### **BIO-DATA**

1. Name : **Dr.K.V.S.RAO** 

2. Designation : **Principal** 

3. Department : Mechanical Engineering

4. Date of Birth : 16/06/1958
5. Date of joining In : 10/10/2018

Present College

6. Official Address : Gayatri Vidya Parishad College of Engineering for Women

Madhurawada

Visakhapatnam – 530 048

7. Phone No. :

Office : 0891-2526639
Residence : 0891-2702254
Mobile 9414787737

8. e-Mail id. : gvpcew@gmail.com, kvsrao12@gmail.com

### 9. Qualification (Enclose Certificates)

Examination/Degree	University/B	Institution	Year	Class/Div	Specialization
	oard				
S.S.C/S.S.L.C.	SSC	SKP Govt National	1973	I	Composite
		Junior College			Mathematics &
		Ramachandrapuram			Sanskrit
Intermediate/ Pre	Board of	SKP Govt National	1975	I	Mathematics
University	Intermediate	Junior College			Physical
	Education,	Ramachandrapuram			Science
	AP				Sanskrit
B.Sc., (Engg)	RIT,	RIT, Jamshedpur	1981	I Class	Mechanical
	Jamshedpur	_		with	Engineering
	_			Distinction	
M.Tech	IIT, Kanpur	IIT, Kanpur	1984	I Class	Mechanical
		•			Engineering
Ph.D	IIT, Delhi	IIT Delhi	1996		Mechanical
					Engineering

Doctoral Thesis (Ph.D.) on	"Forced Vibration Response of Rotor Blade Due to
	Aerodynamic Interaction in a Turbomachine Stage"

### <u>10.</u>

Experience
a) Teaching

a) reaching			Designation Duration		
Institution			Designation	From	То
Department of Mechanical Engineering, University College of Engineering, Rajasthan Technical University, Kota, Rajasthan			Professor	May 2001	June 2018
Department of Mechanical Engineering, University College of Engineering, Rajasthan Technical University, Kota, Rajasthan			Reader	Dec 1991	May 2001
Department of Mechanical Engineering, MREC (now MNIT) Jaipur			Lecturer	Nov 1986	Dec 1988
Department of Mechanical Engineering, S. V. H College of Engineering, Machilipatnam, Andhra Pradesh			Lecturer	Feb 1984	Nov 1986
11	Research Experience	Current research interests: Harnessing Solar Energy and Wind Energy  Worked as a full-time research scholar (not as a QIP scholar) in Department of Mechanical Engineering at Indian Institute of			cholar) in
		Technology Delhi (Jan. 1		).	
12	Administrative Experience	Published 70 research papers  Pro Vice Chancellor, Rajasthan Technical University, Kota, Rajasthan (Jul. 2014- Feb. 2015)  Chairperson, Departmental research committee, Department of Renewable Energy (previously Centre for Energy and Environment) (Mar. 2014- Jun. 2018)  Officiating Registrar of Rajasthan Technical University, Kota, Rajasthan (Feb. 2014- Jul. 2014).  Director, University College of Engineering, Rajasthan Technical University, Kota, Rajasthan (Sep. 2010- Jan. 2011).  Dean, Faculty of Engineering and Architecture, Rajasthan Technical University, Kota, Rajasthan (Jul. 2010- Jun. 2011).  Dean, Research & Development, Rajasthan Technical University, Kota, Rajasthan (Jun. 2009- Jun. 2011).  • During the tenure full-time M. Tech. program and part time Ph.D. program was initiated.  • Students without GATE qualification were also admitted with			
		TECHQIP.  Head, Department of Ren Energy and Environment, Rajasthan (Feb. 2013- Jun Head, Department of Med University, Kota, Rajasth Registrar, Engineering Cot 2005).	) at Rajasthan T n. 2018). chanical Engine an (Sep. 2007-	echnical University ering, Rajasth Sep. 2010).	versity, Kota, nan Technical

