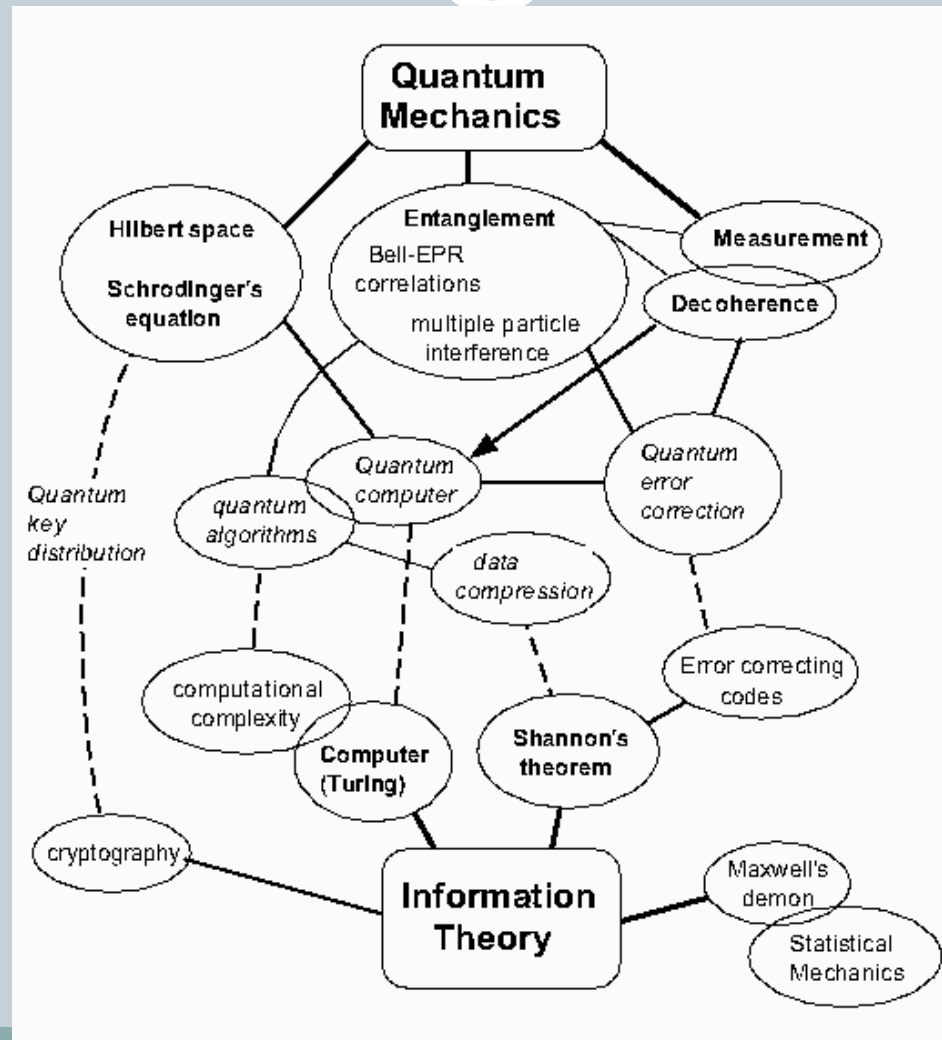


QUANTUM-NANO SYSTEMS CENTRE & CENTRE FOR CONSCIOUSNESS STUDIES



**A Brief Profile and Progress Report
(2013-2017)**

Quantum-Nano Systems is a truly interdisciplinary area



ROADMAP

BACKGROUND

KNOWLEDGE
First Indian books
on Quantum and
Nano Computing
co-authored

AWARENESS
Shared Vision
Workshop on
Quantum-Nano
Computing
(SQUAN 2007, DEI)
BackAction 2006 (IIT
Kanpur)
Nanotech 2007
(FITT, IIT Delhi)

COLLABORATION
S
Quantum-Nano
Conclave
(QANCLAVE
2007)
DEI
IIT Kanpur
IIT Delhi
Univ. of Waterloo

EDUCATION
Quantum-Nano
School
(QANSAS 2008)

ICT EDUCATION
Quantum-Nano
School
(QANSAS 2009)
Nobel Laureates
lectures online

DEI
IIT Kanpur
IIT Delhi
IIT Madras
IIT Bombay
IIT Kharagpur
TIFR Mumbai
IISc Bangalore
Univ. of
Waterloo
MIT

PILOT STAGE

CONVERGENCE
(QANSAS 2010,
2011, 2012, 2013,
2014, 2015, 2016 .
.)

