



Dr.N.Venkata Sairam Kumar

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#### PROFILE:

- Graduated (B.Tech., Civil Engineering) from RVR & JC College of Engineering, Guntur, in 2009.
- Master of Technology (Structural Engineering), from V R Siddhartha Engineering College, Vijayawada, in 2011.
- Ph.D from Acharya Nagarjuna University, Guntur (Sustainable use of crushed rock dust as filler material in concrete) 2019.

**Research Interests:**

Sustainable use of waste materials and by-products in producing concrete; Durability and Elevated temperatures effect on concrete;

**Patents Published:**

S.No.	Patent No.	Title Of the patent	Details of Applicants and inventors	Remarks
1.	202041057020	Method for Compressive Strength Determination of Crushed Rock Concrete	1)Dr.N.Venkata Sairam Kumar 2)Dr.K.S.Sai Ram 3)Dr.M.Rama Rao 4)Dr.A.Srinivasa Prasad 5)Mr.R.Surendra Babu 6)Mr.M.L.N.Krishna Sai 7)Mr.S.V.Satyanarayana 8)Mr.R.Vaishnava Kumar 9)Mr.B.Krishna Chaitanya 10)Mrs.Y.Madhavi	Filed on: Dec. 2020 Published on: Jan 2021
2.	202141059795	Non-Pozzolanic Filler Material for Improving the Flexural Strength of Concrete	R.V.R & J.C College of Engineering. 1.Dr.N.Venkata Sairam Kumar 2. Mr.K.S.Vivek, 3.Dr.A.Srinivasa Prasad, 4.Mr.P.V.S.Maruthi Krishna, 5.Mr.R.Surendra Babu, 6.Mr.M.L.N.Krishna Sai, 7.Mr.S.V.Satyanarayana, 8.Mr.M.Srikanth Kumar, 9.Mr.K.Leela Krishna, 10.Ms.Y.Madhavi.	Filed on: 21.12.2021.  Published on: Jan 2022.

**Professional Societies:**

- Life Member of Indian Society for Technical Education
- Life Member of Indian Concrete Institute
- Life Member of Indian Society for Rock Mechanics and Tunnelling Technology
- Life Member of Indian Geotechnical Society
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**Countries Visited:**

Russia

Sri Lanka

France

### **Administrative Experience:**

- Member Web Studio committee, since 2011 at RVR & JC College of Engineering.
- Consultancy In-charge Material Testing Lab, from 2014-16 at RVR & JC College of Engineering.
- Coordinator Indian Concrete Institute Students Chapter, since 2018 at RVR & JC College of Engineering.

### **Guest Lectures Delivered**

- N. Venkata Sairam Kumar, “Fire and concrete structures: part I” AICTE sponsored one-week online STTP phase-II on ‘Repair and Rehabilitation of Structures’, held during 30.11.2020 to 05.12.2020, by the Department of Civil Engineering, R.V.R & J.C College of Engineering, Guntur, Dec. 05, 2020.

### **Papers published:**

#### **In journals**

1. V.Bhavana, N.Venkata Sairam Kumar, “Mathematical modelling of crushed rock dust concrete: Performance using compressive strength. IOP Conference Series: Materials Science and Engineering, Jan. 2022. <https://doi.org/10.1088/1757-899X/1197/1/012071>
2. U.V.Narayana, N.Venkata Sairam Kumar, “Palm oil fuel ash as partial substitute to cement in concrete”. IOP Conference Series, Materials Science and Engineering, June 2021. <https://doi.org/10.1088/1757-899X/1136/1/012058>
3. **N.Venkata Sairam Kumar**, S.V. Satyanarayana, “ Effect of Elevated Temperatures on the Flexural Strength of Crushed Rock Dust Concrete” Jan. 2021. <https://doi.org/10.1016/j.matpr.2020.12.535> (Scopus; Web of Science indexed).
4. **N. Venkata Sairam Kumar**, “Crushed rock dust as filler material in concrete”, Materials Today: Proceedings, Nov. 2020. <https://doi.org/10.1016/j.matpr.2020.10.256> (Scopus; Web of Science indexed).
5. **N. Venkata Sairam Kumar**, “Effect of sulfuric and hydrochloric acid solutions on crushed rock dust concrete” Dec. 2020. <https://doi.org/10.1016/j.matpr.2020.10.691> (Scopus; Web of Science indexed).
6. **N.Venkata Sairam Kumar**, ‘Performance of crushed rock dust concrete exposed to sulphuric and hydrochloric acid solutions’, IOP Conference Series, Materials Science and Engineering, Vol: 988, December, 2020. <https://doi.org/10.1088/1757-899X/988/1/012021>

