D. Phillips, Klaus von Klitzing, Istvan Hargittai, Kip S. Thorne, J. Richard Bond, P. James Peebles, John Ellis, Benedict Gross, Terence Tao, Etienne Ghys, Peter Sarnak, Nima Arkani-Hamed, Sydney Brenner, Sankar Das Sarma, Cumrun Vafa, Boris Shraiman, Stuart Parkin, Manjul Bhargava, Juan Maldacena, François Bouchet, David Gross, Juan Maldacena, Peter Saulson and Edward Witten, Nima Arkani-Hamed, Ashoke Sen, Nathan Seiberg, Andrew Strominger, Cumrun Vafa..

Einstein Lectures (to commemorate the Centenary of General Relativity):

Bruce Allen, Bala Iyer, Rajesh Gopakumar..

MPE 2013: An interactive exhibition on Mathematics for the Billion held at the VITM, Bengaluru from 22nd November to 1st December 2013 with over 30,000 visitors.

July 2015: Passing the baton to Rajesh Gopakumar



ICTS campus today



Present International Advisory Board

Nima Arkani-Hamed (IAS, Princeton)

Manjul Bhargava (Princeton University)

William Bialek (Princeton University)

Roger Blandford (KIPAC, Stanford University)

Jennifer Chayes (UC Berkeley))

Sankar Das Sarma (University of Maryland)

Rajesh Gopakumar (ICTS-TIFR) Centre Director

Senapathy Gopalakrishnan (Co-founder Infosys)

Michael Green (Cambridge University)

David Gross (KITP, Santa Barbara), Chair

Juan Maldacena (IAS Princeton)

Subir Sachdev (Harvard University)

Ashoke Sen (ICTS-TIFR)

Boris Shraiman (KITP, University of California, Santa Barbara)

Senthil Todadri (MIT)

S. R. S. Varadhan (Courant Institute, New York University)

Spenta R. Wadia (ICTS-TIFR)

Present areas of research at ICTS

Natural Sciences

1. **Astrophysics and Relativity**
2. **Biological Physics**
3. **Condensed Matter and Statistical Physics**
4. **Fluid Dynamics and Turbulence**
5. **String Theory and Quantum Gravity**

Mathematical Sciences

1. **Applied and Computational Mathematics**
2. **Computer Science**
3. **Geometry and Physical Mathematics**
4. **Probability Theory**

Science without boundaries...No Departments

Present Faculty at ICTS

Parameswaran Ajith
Amit Apte
Siva Athreya
Anirban Basak
Riddhipratim Basu
Pallavi Bhat
Subhro Bhattacharjee
Rukmini Dey

Prayush Kumar
Anupam Kundu
Pranav Pandit
Loganayagam R
Jaikumar Radhakrishnan
Suvrat Raju

Abhishek Dhar
Rajesh Gopakumar (Centre Director)
Rama Govindarajan
Akshit Goyal
Vijay Kumar Krishnamurthy
Manas Kulkarni

Sthitadhi Roy
Samriddhi Sankar Ray
Jim Thomas- - Joint Fac.
Shashi Thutupalli - Joint Fac.
Vishal Vasan
Spenta R. Wadia (Emeritus Professor
and Founding Director)

Senior faculty supported through external grants/ fellowships

Chandan Dasgupta
Bala Iyer
Hulikal Krishnamurthy
Rajaram Nityananda
Mythily Ramaswamy
Sumathi Rao

Joseph Samuel
Ashoke Sen
Debasis Sengupta
T. N. Venkataramana

Adjunct/Visiting Professors

Swapan Chattopadhyay
Sunil Mukhi
Ravi S Nanjundiah
Abhinav Kumar
Tejaswi Venumadhav Nerella

Students and Postdocs



105 regular students and 13
long term visiting students.

