



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Guest Lecture on Bio-Inspired optimization algorithms for Artificial Neural Networks

Date: 20-11-2020

By

**Dr.Venkata Naresh Babu
Kuppili
Assistant Professor, NIT**

In the Presence of

Col. Prof. Vel. Dr. R. Rangarajan

Chancellor & Founder President

Dr. Sagunthala Rangarajan

Foundress President

Prof.S.Salivahanan

Vice Chancellor



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R&D Institute of Science and Technology
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SCHOOL OF COMPUTING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

EVENT SUMMARY REPORT

FOR

One day Workshop on

Bio-Inspired optimization algorithms for Artificial Neural Networks

Name of the Coordinator	: Dr K Meena
Dr Carmel Mary Belinda	
TTS NO	: 2304 & 2156
Designation	: Professor
Event Date	: November 20th, 2020

F50



Vel Tech

Rangarajan Dr. Sagunthala

RAJF Engineering College, Chennai

Dr. Rangarajan Dr. Sagunthala Vel Tech

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1. EVENT SUMMARY SHEET

**SCHOOL OF COMPUTING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

EVENT SUMMARY SHEET FOR

**One day Workshop on
Bio-Inspired optimization algorithms for Artificial Neural Networks**

Event Date: November 20th, 2020.

Chief Guest: Dr. Venkata Naresh Babu Kuppili,
Assistant Professor, EEE

National Institute of Technology, Goa, India

Objective:

Bio-inspired computing represents the umbrella of different studies of computer science, mathematics and biology in the last years. Bio-inspired computing optimization algorithms is an emerging approach which is based on the principles and inspiration of the biological evolution of nature to develop new and robust competing techniques. In the last years, the bio-inspired optimization algorithms are recognized in machine learning to address the optimal solutions of complex problems in science and engineering. However, these problems are usually nonlinear and restricted to multiple nonlinear constraints which propose many problems such as time requirements and high dimensionality to find the optimal solution. To tackle the problems of the traditional optimization algorithms, the recent trends tend to apply bio-inspired optimization algorithms which represent a promising approach for solving complex optimization problems. This workshop presents state-of-art recent bio-inspired algorithms, gap analysis, and its applications namely; Genetic Bee Colony (GBC) Algorithm, Fish Swarm Algorithm (FSA), Cat Swarm Optimization (CSO), Whale Optimization Algorithm (WOA), Artificial Algae Algorithm (AAA), Elephant Search Algorithm (ESA), Chicken Swarm Optimization Algorithm (CSOA), Moth flame optimization (MFO), and Grey Wolf Optimization (GWO) algorithm. We also analyze in-depth discussions the essence of these algorithms and their connections to self-organization and its applications in different areas of research are presented.

The workshop was initiated with the blessing of god (prayer song)

The welcome address was given by Prof. **Dr. K . Meena** Department of CSE had addressed the gathering with a glorious welcome.

The inaugural address was given by the Dean Academics Dr Ravichandran by his inspirational and motivational talk about the bio inspired algorithm on open source platform, and more over he insisted the students to learn effectively about the optimization algorithm through artificial neural network.

Dr. Venkata Naresh Babu Kuppili, gave the special address about the usage of Optimization algorithm in real world problem and finally started the session at 10.00 AM through Online platform MSTEAM.

Day – 1

- Introduction to Bio inspired optimization algorithms
- Importance of optimization techniques
- Artificial neural networks and its importance
- Procedure to apply bio inspired optimization techniques for real world problem
- Case study

Valedictory :

Time: 20.11.20 – 1.00pm

The Certificates are issued by the Prof. Dr.V. Srinivasa Rao through online those who participated in the workshop effectively.

Dr. K. Meena proposed vote of thanks, she conveyed the special thanks to Management, Vice chancellor, Dean Academic, HOD, Coordinator's and also added her wholehearted thanks to faculty members, students and supporting faculty. Finally, this program was successfully ended with National Anthem.

