

Co-hosted with GERMI and PDPU the 49th Annual Convention of the Indian Geophysical Union “Towards the Energy Security-Exploration and New Strategies”, Ahmedabad, October 29-31, 2012

Responsibilities S&T Dept. and ISR:

***GUJCOST provided fund of Rs. 1.00 lakh**

***Housed 75 delegates at ISR Campus**

Rastogi, BK: Convenor 49th IGU Convention, Chairman of the session on (i) “Inter and Intraplate seismicity” and (ii) the part of the Invited Talks by: Dr. Rasik Ravindra and Dr. Surjalal Sharma in the session on Atmospheric & Planetary Sciences and **released Technical Program at the Inaugural Function*

***Dr. Kapil Mohan: Chairman Session V- Solid Earth Geosciences (Poster Session) of the 49th Annual Convention of the Indian Geophysical Union.**

INAUGURAL PROGRAM AT PDPU

Dr. Omkar Jani, Sc. GERMI: Inviting dignitaries to the dias.

Dr. Hari Narayana, Director GERMI: Welcome Address

Dr. P. Koteswar Rao: Report of Secretary IGU

Dr. VP Dimri: Presidential Address and presentation of Awards

Sri D.J. Pandian, Chief Guest: Release of Abstract Volume and Inaugural Address

Dr. B.K. Rastogi: Release of Technical Program and Remarks

Prof. P.K. Banik, Director General PDPU: Remarks and Vote of Thanks

Remarks by BK Rastogi during the Inaugural Function of the 49th Convention of Indian Geophysical Union

Sri D.J. Pandian, Principal Secy. Energy & Petrochemicals Dept. Govt. of Gujarat and Chief Guest, Padmasri Dr. VP Dimri, President Ind. Geophys. Un., Prof. Hari Narayana, Convener, IGU and members have been helping ISR for its development since its inception. Now it is the age of multifaceted research. Ind. Soc. Earthq. Sc. has been started to foster synergy between different branches of Seismology as well as between Seismology and Earthquake Engineering. Towards this ISR had held an Intl. Symp. on Earthq. Sc. in the year 2011 and same is planned bi-annually. Hence, the next International Symposium on Advances in Earthquake Science is to be organized during February 1-2, 2013 followed by Intl. School on Earthquake Hazard Assessment named as “Use of e-infrastructures for advanced seismic hazard assessment in Indian Subcontinent”

In future we plan to hold joint Conventions of IGU and ISES.

It is my great pleasure to release the Technical Program.

High lights of the Seminar on “Towards the Energy Security-Exploration, Exploitation and New Strategies”

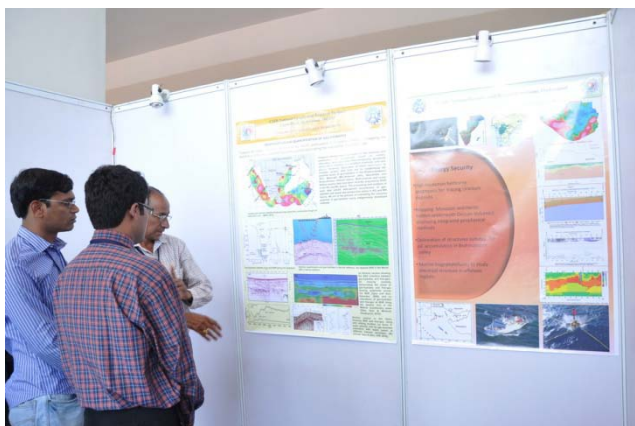
About 50 oral and 50 papers were presented in 3 days seminar in the following sessions:

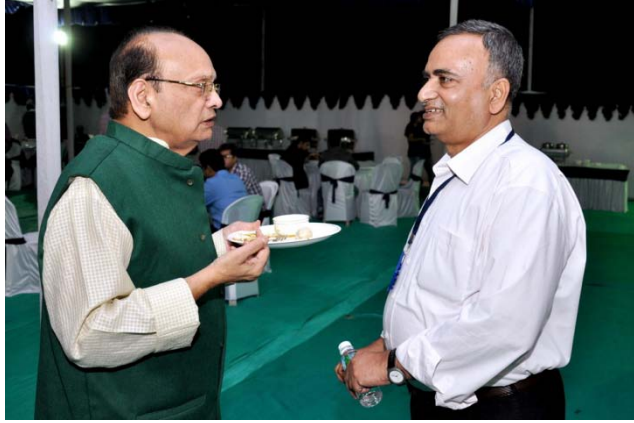
Towards the Energy Security-Exploration, Exploitation and New Strategies