7. **N.Venkata Sairam Kumar**, ‘Flexural strength of crushed rock dust concrete at elevated temperatures’, IOP Conference Series, Materials Science and Engineering, Vol: 988, December 2020. <https://doi.org/10.1088/1757-899X/988/1/012016>
8. Bypaneni Krishna Chaitanya, Chunchu Bala Rama Krishna, R.Vaishnav Kumar, **N.Venkata Sairam Kumar**, S.Srikanth Reddy, “Feasibility and performance of bacteria based self-healing mechanism in concrete”. Journal of Critical Reviews, Vol: 7 Issue 18, July 2020. <http://dx.doi.org/10.31838/jcr.07.18.102>
9. **N.Venkata Sairam Kumar** and K.S.Sai Ram, ‘Sustainable use of waste crushed rock dust as filler material in concrete: Performance at Elevated Temperatures’, Ecology, Environment and Conservation, Vol.25, Issue 3, pp. 1230-1238, November 2019, (Scopus Indexed).  
[http://www.envirobiotechjournals.com/article\\_abstract.php?aid=9888&iid=281&jid=3](http://www.envirobiotechjournals.com/article_abstract.php?aid=9888&iid=281&jid=3)
10. **N.Venkata Sairam Kumar** and Professor K.S.Sai Ram, ‘Performance of Concrete at Elevated Temperatures made with Crushed Rock Dust as Filler Material in Concrete’, Materials today: Proceedings, Vol.18, Issue 7, pp. 2270-2278, November 2019, (Elsevier; Scopus Indexed). <https://doi.org/10.1016/j.matpr.2019.07.009>
11. **N.Venkata Sairam Kumar**, G.Sindu Krishna, M.V.R Harish Babu ‘Utilization of fly ash in concrete as partial replacement of cement’, IJRSET, Vol.8, Issue 7, pp.8271-8279, July 2019. [https://www.ijrset.com/upload/2019/july/84\\_10\\_Utilization.PDF](https://www.ijrset.com/upload/2019/july/84_10_Utilization.PDF)
12. **N.Venkata Sairam Kumar**, T.Sri Divya, K.Rama Rao ‘Use of fly ash as partial replacement of cement in concrete subjected to elevated temperatures’, IJRSET, Vol.8, Issue 7, pp.7773-7779, July 2019.  
[https://www.ijrset.com/upload/2019/july/86\\_Use.PDF](https://www.ijrset.com/upload/2019/july/86_Use.PDF)
13. **N.Venkata Sairam Kumar** and K.S.Sai Ram, ‘Sustainable use of waste crushed rock dust in concrete as partial replacement of cement’, Pollution Research, Vol.37, Issue 3, pp. 684-689, September 2018, (Scopus Indexed).  
[http://www.envirobiotechjournals.com/article\\_abstract.php?aid=8935&iid=259&jid=4](http://www.envirobiotechjournals.com/article_abstract.php?aid=8935&iid=259&jid=4)
14. **N.Venkata Sairam Kumar** and K.S.Sai Ram, ‘Experimental studies on properties of concrete containing crushed rock dust as partial replacement of cement’, Materials

today: Proceedings, Vol.5, Issue 2(2), pp. 7240-7246, April 2018, (Elsevier; Scopus Indexed). <https://doi.org/10.1016/j.matpr.2017.11.391>

15. Dr.K.Srinivasu, M.L.N.Krishna Sai, **N.Venkatasai Ram Kumar**, ‘A review on use of metakaolin in cement mortar and concrete’, IJRSET, Vol.3, Issue 7, pp. 14697-14701, July 2014. [http://www.ijrset.com/upload/2014/july/64\\_AReview.pdf](http://www.ijrset.com/upload/2014/july/64_AReview.pdf)
16. **N.Venkata Sairam Kumar**, Surendra Babu.R, Usha Kranti.J, ‘Shear walls-A review’, IJRSET, Vol.3, Issue 2, pp. 9691-9694, February 2014. [https://www.ijrset.com/upload/2014/february/94\\_Shear.pdf](https://www.ijrset.com/upload/2014/february/94_Shear.pdf)
17. **N.Venkata Sairam Kumar**, P.V.S.Maruthi Krishna, ‘Utilization of reinforced concrete flexural (shear) wall in multi-storey buildings with effect of lateral loads under flat terrain’, IJESRT, Vol.2, Issue 9, pp. 2067-2071, September 2013. <http://www.ijesrt.com/issues%20pdf%20file/Archives%202013/September-2013/37.pdf>
18. **N.Venkata Sairam Kumar**, Krishna Sai M.L.N, Satyanarayana.S.V, ‘Influence of reinforced concrete shear wall on multi-storey buildings’, IJESRT, Vol.2, Issue 8, pp. 2055-2060, August 2013. <http://www.ijesrt.com/issues%20pdf%20file/Archives%202013/august-2013/22.pdf>
19. **N.Venkata Sairam Kumar**, S.V.Satyanarayana and J.Usha Kranti, ‘Seismic behaviour of multi-storied buildings’, IJERA, Vol.3, Issue 4, pp. 2076-2079, July-August 2013. [https://www.ijera.com/papers/Vol3\\_issue4/LL3420762079.pdf](https://www.ijera.com/papers/Vol3_issue4/LL3420762079.pdf)
20. **N.Venkata Sairam Kumar**, Dr.B.Panduranga Rao and Krishna Sai M.L.N, ‘Experimental study on partial replacement of cement with quarry dust’, IJAERS, Vol.2, Issue 3, pp.136-137, June 2013. <https://www.technicaljournalonline.com/ijaers/VOL%20II/IJAERS%20VOL%20II%20ISSUE%20III%20APRIL%20JUNE%202013/316.pdf>

