



IIT MADRAS



**Prof. P S RAO**  
**INSTITUTE CHAIR**

# Prof. P S RAO INSTITUTE CHAIR



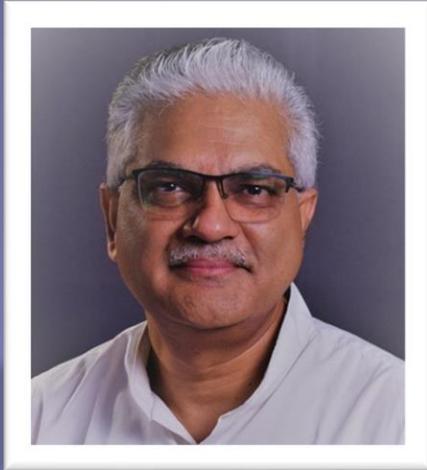
**Prof. Pulugurta Srinivasa Rao**  
Retired Professor, IIT Madras

**Professor Pulugurta Srinivasa Rao** (fondly known to his colleagues and students as **Prof. P.S. Rao**) joined Civil Engineering Department of IIT Madras in 1965 and was instrumental in commissioning the Structural Engineering Laboratory. He has handled a variety of UG and PG courses in Structural Engineering. The students always cherished his teaching and rated him as one of the excellent teachers. During his career at IIT Madras, Prof. Rao has shouldered many additional responsibilities: as the Head of the Structural Engineering Laboratory, HoD of Civil Engineering, Dean (ICSR), Dean (AC) and Member, BoG of IIT Madras. He was awarded the prestigious **Alexander Von Humboldt Fellowship** twice. With his penchant for deep fundamental understanding, he has guided **19** candidates for their **Ph.D** work and published more than **100 technical papers**.

His research and consultancy work included applications to the design of **PSC railway sleepers, RC towers, chimneys, natural draft cooling towers, raft slabs, pile-rafts, shells and folded plates, stadia, and port and harbour structures**. He continues to be an **Advisor** to the GVP group of educational institutions, which he helped found in 1997, and also as a **Structural Engineering Consultant** for a number of organizations. The contributions of Prof. Rao are truly immeasurable.

The Department of Civil Engineering proposes to create a Chair Professorship in the name of Prof. P.S. Rao, as an expression of our gratitude to a great teacher who actively contributed to the development of Department of Civil Engineering and IIT Madras in its formative years, and to honour his significant contributions to the Civil Engineering Profession. The Chair Professorship will enable the Department to identify and nominate academically high performing faculty of **Civil Engineering**.

# CHAIR OCCUPANT



**Professor C. V. R. Murty**  
Professor  
Civil Engineering, IIT Madras

**Professor C. V. R. Murty** serving as Professor at IIT Madras. He received B.Tech. and M.Tech Degrees from IIT Madras, and Ph.D. Degree from California Institute of Technology, USA. He started his career in 1992 at IIT Delhi. He worked in the Department of Civil Engineering, IIT Kanpur from 1993 to 2010; he served as Head, Department of Civil Engineering during 2007-08. During 2008-2009, he was associated with IIT Madras to help establish basic academic systems at IIT Hyderabad and start the academic programs. He was Visiting Professor at IIT Hyderabad during 2009-10. He was bestowed with the **Distinguished Teacher Award** by IIT Kanpur in 2008 and **Best Teacher Award** by IIT Hyderabad in 2009. He conducts fundamental research in **earthquake engineering of buildings and bridges**

He has supervised **6 Ph.D.** and **28 Masters'** theses; currently, he is supervising the Ph.D. Theses work of **4 Ph.D.** students.

He was the Team Leader of **NDMA Post-Earthquake Reconnaissance Teams** to study effects of the 2011 Sikkim and 2012 Doda Earthquakes. He conducted with his colleagues over **40 short courses** in India, Nepal and Bhutan on Seismic Design of New Buildings (Reinforced Concrete, Steel and Masonry) of Bridges, and Seismic Evaluation and Strengthening of Existing Structures and which trained over **2,500 professional engineers** and architects.

He actively steered in Technical Collaborations in Earthquake Engineering Research with two organisations, namely:

(1) **The Central Building Research Institute (CBRI), Roorkee, India** in joint collaboration research projects during 1996-2002; supervised four Masters Theses of students;

(2) **The Institute of Engineering (IOE), Tribhuvan University, Katmandu, Nepal** during 1997-2007 in establishing the M.Sc. Research Program in Structural Engineering (laboratory experiments, theses discussions, and External Examiner M.Sc. Theses).

