

# Curriculum Vitae

**APPLIED FOR: BEST RESEARCH AWARD**

## **Personal Details:**

Candidate Name: Dr. Venkateswara Rao Kolli  
Gender : Male  
Date of Birth : 14-03-1974  
Are you a citizen of India? Yes



## **Present Address:**

Assistant Professor,  
Electronics and Communication Engineering,  
Malnad College of Engineering,  
Hassan-573 202

## **Permanent Address:**

S/o Pentaiah,  
Pothavaram (post),  
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Category: Scheduled Caste

## **Education, commencing with highest qualification:**

Degree	College/Institute	University/Institute	Year of Completion	Percentage /CGPA	Class
<b>Ph.D</b>	Indian Institute of Science, Bangalore	Indian Institute of Science, Bangalore	2018	5.80/8	First
<b>M.Tech</b>	Malnad College of Engineering, Hassan, Karnataka	Visvesvaraya Technological University, Karnataka	2009	66.80	First
<b>B.Tech</b>	S.V.H. College of Engineering, Machilipatnam, AP	Acharya Nagarjuna University, Andhra Pradesh (AP)	2003	60.24	First
<b>D.CM.E</b>	Dr.B.R.A.G.M.R. Polytechnic college, Rajahmundry, Andhra Pradesh	State Board of Technical Education, Andhra Pradesh	1995	FC/67.90	First
<b>SSC</b>	Z.P.P.High school, Pothavarram	Board of Secondary Education	1991	FC/68.17	First

**PhD Advisor :** Prof. T. Srinivas, Professor, ECE Department, Indian Institute of Science, Bangalore

**Title of Thesis:** Integrated Optic Microring Resonator based Sub- $\mu$ N Force and Acceleration Sensors

**Areas of specialization:** Photonics, Integrated Optical MEMS, Optical MEMS

### EDUCATION

Ph.D ( Electrical Communication Engineering) 2012 – 2018  
Indian Institute of Science, Bangalore  
GPA: 5.8/8.0

*Advisor:* Prof. T. Srinivas

*Thesis Topic:* Integrated Optic Microring Resonator based Sub- $\mu$ N Force and Acceleration Sensors

M.Tech.(Digital electronics and Communication Systems) 2005-2009  
Electronics and Communication Engineering  
Malnad College of Engineering, Hassan,  
Karnataka

*Advisor:* Prof.M.V.Satyanarayana

*Thesis Topic:* Geostationary Satellite Image Navigation using coordinates Transformation Technique  
Percentage Scored: 60.24%

B.Tech. (Electronics and Communication Engineering) 1997-2003  
S.V.H. College of Engineering,  
Machilipatnam, Andhra Pradesh  
Percentage Scored: 60.24%

### CURRENT POSITION

Assistant Professor October 2006 - current  
Electronic and Communication Engineering,  
Malnad College of Engineering,  
Hassan-573202, Karnataka.

### RESEARCH INTERESTS

- Integrated Optical MEMS based force, pressure and acceleration, and Bio sensors.
- Photonic crystal MEMS based force, pressure, Bio sensors and chemical sensors.

### WORK EXPERIENCE

Assistant Professor October 2006 – current

### FEEDBACK

20122-23 Odd Semester Sensors and Actuators course	87.75%
20122-23 Odd Semester Basic Electronics	93.55%
2021-22 Even Semester MEMS Course	86.13%
2021-22 Odd Semester Sensors and Actuators course	90.80%
2020-21 Even Semester MEMS course	80.36%
2020-21 Odd Semester OFC Systems course	96.38%

## **AWARDS**

- Co-author of Best paper award in international conference on advances in information technology (ICAIT-2019)

## **PROFESSIONAL SERVICE**

### **Coordinator:**

- One week FDP on MEMS&MOEMS, ECE, MCE May 2018
- Two weeks FDP on Green, Smart,5G Technologies, ECE, MCE, Hassan,2019
- Coordinator for NAAC committee
- Co-coordinator for NBA committee

## **Ph. D THESIS SUPERVISION**

- 1.Basavaprasad, Integrated Optical Ring Resonators for the Sensing and Communication Applications, 2021
- 2.Meghashree B S Design and Analysis of Photonic Crystal resonators for the Sensing and Communication Applications, 2022
- 3.Radhika K A Design and Analysis of Optic Devices for the Sensing and Communication Applications,2023.