13	Member, Curriculum	Member, Committee for improvement of the standard of technical		
	development Bodies	education courses in the state of Rajasthan, (Jul. 2009- Jul. 2010).		
	(such as BOS)	Member, Board of Management, Rajasthan Technical University,		
		Kota, Rajasthan (Jan. 2007- Jan. 2009, Dec. 2009- Dec. 2010).		
		Convener, Board of Studies, Mechanical Engineering, Rajasthan		
		Technical University, Kota, Rajasthan (Jan. 2008- Sep. 2010).		
		Chairman, Games and Sports, Rajasthan Technical University,		
		Kota, Rajasthan (Oct. 2007- Mar. 2008)		
		Member, Research Board of Engineering and Technology,		
		Rajasthan Technical University, Kota, Rajasthan (Mar. 2007- Mar.		
		2008).		
		Member of College Council at Engineering College Kota, Kota,		
		Rajasthan (1995-2002)		
14	Coordinator,	Conducted Rajasthan Pre-Engineering Test, prepared merit		
	RPET-2008.	list and allotted seats for all colleges in the state of		
		Rajasthan.		
		<ul> <li>Conducted online counselling for the first time in the state</li> </ul>		
		with the help of NIC for B. Tech. and B. Arch. admissions.		
		• 47600 students appeared the exam and 22336 seats (98.5%)		
		were allocated without any court case.		
15	No of Scholars	02		
	Working for Ph.D			
16	No. of PG	24		
	Supervisions			
17	Membership of	Life member of professional body ISTE since 1992.		
	Professional bodies			

### **SUMMER/WINTER SCHOOLS ATTENDED**

- [1] Attended staff development on first course on computational fluid mechanics at SSGM College of Engineering Shegaon, Maharashtra (26 Mar. 2007- 6 Apr. 2007).
- [2] On Industry Institute Interaction conducted by NITTR Chandigarh at Engineering College Kota, Kota, Rajasthan (12 Sep. 2005- 16 Sep. 2005).
- [3] On computation fluid flow and Heat Transfer conducted by Department of Mechanical Engineering, Indian Institute of Technology Kanpur (11 May 1992- 23 May 1992).

### WORKSHOPS AND CONFERENCES CONDUCTED

- [1] Workshop titled "Simulation based engineering science: A scientific approach to Engineering" at Malviya National Institute of Technology Jaipur at Jaipur, Rajasthan (21 Apr. 2015- 23 Apr. 2015).
- [2] International Conference on Solar Energy City of Kota: the next solar destination at Hotel Meenal Residency, Bundi Road, Kota, Rajasthan (31 Aug. 2013- 1 Sep. 2013).

### **PUBLICATIONS**

### A. Journal Articles

- [1] Y. Sharma, B. K. Saxena and K. V. S. Rao, "Energy Savings in a Building at Different Climatic Zones of India by Using Insulating Materials". In: *Green Buildings and Sustainable Engineering. Springer Transactions in Civil and Environmental Engineering. Springer, Singapore.* DOI: https://doi.org/10.1007/978-981-13-1202-1\_15. Jul. 2018, pp. 167-178.
- [2] M. Agrawal, B.K. Saxena and K.V.S. Rao, "Techno-Economic Analysis of a Grid-Connected Hybrid Solar—Wind Energy System". In: *Green Buildings and Sustainable Engineering. Springer Transactions in Civil and Environmental Engineering. Springer*, Singapore. DOI: https://doi.org/10.1007/978-981-13-1202-1\_7. Jul. 2018, pp. 81-92.
- [3] S. K. Saraswat and K. V. S. Rao, "Optimization of 10 kW Solar PV- Diesel Hybrid Energy System for Different Load Factors at Jaisalmer Location of Rajasthan India". In: *IOP Conf. Series: Materials Science and Engineering*. 2018, Vol. 330. DOI: 10.1088/1757-899X/330/1/012099.
- [4] Y. Sharma, B. K. Saxena and K. V. S. Rao, "Case Study of Fly Ash Brick Manufacturing Units at Kota in Rajasthan". In: *IOP Conf. Series: Materials Science and Engineering*. 2018, Vol. 330. DOI: 10.1088/1757-899X/330/1/012124.
- [5] R. Sharma et al., "Levelized Cost of Electricity and Plant Load Factor of 7.5 MW Grid Connected Biomass Power Plant". In: *Applied Mechanics and Materials*. Feb. 2018, Vol. 877, pp. 360-365.
- [6] A. Lele and K.V.S. Rao, "Effect of Skin Friction Coefficient on Power Developed by Flettner Rotor System for Ship Propulsion". In: *Applied Mechanics and Materials*. Feb. 2018, Vol. 877, pp. 378-383.
- [7] S. K. Saraswat and K. V. S. Rao, "Optimization of off-grid SPV-Diesel Hybrid Energy System for Different Electric Loads at Jaipur in Rajasthan, India". In: *Elixir Renewable Energy*. Jan. 2017, vol. 102, pp. 44242-44244. ISSN:2229-712X.
- [8] A. Lele and K. V. S. Rao, "Flettner Rotor for Ship Propulsion: Progress and Current Status". In: *Elixir Renewable Energy*. Jan. 2017, vol. 102, pp. 44216-44219. ISSN:2229-712X.
- [9] Z. Akhtar and K.V.S. Rao, "Theoretical Performance Analysis of Solar Chimney Power Plant for Kota Region of Rajasthan, India". In: *Applied Mechanics and Materials*. Aug. 2015, Vol. 787, pp. 157-161.
- [10] B. K. Saxena and K. V. S. Rao, "Comparison of Weibull Parameters Computation Methods and Analytical Estimation of Wind Turbine Capacity Factor Using Polynomial Power Curve Model: Case Study of a Wind Farm". In: *Renewables: Wind, Water, And Solar.* Jan. 2015, vol. 2, no. 3, pp. 1-11.
- [11] K. Sanno and K. V. S. Rao, "Estimation of Wind Power Extraction from Kites Flying at High Altitudes Comparison of Five Mathematical Models". In: *Journal of Chemical and Pharmaceutical Sciences*. Dec. 2014, ISSN: 0974-2115.