Unification of
interdisciplinary
focus areas of
partners for wider
catchment

REALIZATION
Qubit
demonstration
and realization of
INQUAN (Indian
Quantum
Computer)

**Quantum
Information &
Quantum
Computing**



**Excellence in
Quantum
Information
and
Consciousness**

**Consciousness
Studies**



**Systems
Science**



**Nanoscience and
Nanotechnology**



NATIONAL PARTNERS



IIT Kanpur
IIT Delhi
IIT Madras

IISc,
Bangalore

IIT Bombay

IIT
Kharagpur

TIFR
Mumbai

IMSc
Chennai

IoP
Bhubaneswar

ISI Kolkata

INTERNATIONAL PARTNERS

WORLD
OUTLINE MAP



www.maps-of-world.com

Institute for Quantum Computing, University of Waterloo, Canada

Institute for Quantum Sciences, Michigan State University, USA

Massachusetts Institute of Technology, USA

University of Maryland, College Park USA

IBM Watson Research Centre, USA

Alcatel-Lucent Bell Labs, USA

Map not to Scale

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International School on Quantum and Nano Computing Systems and Applications (QANSAS 2013)

- International School on Quantum and Nano Computing Systems (QANSAS 2013) was organized from November 27–December 1, 2013 with leading international experts on consciousness including Sir Roger Penrose, Prof. Stuart Hameroff and Dr. Anirban Bandyopadhyay.



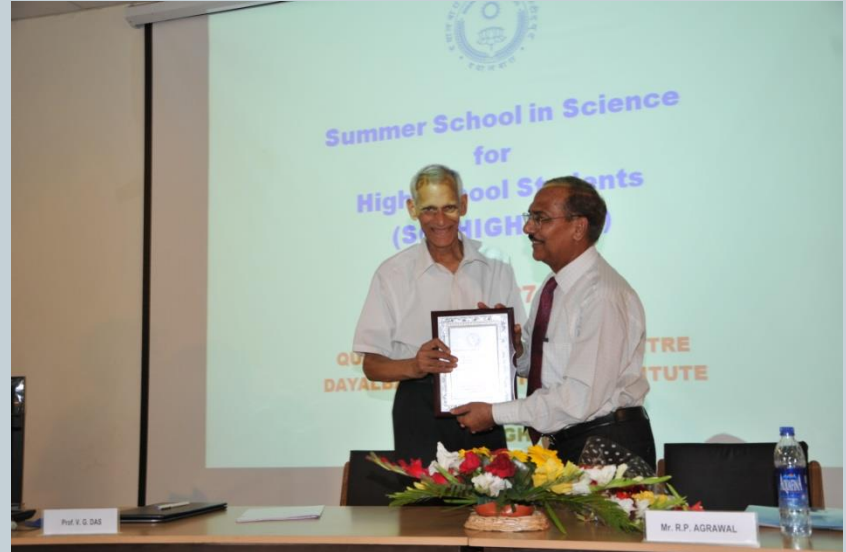
QANSAS 2014



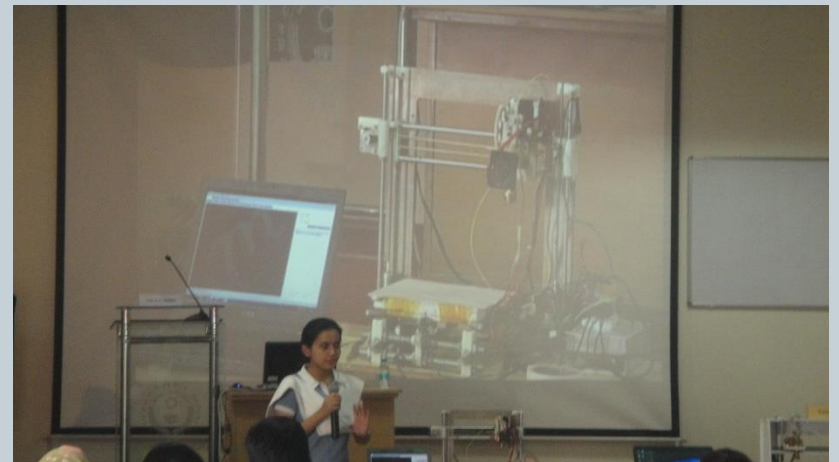
QANSAS 2015



Summer School for High School Students (SCI-HIGH): 2012, 2013, 2014, 2015, 2016



Workshop on 3D Printing for Class X Students at SCI-HIGH (March 2016)