## **M.TECH THESES SUPERVISED AT MCE, HASSAN**

1. Athira K, Strain measurement in the optical fiber, 2017.
2. Divyashree K N, Analysis of dispersion in optical fiber using chirping method, 2017.
3. Girish P R, Photonics crystal-based pressure sensor using diaphragm, 2018.
4. Preetham J K, Photonic crystal ring resonator-based biosensor, 2018
5. Balaramgowda, integrated optical ring resonator-based bio sensor, 2018
6. Basavaprasad, High Q factor 2D PC based ring resonator for detection of glucose concentration in urine, 2019

## **MEMBERSHIP IN TECHNICAL SOCIETIES.**

- ISTE life Member
- IEEE Member
- IEEE Photonics Member
- Optic Member

## **INSTITUTE MEMBERSHIP POSITIONS**

- Board of Studies, ECE, MCE, Hassan
- Board of Examinations, ECE, MCE, Hassan
- Ant ragging committee MCE, Hassan
- Rotract club, MCE, Hassan
- Programm Officer, Youth Red Cross Wind, MCE, Hassan.

## **PATENTS GRANTS AND PUBLISHED**

**1.Venkateswara Rao Kolli**, Dudla Prabhakar, Anusha, Srinivas Talabattula, “*Integrated optical serially coupled microring resonator-based accelerometer and high Q-factor photonic crystal microring resonator-based pressure sensor*”, Application Number, 202141040452, 09.06.2023, **INDIAN GRANT.**

**2. DR. VENKATESWARA RAO KOLLI SUSHMA NAGESH DR. INDIRA BAHADDUR DR. MALA RAMESH DR. RAJANNA SIDDAIAH**, “**Laser Interferometer for length measurement**”, 25.10.2023, **U.K GRANT.**

**3.Venkateswara Rao Kolli**, Dudla Prabhakar, Srinivas Talabattula, “**ADVANCE, AND HIGH SENSITIVE PHOTONIC CRYSTAL MACH-ZEHNDER-INTERFEROMETER BASED PRESSURE-SENSOR**”, Application Number, 202141048718, Published on 25.10.2021.

4. Rishitej Chaparala, Imamvali Shaik, Yuvaraju Chinnam, **Venkateswara Rao Kolli**, Dr.Sreenivasulu Tupakula, “*Spoof Surface Plasmon Polaritons Waveguide for sensor based Applications*”, Application Number:202341033912, Published on 15.05.2023.

5.Dr. RAJANNA S, Dr. M. RAMESH, **Dr.VENKATESWARA RAO KOLLI**, “*Isolated integrated renewable Energy Model*”, Application Number: 202341052112, Published on 03.08.2023,.

**6.Dr. Venkateswara Rao Kolli**, Dr. Srinivasulu Tupakula, Dr. Srinivas Talabattula, “*An Optimized Integrated Optical Coupled Micro Ring Resonator for Low-Pressure Sensing*”, Application Number, 202341048095, Published on 17.07.2023.

7.Dr. M. Ramesh, Dr. Rajanna S, **Dr. Venkateswara Rao Kolli**, “*Dispatch Strategies-based Performance Analysis of a Hybrid Renewable Energy System for a Remote Rural Area in India*”, Application Number, 202341049419, 21.07.2023. Published.

8. Dr. Shreevyas H. M, **Dr. Venkateswara Rao Kolli**, Karthik P N, “*Investigation of Network Anomaly Detection Techniques for Distributed Denial of Intelligent Service Attacks*”, Application Number, 202341052114, Published on 03.08.2023.

9. Dr. Shreevyas H. M, **Dr. Venkateswara Rao Kolli**, Ruhin Shaikh, “*False Positive automatic Reduction in DDoS attack classification using ANN simulation*”, Application Number, 202341052113, , Published on 03.08.2023.

10. Dr. Srinivasulu Tupakula, **Dr. Venkateswara Rao Kolli**, Dr. Indira Bahaddur, “*Super defect inside photonic crystal ring resonator to enhance Q-factor*”, Application Number, 202141048718, November 2021. Published.

11. Dr. Sreenivasulu Tupakula, **Dr. Venkateswara Rao Kolli**, Dr. Indira Bahaddur, *A Novel 8-Channel DWDM demultiplexer on Silicon Photonic Crystal slab: Design and Analysis*, Application Number, 202141049418, 21.07.2023, Published.