## PRIMARY RESEARCH INTERESTS:

- a) Studying **seismic nonlinear behaviour of steel and reinforced concrete (RC) buildings and bridges**
- b) Developing **displacement-based design of structures**
- c) Preparing **seismic design codes**. His research work is related mostly to the practical aspects of earthquake engineering research, and implementation of the same in the design guidelines and building codes of the country.

## AWARDS AND HONOURS

- **Chairman, Earthquake Engineering Sectional Committee CED 39 (2020 onwards)** Bureau of Indian Standards, Government of India, 2020
- **Member, 2nd Advisory Committee (2016 onwards) National Disaster Management Authority, Government of India, 2016**
- **2018 ICI Best Paper Award**, Best Paper Published in ICI Journal "**Limiting Twisting during Earthquakes in Buildings with Unsymmetrical Stiffness in Plan – Elastic Study**" Indian Concrete Institute, 2018
- **Institute Chair Professor, (2017 – 2022)** Indian Institute of Technology Madras, 2017
- **2016 ACCE Nagadi Award**, Best Publication in Civil Engineering (useful to consultants) for authoring the book "**Some Concepts in Earthquake Behaviour of Buildings**" Association of Consulting Civil Engineers, 2016
- **2016 ICI Best Paper Award**, Best Paper Published in ICI Journal "**Importance of Plinth Beams in Mitigating Negative Effects of Flexible Column Bases in Seismic Behaviour of RC Moment Frame Buildings**" Indian Concrete Institute, 2016
- **Member, Tamil Nadu State Disaster Management Authority (May 2013 – 2016)** Government of Tamil Nadu, 2013

To Read more



## A Vertical-to-horizontal spectral ratio model for India

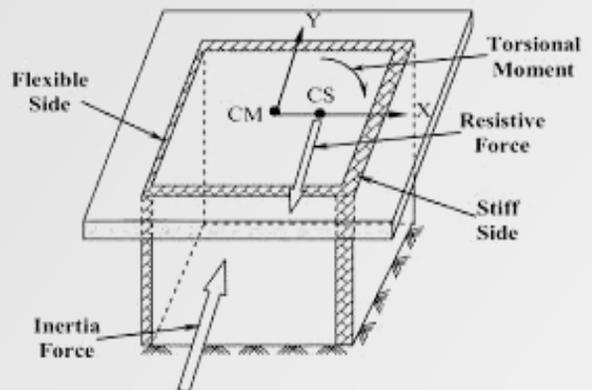
This paper presents the results of a study on the characteristics of vertical-to-horizontal ratio (V/H) of 5% damped acceleration spectra for Indian ground motion records.

To Read more



## Lateral-torsional seismic behaviour of plan unsymmetric buildings

Torsional response of buildings is attributed to poor structural configurations in plan, which arises due to two factors - torsional eccentricity and torsional flexibility. Usually, building codes address effects due to the former. This study examines both of these effects. Buildings with torsional eccentricity (e.g., those with large eccentricity) and with torsional flexibility (those with torsional mode as a fundamental mode) demand large deformations of vertical elements resisting lateral loads, especially those along the building perimeter in plan. Lateral-torsional responses are studied of unsymmetrical buildings through elastic and inelastic analyses using idealised single-storey building models (with two degrees of freedom).



For more details



## Lateral shear strength of rectangular RC columns subjected to combined P-V-M monotonic loading

An analytical method is presented to estimate lateral shear strength (and identify likely mode and location of failure) in reinforced concrete (RC) cantilever columns of rectangular cross-section under combined axial force, shear force and bending moment.



For more details



To Read more Publications



For more research articles

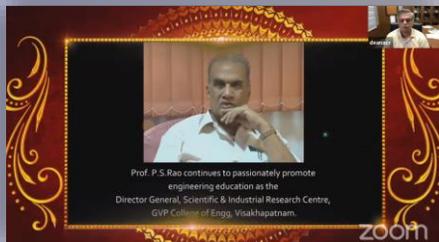


It is truly befitting that Professor C. V. R. Murty is invited to be the first occupant of the P. S. Rao Chair Professorship at IIT Madras.

## ABOUT THE CHAIR LAUNCH

Prof. P S Rao Institute Chair launched virtually at 5.00 PM, 9<sup>th</sup> August 2021

# Prof. P S RAO INSTITUTE CHAIR LAUNCH



For Video of the Chair Launch



Office of Alumni and Corporate Relations

# Thank you!

We would like to take this opportunity again to express our heartfelt gratitude to all those who made benevolent contributions towards the growth and development of IIT MADRAS



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