- [12] S. Bai and K. V. S. Rao, "Design and Integration of Solar-Biomass Hybrid Energy System for Drip Irrigation Pumping". In: *Journal of Chemical and Pharmaceutical Sciences*. Dec. 2014, ISSN: 0974-2115.
- [13] R. Khandelwal and K. V. S. Rao, "Characterization of Organic Waste Generated from Student Messes in Kota". In: *Journal of Chemical and Pharmaceutical Sciences*. Dec. 2014, ISSN: 0974-2115.
- [14] S. A. Khan and K. V. S. Rao, "Design and Manufacturing of Low Cost Small Vertical Axis Wind Turbine". In: *Journal of Chemical and Pharmaceutical Sciences*. Dec. 2014.
- [15] B. Bohra and K. V. S. Rao, "Quality of Kitchen Waste Generated at Rajasthan Technical University, Kota". In: *Journal of Chemical and Pharmaceutical Sciences*, Special Issue 4. Dec. 2014, ISSN: 0974-2115.

### **B.** Conference Proceedings

- [1] A. Sharma, B. K. Saxena and K. V. S. Rao, "Weibull Parameters and Wind Power Density Estimation at Different Heights for Lamba Site at Jamnagar in Gujarat". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.
- [2] A. Lele and K. V. S. Rao, "Fuel Saving Analysis in Ship Propulsion due to Application of Flettner Rotor". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.
- [3] R. Sharma, B. K. Saxena and K. V. S. Rao, "Economic Analysis of Two Grid Connected Biomass based Power Plants of Rajasthan, India". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.
- [4] Y. Sharma, B. K. Saxena and K. V. S. Rao, "Analysis of Energy Conservation by Building Envelope in Five Climatic Zones". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.
- [5] M. Bhardwaj, G. D. Agrawal and K. V. S. Rao, "Effect of Window Size and Window Orientation on Solar Chimney Performance in terms of Air Change per Hour". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.
- [6] D. Mittal, B. K. Saxena and K. V. S. Rao, "Economic Analysis of Floating Photovoltaic Plant in the Context of India". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.
- [7] B. S. Chouhan, K. V. S. Rao and B. K. Saxena, "Contribution of Hydel and Nuclear Power Plants for Carbon-Dioxide Emission Reduction in India". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.
- [8] M. Agarwal, B. K. Saxena and K. V. S. Rao, "Harnessing Solar Energy from Wind Farms: Case Study of Four Wind Farms". In: *IEEE International Conference on Environmental Management and Green Technologies (ICEMGT)*. Chennai, Sep. 2017.