## **In Conferences**

1. **N.Venkata Sairam Kumar** and R.Satya Sai Deep, Earthquake Risk Assessment and Management, International Conference on Professional Engineers: Challenges in

Disaster Management" organized by Department of Civil Engineering, Gitam University, Visakhapatnam 18-19, Dec 2014.

2. **N.Venkata sairam Kumar**, K.S.Sai Ram, Experimental studies on properties of concrete containing crushed rock dust as partial replacement of cement, International conference on recent trends in Metallurgy, Materials Science and Manufacturing, organized by Department of Metallurgical and Materials Engineering, National Institute of Technology, Tiruchirappali, 10-12, March, 2017.
3. **N.Venkata sairam Kumar**, K.S.Sai Ram, Performance of concrete at elevated temperatures made with crushed rock dust as filler material, 9<sup>th</sup> International conference on Materials Processing and Characterization, organized by Department of Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, 8-10, March, 2019.
4. **N.Venkata Sairam Kumar**, "Sustainable use of waste crushed rock dust as filler material in concrete" in the International conference on Advanced Materials Behaviour and Characterization, organized by Mattest Research Academy, Chennai, during 18-23, July, 2020.
5. **N.Venkata Sairam Kumar**, 'Performance of crushed rock dust concrete exposed to sulphuric and hydrochloric acid solutions' in the International concrete on recent developments in material science and applications, organised by department of mechanical engineering, Chennai Institute of Technology, during 25-26, September, 2020.
6. **N.Venkata Sairam Kumar**, 'Flexural strength of crushed rock dust concrete at elevated temperatures' in the International concrete on recent developments in material science and applications, organised by department of mechanical engineering, Chennai Institute of Technology, during 25-26, September, 2020.
7. **N.Venkata Sairam Kumar**, S.V.Satyanarayana, 'Effect of elevated temperatures on the flexural strength of crushed rock dust concrete' in the 2020 Second international conference on recent advances in materials and manufacturing (ICRAMM 2020), organised by the department of mechanical engineering, Velalar College of Engineering and Technology, Erode, Tamil Nadu, India, during 20-2, November 2020.
8. **N.Venkata Sairam Kumar**, 'Effect of sulfuric and hydrochloric acid solutions on crushed rock dust concrete' in the 2<sup>nd</sup> International conference on manufacturing,

material science and engineering, organised by the department of mechanical engineering, CMR Institute of Technology, Hyderabad, during 18-19, December, 2020.

**Workshops/Summer/Winter Schools Attended:**

1. N. Venkata Sairam Kumar, One-week STTP PHASE-II “Repair & rehabilitation of structures” Department of Civil Engineering, RVR & JC Engineering College, Guntur, Nov. 30–Dec. 05, 2020.
2. N. Venkata Sairam Kumar, International webinar “Structural retrofitting refurbishment and rehabilitation” Department of Civil Engineering, Jaypee University of Engineering and Technology, Guna. Nov. 28, 2020.
3. N. Venkata Sairam Kumar, One-week STTP PHASE-I “Repair & rehabilitation of structures” Department of Civil Engineering, RVR & JC Engineering College, Guntur, Nov. 16–21, 2020.
4. N. Venkata Sairam Kumar, webinar “Plagiarism in research” Anjuman Institute of Management and Technology, Belagavi, Nov. 10, 2020.
5. N. Venkata Sairam Kumar, webinar “Case studies related to structures’ ICI Vizag centre and Ultra Tech Cement Limited, Sep. 07, 2020.
6. N. Venkata Sairam Kumar, AICTE sponsored one-week online STTP Phase II “Soft computing techniques in civil engineering” Department of Civil Engineering, Shri Vishnu Engineering College for Women, Bhimavaram, Andhra Pradesh, Aug. 17–22, 2020.
7. N. Venkata Sairam Kumar, FDP “Author’s Conclave” Department of Civil Engineering, SRM Institute of Science & Technology, Ramapuram, Chennai, Aug. 11–17, 2020.
8. N. Venkata Sairam Kumar, AICTE sponsored one-week online STTP “Computational intelligence in earthquake resistant design” Department of Civil Engineering, Prof Ram Meghe College of Engineering & Management, Badnera, Amaravati, Maharashtra, Aug. 03–08, 2020.
9. Participated in a web lecture on “**Decoding the Structural Code Part II-IS 13920-2016**”, Ductile Design & Detailing of Reinforced Concrete Structures, held on 2<sup>nd</sup> August, 2020, organized by iSTEEL XLS TMT Bars.

