



# SRI VENKATESWARA COLLEGE OF ENGINEERING



(an Autonomous Institution affiliated to Anna University, Chennai)  
Pennalur, Sriperumbudur Tk - 602117

## DEPARTMENT OF CIVIL ENGINEERING

### Report of Guest Lecture on “Anchorage Zone Stresses”

Date : Monday, 23<sup>rd</sup> September 2019

Time : 9:30 am to 10:30 am

Venue : CB528

#### Speaker



#### **Dr. A. Punitha Kumar**

Assistant Professor (Sr.),

Vellore Institute of Technology, Vellore.

[punithakumar.a@vit.ac.in](mailto:punithakumar.a@vit.ac.in)

#### Coordinator

Ms. Ruby Freya, Assistant Professor/ Civil Engg

**Target Audience** : final year students

# INVITATION

## **SRI VENKATESWARA COLLEGE OF ENGINEERING**

(An Autonomous Institution affiliated to Anna University, Chennai)

Pennalur, Sriperumbudur Taluk - 602 117



Department of Civil Engineering

Solicit your esteemed presence for the

Guest lecture

on

*Anchorage Zone Stress*

By

Dr. A. Punitha Kumar  
Assistant Professor (Sr.)

Vellore Institute of Technology, Vellore

Venue	: CB 528
Date	: 23.09.2019 (Monday)
Timings	: 9.30am to 10.30am

**ALL ARE WELCOME**

Organised By  
Ruby Freya  
Assistant Professor

## SPEAKER PROFILE



### PUNITHA KUMAR AKHAS

3/6C Pilankalavilai, Thiruvarambu(po), Kanyakumari (Dt)-629161, Tamil nadu, India  
 punithakumar28@gmail.com <https://plus.google.com/116358987040033534449/posts/punith.ar>  
 +91-9487654850

# PERSONAL INFORMATION

### Objective

My mission is to work as a professional in the field of structural engineering where I can share my knowledge of design principles, practices and documentation. I can able to perform well under pressure and ability to listen and understand the requirements students. I am confident that I will make a positive contribution to VIT Vellore.

### Personal Information

Full name	Punitha kumar Akhas
Permanent Address	3/6C Pilankalavilai, Thiruvarambu(po), Kanyakumari (Dt)-629161, Tamilnadu, India
Date of birth	28-05-1980
Age	38
Passport No	L2317787
Marital Status	Married
Nationality	Indian
Religion	Christian
Health	Excellent/ Non Smoking
Language Know	English/Tamil

### Computer and Application Skills



# WORKING EXPERIENCE



## VIT VELLORE



Assistant Professor (Senior) [May 2017 to Till Date]

- Teaching Civil Engineering Subjects
- Doing research in Steel Columns and Fibre reinforced concrete
- Consultancy
- Organising Training programmes and Workshops
- Comprehensive exam Coordinator (SCALE) VIT Vellore 2017-2018
- Academic Coordinator (SCALE) VIT Vellore 2018 - Till Date
- ICI Student Coordinator (SCALE) VIT Vellore 2017- Till Date

## RAJALAKSHMI ENGINEERING COLLEGE



Assistant Professor (Senior) [June 2016 to May 2017]

- Teaching Civil Engineering Subjects
- Done research in CFRP strengthened Steel Columns
- Proof checking of structural drawing
- Consultancy
- Organised Training programmes and Workshops

## ANNA UNIVERSITY CHENNAI



Senior Research Fellow [July 2011 to June 2016]

- Teaching Civil Engineering Subjects
- Analysis and design of multi storied residential buildings.
- Analysis and design of transmission line tower.
- Proof checking of design and drawings
- Non-destructive testing of building (Rebound hammer, UPV and Core testing)

# WORKING EXPERIENCE



## NOORUL ISLAM UNIVERSITY



Assistant Professor [July 2010 to July 2011]

- Teaching Civil Engineering Subjects
- Organised Training programmes and Workshops
- Proof checking of structural drawing
- Overseeing construction entailing structural and architectural design drawings check and recommending design modifications

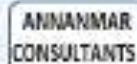
## LARSEN & TURBO (PVT) LTD



Assistant Engineering Manager [July 2008 to July 2010]

- Analysis and design of Transmission line Tower and its Foundation.
- Involved in analysis and design of 470m tall Guyed Tower for Indian Navy
- Involved in analysis and design of 125m height River Crossing tower for NHPC.
- Involved in analysis and design of leg extension of transmission line tower for TNEB and NHPC
- Involved analysis and design of gantry for TISCO and NHPC
- Involved in Pile foundation design for NHPC
- Preparing analysis and design report, both in Microsoft word and Microsoft excel
- Provide required training for new joiners

## ANNANMAR CONSULTANTS (PVT) LTD



Design Engineer [May 2005 to June 2006]

- Analysis and design of steel buildings.
- Analysis and design of RCC buildings.
- Analysis and design of communication tower.
- File Documentation, both in Microsoft Word and Microsoft Excel.