- [9] M. Agarwal, B. K. Saxena and K. V. S. Rao, "Feasibility of Establishing Solar Photovoltaic Power Plants at Existing Wind Farms". In: *IEEE International Conference on Smart Technologies for Smart Nation (SmartTechCon 2017)*. Bengaluru, Aug. 2017. DOI: 10.1109/SmartTechCon.2017.8358378.
- [10] A. Sharma, B. K. Saxena and K. V. S. Rao, "Comparison of Wind Speed, Wind Directions, and Weibull Parameters for Sites having same Wind Power Density". In: *IEEE International Conference on Technological Advancements in Power and Energy (TAP Energy 2017)*. Kollam, Dec. 2017, pp. 920-925.
- [11] H. Singh, B. K. Saxena and K. V. S. Rao, "Performance Study of Solar Photovoltaic Water Pump used for Irrigation at Jaipur in Rajasthan, India". In: *IEEE International Conference on Technological Advancements in Power and Energy (TAP Energy 2017)*. Kollam, Dec. 2017, pp. 306-311.
- [12] D. Mittal, B. K. Saxena and K. V. S. Rao, "Comparison of Floating Photovoltaic Plant with Solar Photovoltaic Plant for Energy Generation at Jodhpur in India". In: *IEEE International Conference on Technological Advancements in Power and Energy (TAP Energy 2017)*. Kollam, Dec. 2017, pp. 932-937.
- [13] M. Gautam, K. V. S. Rao and B. K. Saxena, "Reduction in Liquid Hydrogen by Weight due to Storage in Different Sizes of Containers for Varying Period of Time". In: *IEEE International Conference on Technological Advancements in Power and Energy (TAP Energy 2017).* Kollam, Dec. 2017, pp. 926-931.
- [14] M. Mohsin, B. K. Saxena and K. V. S. Rao, "Estimation of Weibull Parameters and Wind Power Density at a Wind Farm Site of Jogimatti at Chitradurga in Karnataka". In: *IEEE International Conference on Technological Advancements in Power and Energy (TAP Energy 2017)*. Kollam, Dec. 2017, pp. 938-943.
- [15] B. S. Chouhan, K. V. S. Rao and B. K. Saxena, "Reduction in Carbon Dioxide Emission due to Wind Power Generation in India". In: *IEEE International Conference on Smart Technologies for Smart Nation (SmartTechCon 2017)*. Bengaluru, Aug. 2017. DOI: 10.1109/SmartTechCon.2017.8358379.
- [16] M. Gautam, K. V. S. Rao and B. K. Saxena, "Selection of Electrolyzer-Fuel Cell Combination for Supply of Water and Electricity in Remote Areas". In: *IEEE International Conference on Smart Technologies for Smart Nation (SmartTechCon 2017)*. Bengaluru, Aug. 2017. DOI: 10.1109/SmartTechCon.2017.8358380.
- [17] D. Mittal, B. K. Saxena and K. V. S. Rao, "Potential of Floating Photovoltaic System for Energy Generation and Reduction of Water Evaporation at Four Different Lakes in Rajasthan". In: *IEEE International Conference on Smart Technologies for Smart Nation (SmartTechCon 2017)*. Bengaluru, Aug. 2017. DOI: 10.1109/SmartTechCon.2017.8358376.
- [18] A. Sharma, B. K. Saxena and K. V. S. Rao, "Estimation of Weibull Parameters and Wind Power Density at Different Heights for Akal Site at Jaisalmer in Rajasthan". In: *IEEE International Conference on Smart Technologies for Smart Nation (SmartTechCon 2017)*. Bengaluru, Aug. 2017. DOI: 10.1109/SmartTechCon.2017.8358377.