Outcome of Workshop:

The students are able to find and exploit the bio inspired optimization algorithm through Artificial Neural Network to solve real world problems.

2. BUDGET APPROVAL

Dr. K. Meena (TTS 2351)

Professor,

Dr. Chaitali Mary Holmaki (TTS 2352)

Department of Computer

Science & Engineering

Vel Tech Rangarajaperumal Engineering

R&D Institute of Science and

Technology, Avadi, Chennai-600092

Dr. Jeyaraj Rajasekaran

Dr. Jeyaraj Rajasekaran

Dr. Jeyaraj Rajasekaran

Dr. Jeyaraj Rajasekaran

Dr. Jeyaraj Rajasekaran

Through Proper Channel

Respected Sir,

Sub: Requisition to conduct a workshop on "Bio-Inspired optimization algorithms for Artificial Neural Networks" in November 2020. Reg.

This is to bring to your kind notice that we are willing to conduct a workshop on "Bio-Inspired optimization algorithms for Artificial Neural Networks". In continuation to Ipmt, the resource person detail is given below.

Sl. NO	NAME OF THE EXPERT	DESIGNATION	INSTITUTION
1	Dr. Anuska Nandi Kharagpur	Assistant Professor, Department of Computer Science and Engineering	National Institute of Technology Goa, India

Hence, we are requesting you to sanction the amount Rs 6000 for conducting the above said workshop. Kindly consider this and do the needful.

Sl. NO	Item	Budget	To Whom amount to be paid
1	Remuneration	Rs. 5000	Dr. K. Meena
2	Miscellaneous	Rs. 1000	Dr. K. Meena
Total		Rs. 6000	

Thanking you,

Yours sincerely,

Dr. K. Meena

Prof. K. Suresh Kumar
Chairman

Vel Tech

Rangarajaperumal Engineering
R&D Institute of Science and Technology

Handwritten signature and date:
31/11/20

3. COMMITTEE

Bio-Inspired Optimization Algorithms for Artificial Neural Networks

REGISTRATION FORM

(To be filled in block letters)

Name _____
Designation _____
Organization _____
Address _____
Mobile _____
Email ID _____

Signature _____

Important Dates

Last date for Registration : 19.11.2020

CHIEF PATRONS

Col. Prof. Vel. Dr. R. Rangarajan
Chancellor & Founder President

Dr. Sagunthala Rangarajan
Foundress Chancellor

PATRONS

Prof. S. Salivahanan
Vice Chancellor

CONVENOR

Dr. V. Srinivasa Rao
Dean - SoC & HoD - CSE

EVENT CO-ORDINATOR

Dr. K. Meena
Prof., Dept. of CSE

Dr. Carmel Mary Belinda
Prof., Dept. of CSE

RESOURCE PERSON

Dr. Venkata Naresh Babu Kuppli
Assistant Professor, EEE
National Institute of Technology, Goa, India



Vel Tech
Rangarajan Dr. Sagunthala
RSD Institute of Science and Technology
(The Institute of Learning Excellence)

Workshop
on

Bio-Inspired Optimization Algorithms for Artificial Neural Networks

20th November 2020

Organized by
Department of
Computer Science and Engineering,
School of Computing

Convenor
Dr. V Srinivasa Rao,
Dean - SoC & Head - CSE

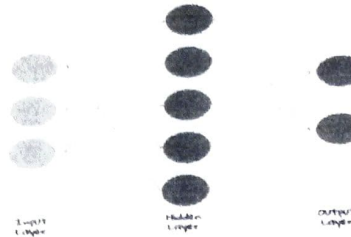
4.BROCHURE



Vel Tech
Rangarajan Dr. Sugunthala
R&D Institute of Science and Technology
Pondicherry, Tamil Nadu, India

School of Computing
Department of Computer Science & Engineering
cordially invites you for one day workshop on