# EDUCATION QUALIFICATIONS



## POSTGRADUATE - ANNA UNIVERSITY, CHENNAI



Degree : Ph.D.  
Institution : College of Engineering, Guindy.  
Year of Passing : November 2016

## POSTGRADUATE - ANNA UNIVERSITY, CHENNAI



Examination Passed : M.E., (Structural Engineering)  
Year of Passing : May, 2008  
Marks obtained : 84%  
Institution : College of Engineering Guindy.

## UNDERGRADUATE - ANNA UNIVERSITY, CHENNAI



Examination Passed : B.E., (Civil Engineering)  
Year of Passing : May, 2005  
Marks obtained : 81%  
Institution : St.Xavier's Catholic College of Engineering, Nagercoil

## DIPLOMA - TAMIL NADU STATE BOARD.



Examination Passed : D.C.E., (Civil Engineering)  
Year of Passing : May, 2002  
Marks obtained : 94%  
Institution : Morning Star Polytechnic College Nagercoil.

**JOURNAL PAPER PUBLISHED**

1. **Punitha Kumar. A** and **Senthil. R.** "Axial Behaviour of CFRP-Strengthened Circular Steel Hollow Sections" *Arabian Journal for Science and Engineering*, 41 (10), 3841-3850.
2. **Punitha Kumar. A** and **Senthil. R.** "Behavior of CFRP strengthened CHS under axial static and axial cyclic loading" *KSCE Journal of Civil Engineering*, 20 (4), 1493-1500

**CONFERENCE PAPER PRESENTED**

3. **Senthil.R.**, **Punitha Kumar.A.** "Design of Thin-Walled Steel SHS Strengthened with CFRP for Enhancing Axial Load Carrying Capacity", *Emerging Trends in Engineering and Technology*, Marthandam College of Engineering and Technology, Kuttakuzhi, Kanyakumari Dist, Tamilnachu, India. 2 - Days, 21<sup>st</sup> & 22<sup>nd</sup> Feb 2013.
4. **Senthil.R.**, **Punitha Kumar.A.**, **Satheesh Kumar.R.** "Axial Strength of CFRP Strengthened Circular Hollow Steel Section", *International Conference on Earthquake Resistant Construction Practices (ICEQRCP 2012)*, Dr.M.G.R. Educational and Research Institute University, Chennai-95, India. 2 - Days, 27 & 28 July 2013.
5. **Satheesh Kumar.R.**, **Punitha Kumar. A.**, **Senthil.R.** "Behaviour of FRP Strengthened Circular Steel Column Section, National Conference on "Recent Advances in Infrastructure Development (NC-RAID' 2012)", 2 - Days, 8<sup>th</sup> - 9<sup>th</sup> March, 2012.
6. **Satheesh Kumar.R.**, **Punitha Kumar. A.**, **Senthil.R.** "Axial Load Carrying Capacity of Steel Hollow Columns Strengthened with CFRP Sheets, 26th Indian Engineering Congress 2011, Bangalore, 3 - Days, 16<sup>th</sup> - 18<sup>th</sup> December, 2011.
7. **Thanga Pandi.K.**, **Punitha Kumar.A.**, **Nalanth.N** Analytical investigation on Stress Concentration in Plate on Roll of Software in Civil Engineering, *Velammal Engineering College, Chennai*, 1 - Day, 21<sup>st</sup> April, 2011.
8. **Punitha Kumar. A.**, **Senthil.R.** Analytical investigation on End Block of post tensioned Beam Subjected to Internal Prestressing, *National Conference on Emerging Technology "NACET-2011"* Anna University of Technology, Tirunelveli, 1 - Day, 6<sup>th</sup> May, 2011.
9. **Punitha Kumar.A.**, **Senthil.R.** Analytical investigation on End Block of post tensioned Beam Subjected to External Prestressing on *Recent Advances in Steel and Concrete for Construction*, *St Peter's Engineering College, Avadi-Chennai*, 3 - Days, 22<sup>nd</sup> - 24<sup>th</sup> March, 2008.

### **Brief Report of the Guest Lecture**

The webinar started with a welcome note and the introduction of the speaker to the Participants by Ms Ruby Freya, Assistant Professor, Coordinator of this Program.

Dr. A. Punitha Kumar started the lecture with introduction about prestressing. He highlighted all the codal provisions for prestressed concrete elements. The transmission of pre stress in pre tensioned members was explained with diagrams along with the terminologies used. Transmission length, development length were clearly explained. Post tensioning was also explained in detailed with its mechanism and behavior. The transmission of post tensioned members were discussed. He discussed in detail about Anchorage zone stress in post-tensioned beams. The stress distribution and the calculation of stresses by Guyon's Approach and Magnel's method were explained. Additionally, he explained the analysis of prestressed concrete member using the software, ANSYS.

The students felt the lecture enhanced the knowledge for the subject "Prestressed Concrete Structures" in the curriculum. The participants also had appreciated the guest lecture being well organized with good content.



## PHOTOS DURING THE LECTURE



Prepared By

*Ruby Freya*

Ms.Ruby Freya (AP/Civil Engg.)