- [19] H. Singh, B. K. Saxena and K. V. S. Rao, "Performance of Solar Water Pump for Irrigation: A Case Study of Village Peepalda Kalan in Kota, Rajasthan, India". In: *International Conference on Recent Advances in Materials, Mechanical and Civil Engineering (ICRAMMCE-2017)*. Hyderabad, Jun. 2017.
- [20] M. Agrawal, B. K. Saxena and K. V. S. Rao, "Estimation of energy production and net metering of Grid connected rooftop photovoltaic system in Rajasthan". In: 2017 International Conference on Circuit, Power and Computing Technologies (ICCPCT). Kollam, Apr. 2017. DOI: 10.1109/ICCPCT.2017.8074181.
- [21] A. Sharma, B. K. Saxena and K. V. S. Rao, "Comparison of smart grid development in five developed countries with focus on smart grid implementations in India". In: 2017 International Conference on Circuit, Power and Computing Technologies (ICCPCT). Kollam, Apr. 2017. DOI: 10.1109/ICCPCT.2017.8074195.
- [22] M. Gautam, K. V. S. Rao and B. K. Saxena, "Relevance of hydrogen as an alternative of electricity for energy transmission and transportation of water in India". In: *2017 International Conference on Circuit, Power and Computing Technologies (ICCPCT)*. Kollam, Apr. 2017. DOI: 10.1109/ICCPCT.2017.8074235.
- [23] D. Mittal, B. K. Saxena and K. V. S. Rao, "Floating solar photovoltaic systems: An overview and their feasibility at Kota in Rajasthan". In: 2017 International Conference on Circuit, Power and Computing Technologies (ICCPCT). Kollam, Apr. 2017. DOI: 10.1109/ICCPCT.2017.8074182.
- [24] A. Lele and K. V. S. Rao, "Net power generated by flettner rotor for different values of wind speed and ship speed". In: 2017 International Conference on Circuit, Power and Computing Technologies (ICCPCT). Kollam, Apr. 2017. DOI: 10.1109/ICCPCT.2017.8074170.
- [25] R. Kumar and K. V. S. Rao, "Performance analysis of a 2.1MW wind turbine in a wind farm at Mulana in Jaisalmer district of Rajasthan". In: 2016 Second International Innovative Applications of Computational Intelligence on Power, Energy and Controls with their Impact on Humanity (CIPECH). Ghaziabad, Nov. 2016, pp. 201-204. DOI: 10.1109/CIPECH.2016.7918766.
- [26] S. Patel and K. V. S. Rao, "Survey of awareness of Renewable Energy Technology". In: *IEEE International Conference on Innovative Applications of computational intelligence on power, energy and control with impact on Humanity (CIPECH-16)*. Ghaziabad, Nov. 2016.
- [27] S. K. Saraswat and K. V. S. Rao, "Comparison of various off-grid power system models for a 10kW load at Jaipur in Rajasthan". In: 2016 Second International Innovative Applications of Computational Intelligence on Power, Energy and Controls with their Impact on Humanity (CIPECH). Ghaziabad, Nov. 2016, pp. 134-138. DOI: 10.1109/CIPECH.2016.7918753.
- [28] A. Lele and K. V. S. Rao, "Ship propulsion strategies by using wind energy". In: 2016 International Conference on Emerging Technological Trends (ICETT). Kollam, Oct. 2016. DOI: 10.1109/ICETT.2016.7873693.

- [29] S. K. Saraswat and K. V. S. Rao, "10 kW solar photovoltaic-Diesel hybrid energy system for different solar zones of India". In: 2016 International Conference on Emerging Technological Trends (ICETT). Kollam, Oct. 2016. DOI: 10.1109/ICETT.2016.7873692.
- [30] R. Kumar and K. V. S. Rao, "Performance analysis of a 7.2 MW wind farm at Sikar in Rajasthan". In: 2016 International Conference on Emerging Technological Trends (ICETT). Kollam, Oct. 2016. DOI: 10.1109/ICETT.2016.7873694.
- [31] S. Patel and K. V. S. Rao, "Social acceptance of solar energy technology in India," 2016 International Conference on Energy Efficient Technologies for Sustainability (ICEETS). Nagercoil, Apr. 2016, pp. 142-147. DOI: 10.1109/ICEETS.2016.7582914.
- [32] Z. Akhtar and K. V. S. Rao, "Estimation of levelized electricity cost of solar chimney power plant in India by using approximate cost model of Pretorius and Kroger". In: 2016 International Conference on Energy Efficient Technologies for Sustainability (ICEETS). Nagercoil, Apr. 2016, pp. 276-279. DOI: 10.1109/ICEETS.2016.7582940.
- [33] T. Bano and K. V. S. Rao, "Performance analysis of 1MW grid connected photovoltaic power plant in Jaipur, India". In: 2016 International Conference on Energy Efficient Technologies for Sustainability (ICEETS). Nagercoil, Apr. 2016, pp. 165-170. DOI: 10.1109/ICEETS.2016.7582919.
- [34] R. Roshan and K. V. S. Rao, "A review of renewable energy progress in SAARC countries". In: *Global Conference on Renewable Energy (GCRE-2016)*. Patna, Mar. 2016.
- [35] S. A. Khan and K. V. S. Rao, "Relevance of power from Small Wind Turbines: A case study for torque speed characteristics of Small Vertical Axis Wind Turbine for Kota region of Rajasthan". In: 2016 Biennial International Conference on Power and Energy Systems: Towards Sustainable Energy (PESTSE). Bengaluru, Jan. 2016. DOI: 10.1109/PESTSE.2016.7516368.
- [36] S. Patel and K. V. S. Rao, "Social acceptance of a biomass plant in India". In: 2016 Biennial International Conference on Power and Energy Systems: Towards Sustainable Energy (PESTSE). Bengaluru, Jan. 2016. DOI: 10.1109/PESTSE.2016.7516463.
- [37] T. Bano and K. V. S. Rao, "The effect of solar PV module price and capital cost on the levelized electricity cost of the solar PV power plant in the context of India". In: 2016 Biennial International Conference on Power and Energy Systems: Towards Sustainable Energy (PESTSE). Bengaluru, Jan. 2016. DOI: 10.1109/PESTSE.2016.7516468.
- [38] S. S. Chundawat and K. V. S. Rao, "Levelized electricity cost of two grid connected biomass power plants". In: 2016 Biennial International Conference on Power and Energy Systems: Towards Sustainable Energy (PESTSE). Bengaluru, Jan. 2016. DOI: 10.1109/PESTSE.2016.7516484.
- [39] T. Bano and K.V.S. Rao, "Levelized Electricity Cost of Five Solar Photovoltaic Plants of Different Capacities". In: *Procedia Technology*. 2016, vol. 24, pp. 505-512. DOI: 10.1016/j.protcy.2016.05.086.
- [40] B. K. Saxena and K. V. S. Ro, "Estimation of wind power density at a wind farm site located in western Rajasthan region of India". In: *Procedia Technology*. 2016, vol. 24, pp. 492-498. DOI: 10.1016/j.protcy.2016.05.084.