Numbers



- **Students Trained**
 - **High School Students** **360**
 - **Undergraduate** **2,585**
 - **Post Graduate** **1,953**
 - **Ph.D. / Post-Doc** **773**
 - **TOTAL** **5,671**

- **Institutions** – 46 Universities / Colleges + 80 Distance Education Centres of DEI

- **Video Lectures** – Over 300 digitized and uploaded, more in repository

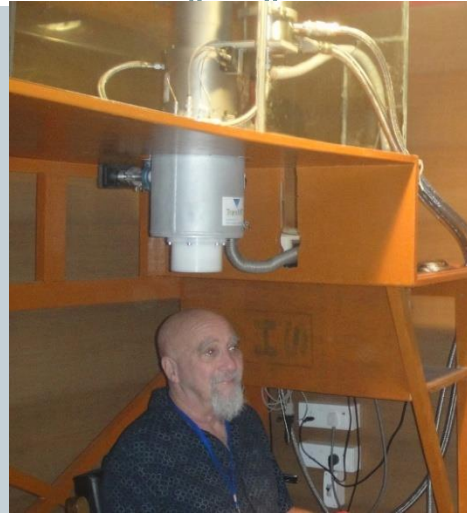
SQUID Facility at DEI in Magnetically Shielded Room



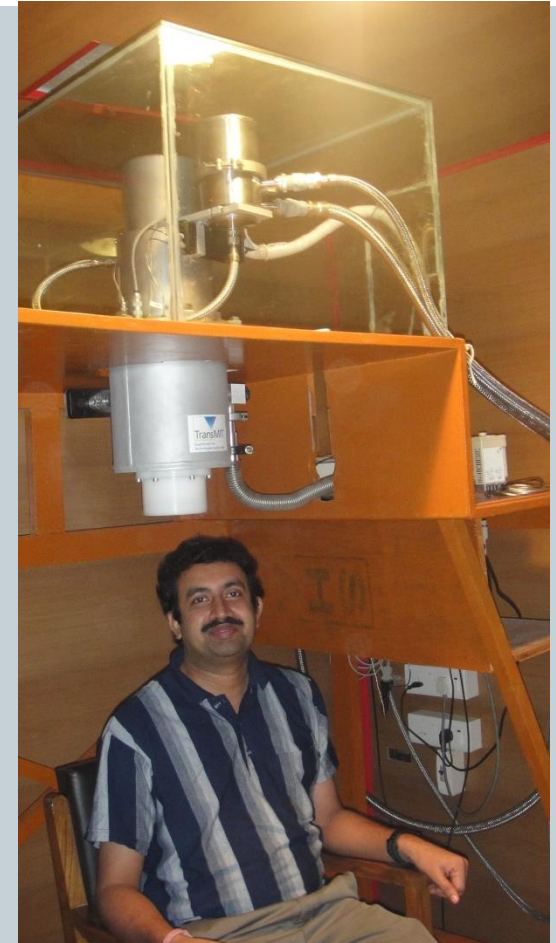
Magneto-Encephalography (MEG) Facility at DEI in Magnetically Shielded Room (MSR)



Sir Roger Penrose at DEI MEG (2013)



Prof. Stuart Hameroff at DEI MEG (2013)

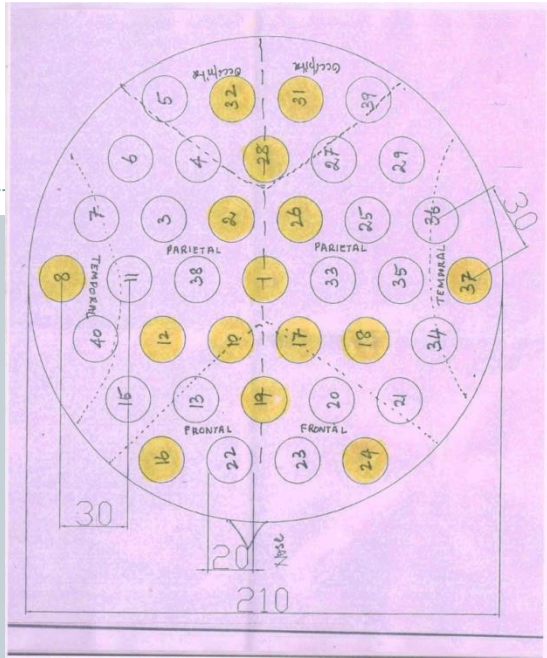


Dr. Anirban Bandyopadhyay at DEI MEG (2013)