10. Participated in a Five-Day online faculty development program on **“Recent Trends and Innovations in Civil Engineering”** held from 27.07.2020 to 31.07.2020, organized by the Department of Civil Engineering, Dr Lanakapalli Bullayya College of Engineering For Women, Visakhapatnam.
11. Participated in a webinar series on **“Sustainable Materials and Construction Technologies”** held from 06.07.2020 to 10.07.2020, jointly organized by the Department of Civil Engineering, B.V.Raju Institute of Technology, Narsapur and The Ramco Cements Limited .
12. Participated in a three day national level online faculty development program on **“Rehabilitation and Retrofitting of Structures (R<sup>2</sup>S)”** held from 04.06.2020 to 06.06.2020, organized by the Department of Civil Engineering, Sree Vidyanikethan Engineering College (Autonomous), Tirupati.
13. Attended a Workshop on **‘ETABS (Extended Three-dimensional Analysis of Building Systems)’** on’, organized by R.V.R & J.C College Engineering, Guntur, November 20-22, 2019.
14. Attended 5 day Skill Development Programme on **‘RIVET Structures’** organized by AP State Skill Development Centre (APSSDC), at RVR & JC College of Engineering, during 24-28 October, 2016.
15. Attended a one week FDP on **‘Advanced Software Training in Civil Engineering’** under Industry Institute Interaction Program of TEQIP II-SC1.2 organised by Department of Civil Engineering, V.R.Siddhartha Engineering College, Vijayawada during 3-8 October, 2016.
16. Attended workshop on **“Outcome based Education”** Organized R.V.R.J.C College of Engineering, at R.V.R.J.C College of Engineering on 6<sup>th</sup> June 2014.



17. Attended a one day national seminar on “**Problems Associated with Geotechnics of Expansive soils**” Organized by IGS-Guntur Chapter and R.V.R.J.C College of Engineering, at R.V.R.J.C College of Engineering on 25<sup>th</sup> January 2014.
18. Attended national workshop on “**Nano Technology- A fuel for chemical Industry (NTFC)**” organized by R.V.R & J.C College of Engineering, Chowdavaram, Guntur, during 20<sup>th</sup> -21<sup>st</sup> September 2013.
19. Attended national seminar on “**Futuristic trends of Nano-composites and their fabrication**” organised by R.V.R & J.C College of Engineering, Chowdavarm , Guntur , during 6<sup>th</sup> -7<sup>th</sup> September 2013.

**Events organized:**

1. K. S. Sai Ram, M. L. N. Krishna Sai, **N. Venkata Sairam Kumar** and R. Vaishnav Kumar, AICTE sponsored one-week online STTP phase-I “**Repair and rehabilitation of structures**” Department of Civil Engineering, R.V.R & J.C College of Engineering, Guntur, Nov. 16–21, 2020.
2. K. S. Sai Ram, M. L. N. Krishna Sai, **N. Venkata Sairam Kumar** and B. Krishna Chaitanya, AICTE sponsored one-week online STTP phase-II “**Repair and rehabilitation of structures**” Department of Civil Engineering, R.V.R & J.C College of Engineering, Guntur, Nov. 30–Dec. 05, 2020.
3. Organized a webinar lecture on “**Earthquake Resistant Design of Structures-Basic Concepts**” held at R.V.R & J.C College of Engineering, on 16<sup>th</sup> July, 2020.
4. Organized a webinar lecture on “**Quality Assurance in Reinforcement Steel and Concrete** ” held at R.V.R & J.C College of Engineering, on 10<sup>th</sup> July, 2020.
5. Organized one day national workshop on “**Sustainable Materials and Techniques in Concrete Structures (SMTCS-2019)**”, held at R.V.R & J.C College of Engineering, on 23<sup>rd</sup> February, 2019.