- [41] K. Sanno and K. V. S. Rao, "Effect of air density on kite power". In: *International Conference on Technological Advancements in Power and Energy (TAP Energy)*. Kollam, Jun. 2015, pp. 132-137. DOI: 10.1109/TAPENERGY.2015.7229605.
- [42] Z. Akhtar and K. V. S. Rao, "Effect of collector efficiency on levelized electricity cost of 200 MW solar chimney power plant in India". In: 2015 International Conference on Technologies for Sustainable Development (ICTSD). Mumbai, Feb. 2015. DOI: 10.1109/ICTSD.2015.7095908.
- [43] V. Meena and K. V. S. Rao, "Feasibility of rural electrification through gasification at village Kund Habeli of Sheopur district in Madhya Pradesh, India". In: *International Conference on Bioenergy, Environment, and Sustainable Technologies (BEST)*. Tiruvannamalai, Jan. 2015.
- [44] B. K. Saxena and K. V. S. Rao, "Analysis of wind turbines for electric energy production disparity at a wind farm in Jaisalmer". In: *1st International Conference on Non-Conventional Energy (ICONCE 2014)*. Kalyani, Jan. 2014, pp. 164-168. DOI: 10.1109/ICONCE.2014.6808713.
- [45] K. Sanno and K. V. S. Rao, "Estimation of wind power extraction from kites flying at high altitudes". In: *1st International Conference on Non-Conventional Energy (ICONCE 2014)*. Kalyani, Jan. 2014, pp. 193-197. DOI: 10.1109/ICONCE.2014.6808708.
- [46] Z. Akhtar and K. V. S. Rao, "Study of economic viability of 200 MW solar chimney power plant in Rajasthan, India". In: *1st International Conference on Non-Conventional Energy (ICONCE 2014)*. Kalyani, Jan. 2014, pp. 84-88. DOI: 10.1109/ICONCE.2014.6808689.
- [47] B. K. Saxena and K. V. S. Rao, "Performance analysis of wind power plant at Devgarh in Rajasthan". In: *International Conference on Green Computing, Communication and Conservation of Energy (ICGCE)*. Chennai, Dec. 2013, pp. 544-547. DOI: 10.1109/ICGCE.2013.6823496.
- [48] K. Sanno and K. V. S. Rao, "Effect of Wind Density on Kite Power". In: *International Conference on Renewable Energy and Sustainable Energy (ICRESE)*. Coimbatore, Dec. 2013.
- [49] B. K. Saxena and K. V. S. Rao, "Wind turbine failure analysis for wind farm at Devgarh in Rajasthan". In: *International Conference on Renewable Energy and Sustainable Energy (ICRESE)*. Coimbatore, Dec. 2013, pp. 196-199. DOI: 10.1109/ICRESE.2013.6927814.
- [50] Z. Akhtar and K. V. S. Rao, "Levelized Electricity Cost of Solar Chimney Power Plant of Different Capacities". In: *International Conference on Renewable Energy and Sustainable Energy (ICRESE)*. Coimbatore, Dec. 2013.
- [51] Z. Akthar and Prof. K.V.S. Rao, "Solar Chimney Power Plant". In: *International Conference on Solar Energy City of Kota: the next solar destination*. Kota, Sep. 2013.
- [52] J. S. Rao and K. V. S. Rao, "Effect of Stator Viscous Wakes on the Non-steady Lift of Rotor Blades". In: 2nd International Symposium on Fluid Machinery and Fluids Engineering. Beijing, Oct. 2000.