Bio-Inspired Optimization Algorithms for Artificial Neural Networks



20th November 2020

In the Presence of

Cof. Prof. Vel. Dr. R. Rangarajan
Chancellor & Founder President

Dr. Sugunthala Rangarajan
Foundress President

Prof. S. Salivahanan
Vice-Chancellor

**Dr. Venkata Naresh
Babu Kuppili**

Assistant Professor - CSE,
National Institute of Technology,
Gad, India

RESOURCE
PERSON

Event Co-ordinator

Dr. K. Meena, 9940840774
drkmeena@veltech.edu.in

Dr. Carmel Mary Belinda M.J. 9486110685
carmelbelinda@veltech.edu.in

Convenor

Prof. Dr. Y. Srinivasa Rao
Dean - SoC & Head - CSE

About Vel Tech

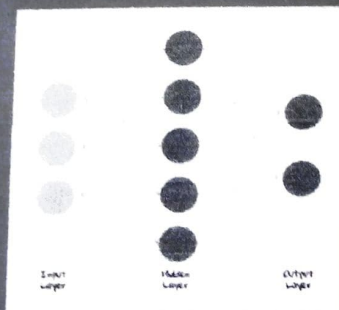
Vel Tech is well-known for its renowned educational practices, which has been recognized and endowed with several awards. The founders of the institution, Cof. Prof. Vel. Dr. R. Rangarajan, Chancellor & Founder President and Dr. Sugunthala Rangarajan, Foundress President believe in Education for All despite their financial means which will promote and uplift the society. In accord to their vision, Vel Tech Mahatma Gandhi Scholarship scheme was started and has supported students since the inception. Vel Tech has bestowed 9500 scholarships worth approximately Rs. 35 Crores until 2019.

Global Alliances of Vel Tech has working International Relations with more than 390 Institution across 20 countries and has entered in the Memorandum of Understanding (MoU)

with 120 Institutions for various Academic and Research exchange activities. Students, Faculty members, and Researchers get the collaborative platform for Academic projects, explore leading best practices and Research work with International Universities. Vel Tech believes that there are no boundaries in the pursuit of knowledge. Through these strategic alliances with International Universities, the standard of education at Vel Tech would be on par with the best in the world.

About School of Computing (SoC)

The SoC, Comprises the Departments of Computer Science and Engineering (CSE), and Information Technology (IT). It offers UG, PG and Doctoral Programmes in CSE and IT. For further details, www.veltech.edu.in



About the Department

The Department of Computer Science & Engineering (CSE) was established in the year 1997. The department has grown to current strength of 2600 students from a humble beginning with 250 students. The department is equipped with the latest state-of-the-art laboratories. The department has a dedicated team of faculty members with 14 Professors, 17 Associate Professors and 106 Assistant Professors among them 43 having doctoral degree. The students can become members of Computer Science of India (CSI), IEEE CS, IEEE PCS, IEEE WIE, ACM & ISTE. The students have been placed with leading MNC's like Wipro, ZOHO, KAAR technologies, TCS, Microsoft, Infosys, CTS, HP and Verizon. For further details, www.veltech.edu.in/cse.