- I. Inter and Intra Plate Seismicity
- II. Marine Geoscience
- III. Atmospheric & Planetary Sc.
- IV. Solid Earth Geosciences

Highlights: About 300 delegates attended the seminar in which 50 oral and 50 poster papers were presented. ISR scientists and JRFs presented 20 papers in sessions II and V. The Co-Chairman of Session II Dr. Dipankar Sarkar remarked that highlight of the session was papers presented by ISR scientists. ISR has made a complete study of seismic hazard of Gujarat and other states need to emulate that.









15.3.2. ISR Co-hosted with GERMI the 2nd Indo-German Workshop on “Magnetotelluric Data Acquisition, Processing and Modeling”, Gandhinagar, November 1- 3, 2012.

Responsibilities:

Sri Ravi Saxena: Chief Guest and inaugurated the Workshop.

Dr. BK Rastogi: delivered Welcome Address as Coordinator 2nd Indo-German Workshop on “Magnetotelluric Data Acquisition, Processing and Modeling”

Dr. Kapil Mohan: Convener from ISR.

Hosted about 45 trainees and 20 Resource persons in ISR Campus

Arranged field demonstration of two types of geophysical surveys at GIFT City and IITg site

WELCOME ADDRESS BY DG-ISR DURING THE INDO-GERMAN WORKSHOP ON MAGNETOTELLURICS DATA ACQUISITION, PROCESSING AND MODELING” November 1, 2012

Chief Guest Mr. Ravi Saxena, Addl. Chief Secretary, S & T Dept. Govt. of Gujarat , President In. Geophys. Un. Padmasri Dr. VP Dimri, and Guest of Honor, Dr. Sudhakar, Advisor MoES, coordinators Prof. Heinrich Brasse, from Free Univ., Berlin and Prof. Hari Narayana, other dignitaries on the dias, it is heartening to welcome you all in the Second Indo-German workshop on “Magnetotelluric Data Acquisition, Processing and Modeling” jointly organized by Institute of Seismological Research (ISR), GERMI and NGRI. I welcome conveners Dr. Kapil Mohan, from ISR and Dr. Ajay Manglik of NGRI.

I welcome some 20 Indian resource persons some of whom have already arrived:

NGRI: Nandini Nagarajan, Ajay Manglik, B.P.K. Patro, S.P Sharma, S.K Verma, K.K Abdul Azeez

Wadia Institute of Himalayan Geology: B.R. Arora,

SN Bose National Centre for Basic Science, Kolkata: BB Bhattacharya

IIT Roorkee: Dr. Md. Israil, Sri Niwas, PK Gupta

IIT Bombay: E. Chandrasekhar,

Indian Institute of Geomagnetism (IIG): S.G. Gokarn

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I specially welcome the German resource persons:

Prof. Michael Becken of University of Münster,

Prof. Bulent Tezkan of University of Cologne,

Dr Katrin Schwalenberg of Bundesanstalt für Geowissenschaften und Rohstoffe (BGR),

Dr. Friedrichs Bernhard of Metronix

and Dr. Ulrich Matzander also of Metronix

ISR has carried out considerable amount of Geophysical Investigations related to earthquake studies. In Magnetotellurics, ISR along with NGRI has pioneered 3-D survey method for upper crust. ISR has done detail survey for detection of subsurface faults in India. I have not seen in literature such clear indications of faults as inferred in Kachchh as well as Cambay.

Lately MT method of geophysical exploration is emerging as an inexpensive alternative to seismic methods and in some cases like Deccan trap country the only successful method. Moreover, it is the only reliable method for deeper structure to 30-40km. It has been used for oil exploration, geothermal exploration and the study of lithospheric structure. It has been used in land as well as ocean. It is also good to note that extensive expertise has been developed within India in recent times. As the expertise of interpretation is fast developing, the young researchers are keen to learn the same from the experts. It is evident from the overwhelming response from the participants and resource persons. More than 40 participants are from 12 organizations including four IITs (Kanpur, Roorkee, Kharagpur, Bombay), ONGC, Hindustan Zinc, Atomic Minerals Division (AMD), NGRI, Ind. Inst. of Geomagnetism, Nat. Remote Sensing Center, Hyderabad..