- [53] J. S. Rao, N. S. Vyas, and K. V. S. Rao, "Blade Stresses and Life Estimation under Flow Path Excitation". In: *Proc. 6th Intl. Symp. on Transport Phenomena and Dynamics of Rotating Machinery*. Honolulu, Feb. 1996, Vol. 1, pp. 252.
- [54] J. S. Rao et al., "Blade Dynamic Stresses due to Flow Path Excitation". In: *Discussion Meeting on Aerodynamic Testing and Structural Dynamics at Indian Institute of Science Bangalore*. Bengaluru, Oct. 1994.
- [55] J.S. Rao et al., "Nonsteady Forces in a Turbomachine Stage-Experimental Verification". In: *Proc I Mech. E Conference Vibrations in Rotating Machinery*. Bath, England, Sep. 1992, C432-008.

### C. Technical Reports

- ➤ Contributed in the completion of the following two projects of Gas Turbine Research Establishment (GTRE) Bangalore.
  - [1] Non-Steady Forces on Stator and Rotor Blades of Turbomachines.
  - [2] Forced Vibration and Stresses of Turbomachine Blades.
- ➤ Contributed in the completion of the following project of Aeronautical Research and Development Board (ARDB) Bangalore.
  - [1] Life Estimation of Turbine Blades.

### **COMPLETED PG SUPERVISIONS**

- [1] Monika Agrawal (M. Tech., In progress since 2015), "Harnessing Solar Energy in Wind Farms".
- [2] Yogita Sharma (M. Tech., In progress since 2015), "Energy Conservation in a Building by Modifying Building Envelope at Different Climatic Zones of India".
- [3] Harjot Singh (M. Tech., In progress since 2015), "Performance Study of Solar water Pumps for Irrigation in Rajasthan, India".
- [4] Divya Mittal (M. Tech., 2018), "Techno-Economic Feasibility Analysis for Installing 1 MW Floating Photovoltaic Power Plant at Ten Lakes Located in Ten Different States of India".
- [5] Akanksha Sharma (M. Tech., 2018), "Calculation of Weibull Parameters, Wind Power Density and Capacity Factor Estimation for Different Locations in India and Selection of Wind Turbine Generator".
- [6] Mayank Bhardwaj (M. Tech., 2018), "Experimental and Simulation Study for Performance Assessment of Solar Chimney for Ventilation".
- [7] Manpreet Kaur (M. Tech., 2017), "Study of Power Demand-Supply and Potential of Solar Power in Rajasthan".
- [8] Akshay Lele (M. Tech., 2017), "Some Studies on Wind Assisted Ship Propulsion Systems with Emphasis on Flettner Rotor".

