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Future Path and Suggestions from Various Members

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Soil Dynamics Forum in India – Future path and Suggestions from Various Members

by

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**Academy of Scientific and Industrial Research (AcSIR),
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And, Guest Professor, Technical University Darmstadt, Germany.



Presentation at Soil Dynamics Forum at IIT Roorkee, December 21, 2013

Recent Giant Indian Earthquakes

1993 – Latur (Khillari) Earthquake, West-Central India

1997 – Jabalpur Earthquake, Central India

1999 – Chamoli Earthquake, Northern India

2001 – Bhuj Earthquake, Gujarat, Western India

2004 – Anandaman Nicobar Earthquake (Sumatra Earthquake)
and Tsunami, South-Eastern India.

2005 – Kashmir Earthquake, Kashmir, Northern India

2011 – Sikkim Earthquake, North-East India

2013 – Delhi Earthquake, North-West India

Earthquake Engineering Research in India

Three major Shake Tables of about 50 ton capacity with multi-directional shaking. E.g. SERC Chennai, CPRI Bangalore etc.

Seismological recording stations – several 100s

Research Institutes/Organizations – 7 IITs & some new IITs, IISc, SERC, NGRI, CPRI, NIDM, GSI, CWC, CWPRS, BMTPC etc.

Information Centre – National Information Centre for Earthquake Engineering (NICEE), IITK

Journal/Society – Indian Society of Earthquake Technology (ISET), IITR

Milestones for India

First worldwide Soil Dynamics Course started at IIT Roorkee by Prof. Shamsheer Prakash in 1960s.

Large numbers (6) of national standards on Design, retrofitting of structures

Only major country with National Standards dealing with Earthquake Resistant Non-engineered construction

IAEE – International Association for Earthquake Engineering, present President from India, Prof. Sudhir K. Jain, IITGN

Active Representation in ISSMGE (International Society for Soil Mechanics and Geotechnical Engineering, UK) Technical Committee TC 203

Distance Education Programs in Soil Dynamics

NPTEL – MHRD, Govt. of India Initiative

(Prof. Pradipta Banerji, Civil Engg. Group Coordinator)

Two Phases on NPTEL, Phase – I and Phase – II,

Phase – I, All Undergraduate Engineering Courses

Phase – II, Most Post-Graduate Engineering Courses

<http://www.nptel.iitm.ac.in/>

Soil Dynamics

- Video Course by Prof. Deepankar Choudhury, IITB (available free in Youtube)
- Web Course by Prof. P. Maheswari, S. Mittal & M.N. Viladkar, IITR

Geotechnical Earthquake Engineering

- Video Course by Prof. Deepankar Choudhury, IITB (available free in Youtube)
- Web Course by Prof. Madhavi Latha, IISc and Prof. N. R. Patra, IITK



Major Unaddressed Issues in Soil Dynamics in India

- Only 3 types of soil!!!