12. DR. SREENIVASULU TUPAKULA, DR. VENKATESWARA RAO KOLLI, DR. INDIRA BAHADDUR, DR. KUMAR P K, **4-Channel DWDM demultiplexer on silicon photonic crystal slab**, Application No.202341056018, Filled on 21/08/2023

## PUBLICATIONS

Link to Google Scholar page

<https://scholar.google.com/citations?user=8LiKAlkAAAJ&hl=en>

As on 23/11/2023, Citation Count: 105, h-index: 6, i10 index: 2.

## JOURNAL PAPERS

1. **Venkateswara Rao Kolli**, Srinivas Talabattula, An Optimized Integrated Optical Coupled Micro Ringresonator for Low-Pressure Sensing, IEE Sensors, Volume/Issue: Volume 22 , Issue 16, Jul 12 2022, DOI: 10.1109/JSEN.2022.3188873 , Impact factor- 4.60, SCI.

2. **Venkateswara Rao Kolli**, Indira Bahaddur, Srinivas Talabattula , *A high sensitive photonic crystal Mach-Zehnder-Interferometer based pressure-sensor*, Elsevier - Results in Optics, 202, Scopus.

3. **Venkateswara Rao Kolli**, Prabhakar Dudla, Srinivas Talabattula, *Integrated optical MEMS serially coupled double racetrack resonator based accelerometer*, Elsevier, Optik (2021) Volume 236, June 2021, 166583, Impact factor-2.840, SCI.

4. **Venkateswara Rao Kolli**, Indira Bahaddur, Basavaprasad, Dudla Prabhakar, Srinivas Talabattula, *High Q-factor Photonic Crystal Microring-resonator based Pressure Sensor*, Elsevier-Photonics and Nanostructures - Fundamentals and Applications 2020, Volume 43, February 2021, 100870., Impact factor- 3.064, SCI.

5. T Sreenivasulu, **Venkateswara Rao Kolli**, Badrinarayana T, Gopalkrishna Hegde, T Srinivas, *Photonic crystal ring resonator based force sensor: Design and analysis*, Elsevier, Optik 155 June-2018, 111-120 Impact factor-2.840, SCI

6. **Venkateswara Rao Kolli**, Tupakula Sreenivasulu, T Badrinarayana, Gopalkrishna Hegde, T Srinivas, *Design and Analysis of Serially Coupled Double Microring Resonator Based Force Sensor for 1  $\mu$ N Range Measurement*, Elsevier, Optik 131 Feb-2017 1063-1070. Impact factor-2.840, SCI

7. T Sreenivasulu, **Venkateswara Rao Kolli**, T R Yadunath, T Badrinarayana, Amaresh Sahu, Gopalkrishna Hegde, S Mohan and T Srinivas, *Photonic Crystal based Sensor to Measure Sub-micro Newton Forces over a Wide Range*, Current Science, Vol. 110, No. 10, May 2016. Impact factor 1.102, SCIE.

8. Tupakula Sreenivasulu, **Venkateswara R. Kolli**, Badrinarayana Tarimala, Gopalkrishna Hegde, Mohan Sangineni, and Srinivas Talabattula, *Super Defect Inside Photonic Crystal Ring Resonator to Enhance Q Factor*, SPIE Journal of Optical Engineering, Vol. 55, No. 3, 035103, March 2016. Impact factor 1.09, SCI.

## INTERNATIONAL CONFERENCES

1. PRABHAKAR DUDLA, **Venkateswara Rao Kolli**, VKDV PRASAD Varre, Vasudeva Rao Manepalli, Bhuvan Chand Pulikonda, Performance prediction of graphene-based patch antenna using different ground plane dimensions, Volume 50, Part 5, Pages 2392-2397, 2022.

2. Varsha, Indira Bahaddur, **Venkateswara Rao Kolli**, Photonic Crystal Based Bio-Sensor using Rhombic Ring Resonator for Cancer Cell Detection, 2021 IEEE International Conference on Electronics, Computing and Communication Technologies (IEEE-CONECCT).

3. **Venkateswara Rao Kolli**, Basavaprasad, Srinivas Talabattula, *High Q Photonic Crystal Based Microring Resonator Biosensor for the Detection of Glucose-Concentration in Urine and Blood*, IEEE-CONNECT, July-2020.