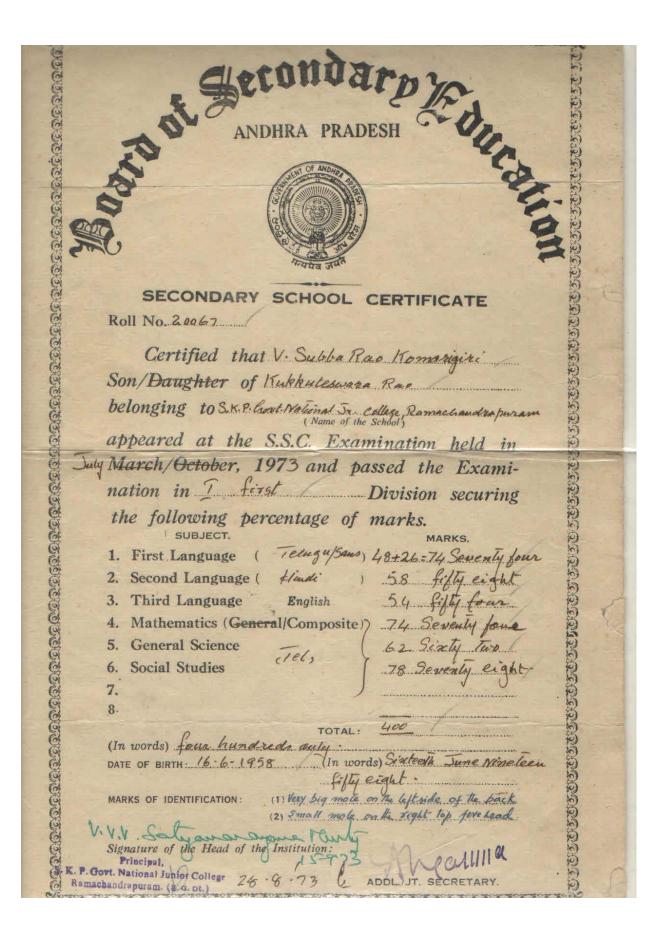
- [9] Santosh Kumar Saraswat (M. Tech., 2017), "Optimization of Solar PV Diesel Power Plant for Different Locations of India".
- [10] Rajendra Kumar (M. Tech., 2017), "Performance Analyses of Three Wind Farm in Rajasthan".
- [11] Vishnu Meena (M. Tech., 2016), "Viability of Rural Electrification through Gasification: A Case Study of Village Kund Habeli".
- [12] Burhanuddin Bohra (M. Tech., 2016), "Feasibility Study on Disposal of Organic Waste Generated at RTU campus through Anaerobic Digestion".
- [13] Tahira Bano (M. Tech., 2016), "Performance Analysis of Five Grid Connected Solar Photovoltaic Power Plants in India".
- [14] Sagar Patel (M. Tech., 2016), "Social Acceptance of Renewable Energy in India".
- [15] Seema Bai (M. Tech., 2016), "Optimization of Hybrid Energy System for Drip Irrigation Pumping of Guava Crop in Kota Region".
- [16] Sachin Jain (M. Tech., 2015), "Comparative Theoretical and Experimental Studies of Hot Box Solar Cookers".
- [17] Shahid Ali Khan (M. Tech., 2015), "Torque-Speed Characteristics of Small Vertical Axis Wind Turbine for Kota Region".
- [18] Zainab Akhtar (M. Tech., 2015), "Study of feasibility of solar chimney power plant in India".
- [19] Kumari Sanno (M. Tech., 2015), "Effect of air density on estimation of wind power extraction of kites flying at high altitudes".
- [20] Bharat Kumar Saxena (M. Tech., 2014), "Computation of Wind Resource Assessment and Performance Analysis of Wind Turbines at two wind farms".
- [21] Vishnu Agarwal (M. Tech., 2009), "Analysis of Heat Transfer in Fins using Numerical and Analytical Methods".
- [22] Bharatveersingh Chouhan (M.Tech, 2018), "Carbon diosxide E mission Reduction in India due to Wind Power, Hydel Power and Nuclear Power"
- [23] Rashmi Sharma (M. Tech., 2018), "Economic Analysis of Various Biomass Plants in Western India".
- [24] Mayank Gautam (M. Tech., In progress since 2015), "Hydrogen for Power Generation, water Production, Energy Storage and fuel cell application in vehicles".

### ONGOING DOCTORAL SUPERVISIONS

- [1] Bharat Kumar Saxena (PhD., In progress since 2017), TBD.
- [2] Radha Raman Shah (PhD., In progress since 2017), TBD.

### **OTHER ACTIVITIES**

- ➤ Involved in community/social activities:
- > Involved in starting of Annapurna Public School (high school) at Mauji Baba Trust premises, near Chambal Garden, Kota, Rajasthan.
- > Other interests include history, philosophy, astrology, religion and music.





### Provisional Certificate

19th. March 19781

a student of Final Year Will Electrical Mechanical Metallurgy Branch of this Institute, has passed the Annual | Supplementary B.Sc. (Angg.) Examination 730 f Ranchi University held in the month of Oct. 1980 College Roll Mo. 44/75 and University Roll Jam Mo. 59 W. This is to certify that Shree Venkala Gubba Rao Komazagizi and has been placed in the First Class with Distinction.

He bears a good moral character.





R. I. I., Jamshedpur

THE BOARD OF GOVERNORS OF THE

# INDIAN INSTITUTE OF TECHNOLOGY KANPUR

UPON THE RECOMMENDATION OF THE SENATE

HEREBY CONFERS ON

Venkata Lubba Ras Romaragini

THE DEGREE OF

## MASTER OF TECHNOLOGY

IN MECHANICAL ENGINEERING

GIVEN AT KANPUR ON THIS THIRTEENTH DAY OF MARCH NINETEEN HUNDRED AND EIGHTY FIVE



3 REGISTRAR

> BOARD OF GOVERNORS CHAIRMAN

SENATE

### Indian Institute of Technology Belhi

Upon the recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

on

Venkata Subba Dao Komaragiri

Thesis title :

"Forced Vibration Response of Rotor Blade Due to Aerodynamic Interaction in a Turbomachine Stage."

Given this day under the seal of the Institute at Belhi in the Republic of India.

The 9th colugust, 1996.

Birector & Chairman, Senate Chairman Board of Governors

Registrar