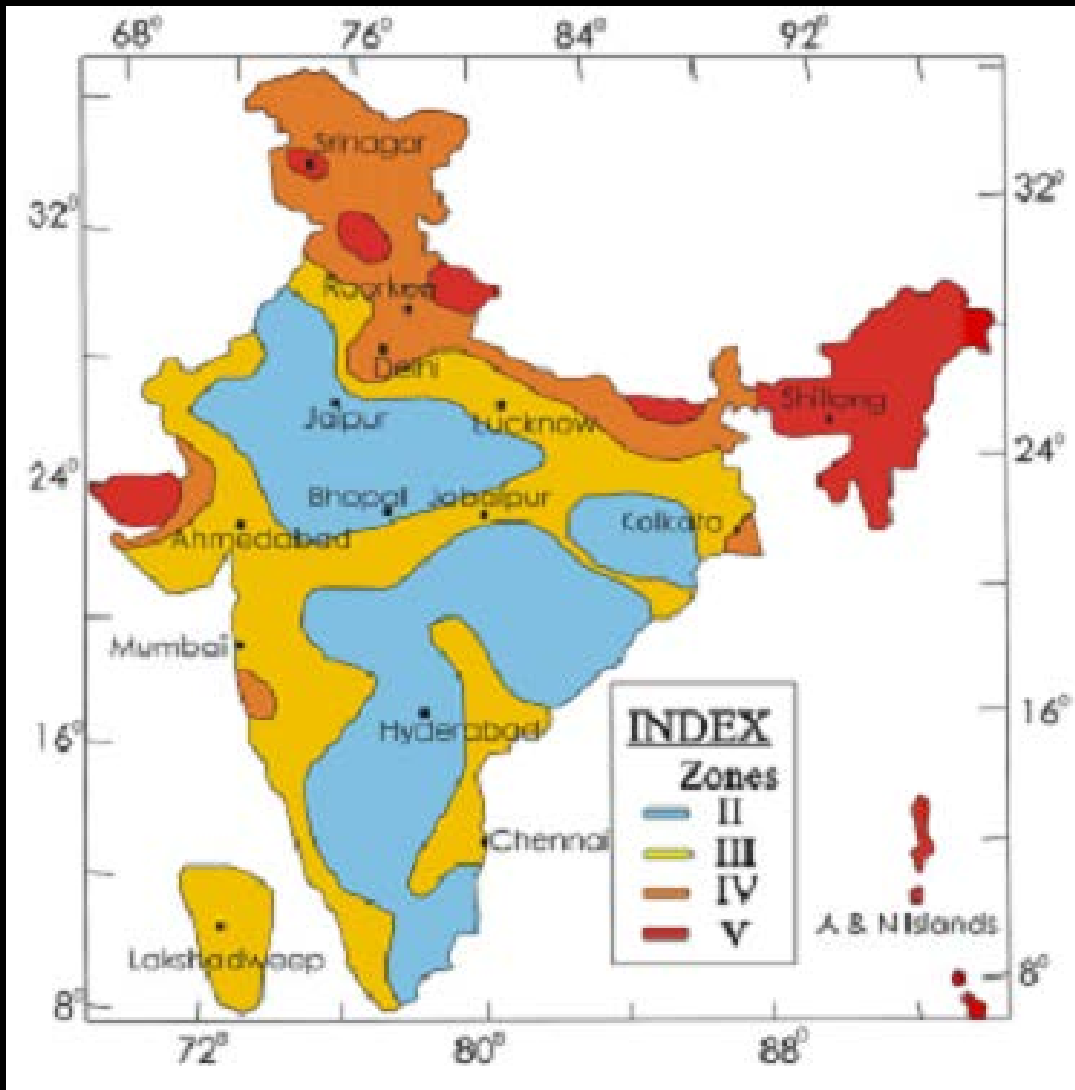
Soft soil

Medium soil

Hard rock

- Characterization of Soil Based on SPT 'N' Value, irrespective of soil type !!

- No DYNAMICS (for soil characterization) is involved!!!



**Seismic zonation map of India [as per IS 1893 – Part 1 (2002)]
with highlight on Soil Characterization**

Earthquake Resistant Geotechnical Constructions (Example of International Practices)

Slope Stability using Earth Anchors



Slope in Kagoshima, Japan

Suggestions by Various members of Soil Dynamics Forum

Prof. Atilla Ansal, Turkey

Dear Shamsheer,

Many thanks for your e-mails.

It was very nice to see you in Istanbul.

Of course I would be happy to contribute in any capacity you think is possible and appropriate for me.

I can visit India, teach some short courses if needed, help in the organization of the conferences, be a member of Overseas Committee.

Greetings

Atilla

Suggestions by Various members of Soil Dynamics Forum

Dr. Rajendra K. Bhandari, India

Dear Professor Shamsheer Prakash

Greetings. your email had escaped my attention.

Thanks for the reminder. My views are indicated below, seriatim.

A lot of attention is being paid to earthquake risk reduction .

The subject of earthquake-induced landslides is also getting to focus.

You may have to select title and define scope which can capture the imagination of stakeholders. You can consider also writing to President INAE and ask whether the Academy can own this activity on the strength of its Fellows.

In that case the activity may get head-start and national credibility.

Best regards

Rajendra

Suggestions by Various members of Soil Dynamics Forum

Dr. Sissy Nikolaou, USA

Dear Professor Prakash,
please correct my last name from "NIKLOU"
to the correct "NIKOLAOU".

I like the idea of short courses online to promote the topic.

I will read with more detail and get back to you with more comments.

Would you need more members from the US?

Thank you

Sissy

Suggestions by Various members of Soil Dynamics Forum

Prof. Vijay K. Puri, USA

Respected dr. Prakash

It looks very good.

In item F below (F. In my (GOPAL) view, -----
the state-of-the-art in)

we may add

(i) Seismic Design and Settlement of Shallow Foundations, and

(ii) Seismic Micro-zonation

(iii) Developments in in-situ dynamic testing and evaluation of test data.

With regards

VKPURI

Suggestions by Various members of Soil Dynamics Forum

Prof. Pedro Seco Pinto, Portugal

Dear Shamsheer and friends

Many thanks for the information

The tentative list of overseas members to participate in this Forum is proposed, as well the ToR(Terms of Reference) and Selected Topics.

I suggest that the Co-ordinators of each IIT in Bangalore, Rourkee, New Delhi and Gandhinagar should make a survey about the existent laboratory and in situ equipments and facilities,

in the areas of Soil Dynamics and Earthquake Engineering, as well the on going research topics and future research projects.

This information will help us to organize the short courses, as well to define the themes of the next Conference in November 2015.

Kind regards

Pedro

Suggestions by Various members of Soil Dynamics Forum

Prof. Gopal Madabushi, UK

Dear Prof Shamsheer Prakash,

It was a great pleasure to hear that you have been awarded the Distinguished Membership of the ASCE Society for your exceptional service to the profession.

You richly deserve this honour.

Thank you for inspiring me and many others in the area of Soil Dynamics and Earthquake Engineering.

Best regards,

Gopal Madabhushi

Suggestions by Various members of Soil Dynamics Forum

Some more suggestions.....



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