4. **Venkateswara Rao Kolli**, Srinivas Talabattula, *Design and Analysis of MEMS Racetrack Resonators for Force Sensing Applications*, IEEE-CONNECT July-2020

5. Lakshmi, **Venkateswara Rao Kolli**, P. C. Srikanth, D. L. Girijamba, Indira Bahaddur Pressure Sensor Based On 2-Dimensional Photonic Crystal Ring Resonator”, VLSI, Signal Processing, Power Electronics, IoT, Communication and Embedded Systems" (VSPICE-2020- ICETE-2020) being held on 22nd and 23rd December 2020.

6. Basavaprasad, Indira Bahaddur, **Venkateswara Rao Kolli**, *High Q-factor 2D PC Microcavity Ring Resonator Based Biosensor for Biomedical Applications*, 2019 1st International Conference on Advances in Information Technology (ICAIT), 2019.

7. Ravali Pampala, **V.R. Kolli**, T. Srinivas, *Differential Pressure Sensor Using Integrated Optical MEMS and Double Ring Resonator*, IEEE Workshop on Recent Advances in Photonics (WRAP), 2017, WRAP 2017-Hyderabad, India

8. **Venkateswara Rao Kolli**, T R Yadunath, Resmi R K, T Badrinarayana, Gopalkrishna Hegde, T Srinivas, Design, *Fabrication and Characterization of 5 μm Ring Resonator*, OSA, International Conference on Fibre Optics and Photonics-2016 Kanpur India, ISBN: 978-1-943580-22-4, 4-8 December 2016.

9. T Sreenivasulu, **V R Kolli**, Amresh Kumar Sahu, and T. Srinivas, *Photonic Crystal based Sensor for Small Forces*, International Conference on Microwave and Photonics, Dhanbad, pp. 1-3, December 2015.

10. T Sreenivasulu, **V R Kolli**, Anusree K, Yadunath T R, Badrinarayana T, T Srinivas, Gopalkrishna Hegde, and S Mohan, *Photonic Crystal based Force Sensor on Silicon Microcantilever*, IEEE International Conference on Sensors – IEEE Sensors - 2015, Busan, pp. 247-250, 1-4, November 2015. 1-480707877

## CONFERENCE NOT PRESENTED/POSTERS

1. **V Rao Kolli**, Ravali Pampala, Yadunath T R and Srinivas Talabattula Integrated Optic Microring Resonator based Sub-μN Force and Acceleration Sensors, EECS Symposium-2018, Indian Institute of Science, Bangalore

2. **Venkateswara Rao Kolli**, K.G.Narayanan, T.Srinivas, An Integrated Optic Force Sensor Based on Serially Coupled Double Microring Resonator, BRICS PHOTONICS May-2016, Masckow, Russia.

3. **Venkateswara Rao Kolli**, Sreenivasulu.T, Yadunath.T.R, Anusree Kandoth, T.Srinivas, Mechanically Tunable IO Microring Resonator Based Force Sensor , Dec, ICANN-2015, IIT-Guwahati, 2015.

4. Yadunath.T.R, Anusree Kandoth, Srinivasulu T, **Venketeswara Rao Kolli**, Lavendra Yadav, GopalHegde, Badrinarayana, T.Srinivas, S.Mohan, Photonic Crystal Fabrication For Integrated Optics Applications , ICEE-December-2014, IISc, Bangalore.

## INTERNATIONAL CONFERENCES ATTENDED

1. International conference on smart systems and smart material structures and systems, July 08-11 2014 at the Indian Institute of Science, Bangalore.

2. IEEE workshop on Recent Advances in Photonics (WRAP) 2015 organized by IEEE Photonics society on 16<sup>th</sup> and 17<sup>th</sup> December at IISc, Bangalore.

3. IEEE CRALT 2016, Conference on Recent Advances in Light wave Technology 21-23 September 2016 Bangalore International Exhibition Center.

### **COURSES CREDITED AT IISc, BANGALORE**

Micro-sensor technologies  
Optical Engineering and Laser Instrumentation  
Photonics Integrated Circuits  
Sensors and Measurement Techniques

### **Declaration:**

I hereby declare that all entries in this form as well as the information provided in the attached documents are true to the best of my knowledge and belief.

**SD/-**  
**Venkateswara Rao Kolli**