5. Resource Person Details

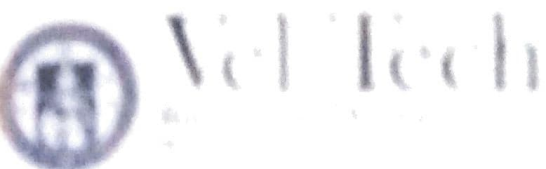
Dr. Venkata Naresh Babu Kuppili,

Assistant Professor, EEE

National Institute of Technology, Goa, India

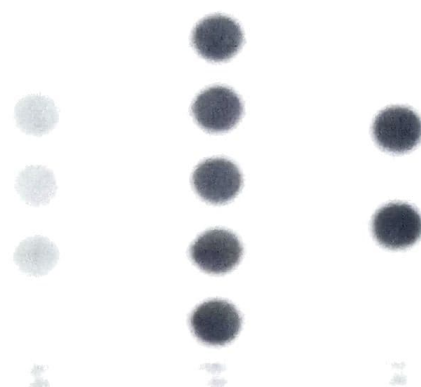
Dr. Venkata Naresh Babu Kuppili, currently serves as an Assistant Professor at the Department of Electrical and Electronics Engineering, National Institute of Technology, Goa, India. He received his M. Tech and PhD from IIT Delhi, worked as Senior research associate in Evalueserve, Visiting Scientist at Global medical research, California. His area of interest in research includes Power Electronics, Renewable Energy Systems, Soft Computing and Machine Learning. He has filed and published four Indian patents. He has 12 years of teaching and research experience. He has published his research works in 15 National Conferences, 10 International Conferences and 10 International Journals out of which majority of the papers are indexed in SCOPUS, SCI and Web of Science. He published 2 books as an author in soft computing and awarded as IEEE senior Research fellow. He is the CoPI for 3 crores project on Mechelectronics related with indonetharland collaboration and 15 lakhs project with DST. He has Senior membership in professional body like IEEE & IAENG. He is an active member in various societies as IEEE PELS, PES, IES, IEEE Young Professionals and IoT Community.

7. Banner



15th September 2024

Bio-Inspired Optimization Algorithms for Artificial Neural Networks



14/9/2024

Dr. Venkata Naresh Babu Kuppili

Assistant Professor, Department of Computer Science & Engineering, Vel Tech University, Chennai



Organized by Department of Computer Science & Engineering, School of Computing

6. INVITATION



Vel Tech

See <http://www.fishbase.org> for more information.

Figure 6. The effect of the initial concentration of the monomer on the polymerization rate.

Bio-Inspired Optimization Algorithms for Artificial Neural Networks



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It is important to remember that

Figure 1. The effect of the initial concentration of the monomer on the polymerization of α -methylstyrene initiated by $\text{C}_6\text{H}_5\text{MgBr}$ in THF at -78°C for 24 h. The concentration of the initiator was 0.01 mol/L . The concentration of the monomer was 0.01 mol/L (a), 0.02 mol/L (b), 0.03 mol/L (c), 0.04 mol/L (d), 0.05 mol/L (e), 0.06 mol/L (f), 0.07 mol/L (g), 0.08 mol/L (h), 0.09 mol/L (i), 0.10 mol/L (j).

① 资料来源：作者根据《中国统计年鉴》、《中国人口统计年鉴》和《中国农村统计年鉴》整理。

[illegible]