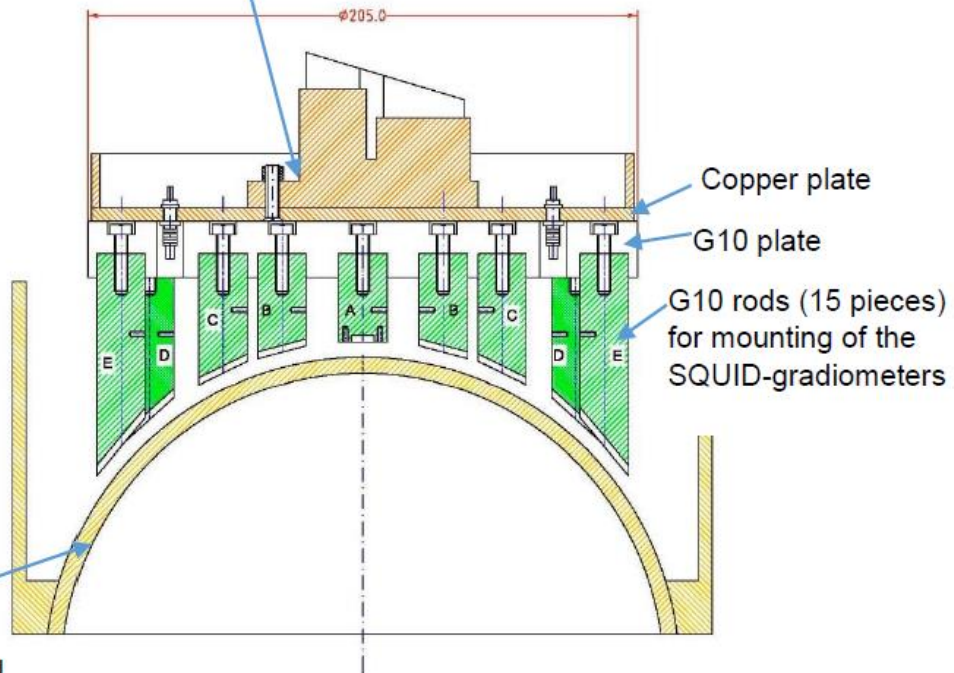
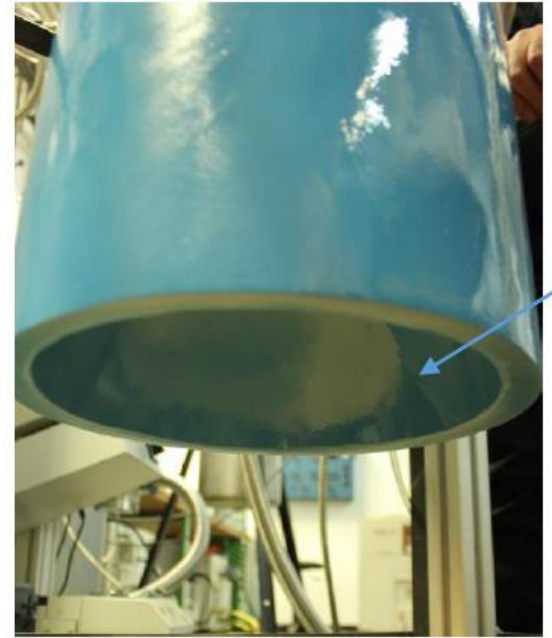
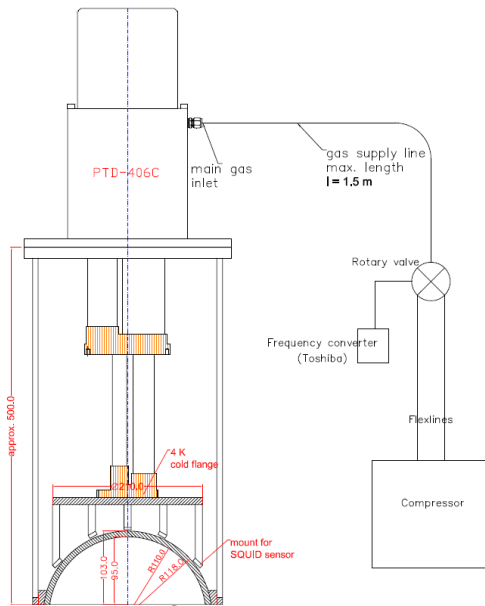


Magnetically Shielded Room

Upgraded to 15 channels with support of AADEIs in January 2016



Drawing of holder for Multichannel SQUID-system



G10 helmet of vacuum vessel