27 postdocs

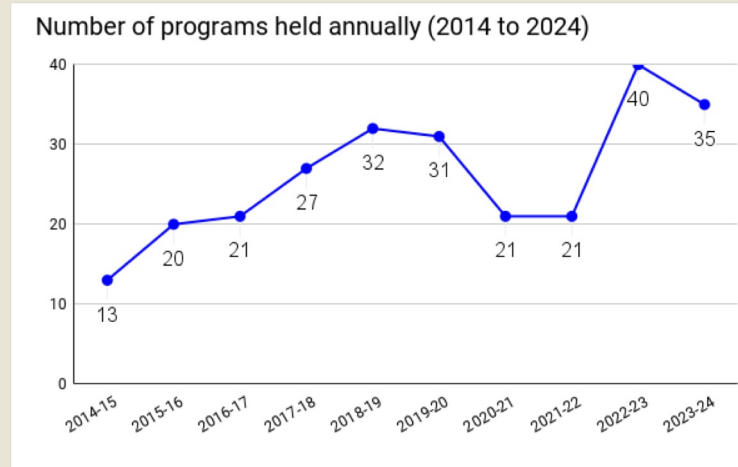


Program Statistics

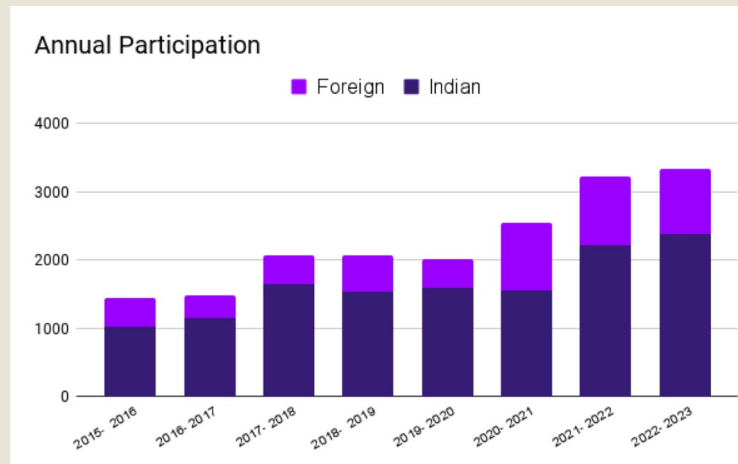
- A total of **336 programs** of varying sizes
- **144 Named Lectures** and **several Public Lectures**

(9 Nobel laureates, 4 Fields Medallists, 12 Dirac Medallists, 7 Boltzmann Medallists, 10 Lars Onsager Prize winners and many more...)

- More than **7000 talks** archived on ICTStalks (Our lecture videos have over **4.5 million views** and **54000 subscribers**.)



A steady increase in the number of high-level programs



Special Lecture Series

Infosys - ICTS Chandrasekhar
Lecture Series

Infosys - ICTS Ramanujan Series

Infosys - ICTS Turing Series

Abdus Salam Memorial Lectures

Public Lectures

Distinguished Lectures

Einstein Lectures

Vishveshwara Lectures

D.D. Kosambi Lectures

Madhava Lectures

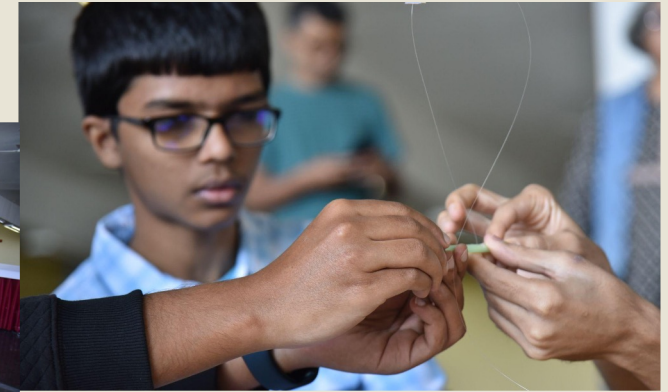
Infosys ICTS String Theory Lectures

Foundation Day Lectures



Outreach

- Kaapi with Kuriosity
- Einstein Lectures
- Vigyan Adda
- Vishveshwara Lectures
- Public Lectures
- Maths Circles
- Science Education Program
- Science outreach in Schools
- Promise in Science and Mathematics (PRISM)
- Exhibitions: Cosmic Zoom and Climate Chaos: We're just warming up!
- GeoSphere@ICTS
- Other several events



Some present initiatives

- **ICTS Science Teachers Training Camp** for university, college and school teachers in modern methods in physics and mathematical pedagogy.
- **Summer School for Women in Mathematics and Physics**
- **Research in Teams:** brings together a small group (4 to 6) as a follow-up of a program.
- **Thematic trimesters** 3-month program on specialized themes to foster collaborative research and publications in highly topical and interdisciplinary areas.
- **Research directions:** computer science, data science, quantum computing and information, climate science and health, and ML/AI.

ICTS Resources

Major source of funding is from TIFR , Department of Atomic Energy, Govt of India..

ICTS for day one reached out for philanthropic foundations:

Airbus Corporate Foundation (2013-17)

S.N. Bhatt memorial grant (2014-)

Infosys Science Foundation (2015)

Simons Foundation (2015-2020; 2020-2023)

Infosys Foundation (2015-)

Other philanthropic foundations and the `Friends of ICTS' have also made contributions for various activities at ICTS.

ICTS Campus in Bangalore



The creation of the ICTS was a massive collective effort involving many many people from India and abroad. ICTS is grateful to all of them for their help, effort, guidance and commitment. It is difficult to imagine that this Centre would be what it is without them.

During the DPR approval meeting in 2009 at JNCASR, CNR Rao said, "ICTS could become the centre of new things in the theoretical sciences" ..." and expressed the hope that "ICTS would make India famous in the theoretical sciences and become the flagship of TIFR".

Today this dream and vision is indeed fulfilled! ICTS is a world class institution and among the best of its type worldwide, furthering the cause of basic research and education in India.



"Traveler, there is no road, the road is made by walking" - Antonio Machado

ICTS needs to grow to an optimal size to serve science and the nation better.

Thank you!