The training consists of lectures; hand on experience, field training, numerical modeling and data interpretation making it a complete package.

I am sure that the workshop will act as an excellent tool to disseminate the advance knowledge in the Electromagnetics and the participants will utilize it in their individual organization for Nation building in terms of oil and mineral exploration, seismic hazard assessment (identification of faults) etc.

Remarks of the German Coordinator: The German Coordinator Prof. Heinrich Brasse, from Free Univ., Berlin remarked that the Magnetotelluric data coming out from India is now of high quality and Indian Group may become largest magnetotelluric group in the World.

Remarks by the Guest of Honour Dr. M. Sudhakar, Advisor MoES: The present century may be the Earth Science Century because of resources and energy crunch. Hence, the students and researchers have great responsibility in the coming years.

Remarks by President IGU Dr. VP Dimri: Several types of studies and geophysical surveys are being done by ISR for earthquake studies. In record short time ISR has become Centre of Excellence.

Remarks by the Coordinator Dr. T. Hari Narayana, Director GERMI: Expressed that ISR should have at least 5 more MT units for effective and faster surveys.

Inaugural Address by Chief Guest Sri Ravi Saxena:

1. Students have to prepare for the greater need of work in Earth science in this century of Earth Science.
2. Gandhinagar is becoming knowledge hub as earlier it was Hyderabad. It is apparent from the fact that carnival of Geophysics is organised by GERMI, PDU and ISR by way of holding 49th Convention of Indian Geophysical Union and the Indo-German Workshop on “Magnetotelluric Data Acquisition, Processing and Modelling” in which the S&T Dept of GoG is associated with.
3. The Honourable CM sends good wishes for the workshop. He is always happy to meet the Scientists, but could not do so due to busy schedule.

4. The GoG uses e-Technology for administration. It has five departments. Under GSBTM the lion genome sequencing has been done. GUJCOST is popularizing science. Enrolment in Science stream has increased.

Gujarat had 2000 yr of microcosm and population was busy in trading. Now the task is instilling the Science culture.

5. Six years back focusing on earthquake studies an institute of this nature was established which is fully dedicated to earthquake study. Dr. Rastogi has brought it a long way. The Institute is now well recognised all over the world. It has also partnered with the engineering community. Work on intra-plate seismicity was recognised as best data sets and valuable assets for future research. The Institute has 3 major Schemes of work: Study of Physics of the Earthquake Process, Earthquake Hazard Assessment and Earthquake Forecasting.

Now MT Method will be used with vigour as I agree for buying of 10 more MT Units as suggested by Experts present in the inaugural function.

In fact, country as a whole and Gujarat also is planning to increase the investment in R&D to 1% or more.

Highlights of the 2nd Indo-German Workshop on “Magnetotelluric Data Acquisition, Processing and Modelling” – Concluding Session

Remarks by Dr. B.K. Rastogi, Chairman:

Dr. Heinrich Brasse, Resource Persons, Participants, I am sure you had two days of intensive crack course on magnetotellurics. One more day is for training on Field deployment, recording and Processing experience on two methods of MT & TEM. Some 36 participants and 22 resource persons attended from a dozen different organizations from different parts of India and Germany.

TWO DAYS Lectures Covered (i) Fundamentals (ii) New and improved instrumentation including Radio MT and VLF for shallow sub-surface (iii) Improved interpretation techniques for 2D and Exposure to 3D interpretation (iv) Tutorial on software

I talked to some of the participants. They are happy to know so many aspects of MT Survey and many new advances directly from renowned experts.

This is all good but in future you can plan one week Training course focussing more on field deployment, processing and interpretation. That should not have many theoretical development and case studies. The suggestion was supported by several resource persons and students.

Remarks of Prof. Heinrich Brasse:

The students should do their own programming. Learn what available software is doing. The suggestion was supported by several delegates and students. Inversion in Seismology is similar to MT. Hence, Seismological developments can be brought for MT. This is needed for 3D inversion of MT data. He informed that an International Symposium on MT will be held in Germany August end of 2014 and the Next Indo-German workshop may be held in 2016.