Dr. Veronika Maresch
Barbara Kuppel

1074-0969(199609)14:05:1-0

9. Registration Details

Sl.No	Student Name	VTU No	Register no	Whatsapp no	Year
1	Yelguri Sruthi	14745	18UECS0952	7730905775	III Year
2	R.Manvitha Chowdary	12905	18UECS0715	7288812891	III Year
3	Gogula Divya Jyothi	12364	18UECS0965	6301747428	III Year
4	D Naga gopala krishna	8917	17uecs0176	9391177043	IV Year
5	Kolla Jagadeesh	14209	18UECS0396	9949581634	III Year
6	RAVURU SATHYA NAGA SIVANANDANA SAI BHARATH	9507	17UECS0649	7032133976	IV Year
7	Uma Shankar Kakumanu	9003	17UECS0292	9848186420	IV Year
8	Vishnupriya Mandhapati	13445	19UECS0580	9177475351	II Year
9	Anubhuv kumar	11192	18uecs0073	8754576548	III Year
10	Rana prathap Reddy N	14832	18UECS0559	8790194681	III Year
11	Himavanth Dudipalla	9575	17UECD0036	9182358093	IV Year
12	Eadara yeswanth	8836	17UECS0880	9182501412	IV Year
13	n.lokeswarareddy	9097	17uecs0520	8978475359	IV Year
14	Kartik kalita	11749	18UECS0372	8399099835	III Year
15	CH.CHANDINI GEETHIKA	14706	18UECS0167	9908375819	III Year
16	Nainsar Alam	10672	17UECS0488	8757665293	IV Year
17	G. Ashritha	14193	18UECS0290	9381171007	III Year
18	PULAGAM JYOTHI BHARGAVI	12984	18UECS0691	9293234222	III Year
19	Krishna pujitha	12303	18UECS0503	9381432257	III Year
20	RAJU KUMAR RAY	14627	18UECS0713	9529132706	III Year
21	CHIRAMJEEVI PINAPATI	9038	17UECD0016	9182910062	IV Year
22	Abhay Kumar Gautam	14437	18UECS0004	9155993059	III Year
23	M.subrahmanya Sri sai sudheer	14268	18UECS0501	9177348201	III Year
24	Shruti Chowdhury	14425	18UECS0801	9366285148	III Year
25	RAVI PAVAN	12154	18UECS0727	6302852193	III Year
26	Roshan Baniya	16247	19UECS0846	9555847385	II Year
27	U venkata saiKumar	14582	18UECS0877	6302460630	III Year
28	piyush pandit	11407	18UECS0670	8982828898	III Year
29	D. Muni umesh chandra	12790	18uecs0209	6302053446	III Year
30	Mahesh Banda	9895	17UECS0090	9133580492	IV Year
31	V. Gunasekhar	9734	17UECS0782	7285980274	IV Year
32	PITCHUKA CHINNI NAGA VINAY	11140	18UECS0669	9966470469	III Year
33	SAGI AKASHVARMA	12225	18UECS0750	9381572826	III Year
34	SAKTHIVEL L K	11117	18uecs0757	7339610254	III Year
35	Sneha chowdary Tella	11496	19uecs0965	9347782323	II Year
36	KURMA BALA SAI SONU	11135	18UECS0450	9951103686	III Year
37	D.BHARGAVI	12892	18UECS0219	9492648395	III Year

38	SARIMELLA MADHU SUDHAN REDDY	11266	18UECS0774	9032374202	III Year
39	Arun Kumar Dash	11182	18UECS0974	9840372719	III Year
40	Gandham sushma	8766	17UECS0213	7358160630	IV Year
41	Burla Sudha Rani	12297	18UECS0161	6304646321	III Year
42	Saikumar Tirupathi Tati	9963	17UECN0049	9527003877	IV Year
43	Balasa swetha	15957	19UECS0095	9441830062	II Year
44	RAVELLA VISHNU	14743	18UECS0725	9676095674	III Year
45	Animesh Gupta	14411	18UECS0062	7309970942	III Year
46	R.Manideep	9997	17UECN0109	9182496489	IV Year
47	Krishna Priya	15426	19UECS0456	9361269297	II Year
48	Chavva Raghunatha Reddy	13104	19UECS0175	7013470933	II Year
49	Y.Vineeth kumar	9900	17UECN0069	8247617255	IV Year
50	Basyam Bharath	9600	17UECS0094	8297710641	IV Year
51	BHAVANAM BINDHU REDDY	15193	19UECS0122	9390707156	II Year
52	Yendrapalli Venkata Naga Siva Vara Prasad	12438	18UECS0954	9502706404	III Year
53	M. Chandana	13856	19UECS0576	8688550067	II Year
54	ALOKAM JAHNAVI	14713	18UECS0049	9000754429	III Year
55	Guruprakash.Galla	9385	17UECS0209	7981593345	IV Year
56	P. Upendra	12794	18UECS0633	9182640767	III Year
57	Swathi Raju	10918	17UECS0875	9476015616	IV Year
58	Venkata sai galla	9384	17UECS0210	8247554594	IV Year
59	Md saquib pasha	10267	17uecs0446	7799883786	IV Year
60	CHIRUMAMILLA.RAVITEJA	13435	19UECS0213	9133270306	II Year
61	Darisha Jahnavi	13377	18UECS0211	6302656367	III Year
62	KOMARA CHANDRA PRASAD	13183	18UECS0400	9490677705	III Year
63	Ch.Aryan sriharsha	14702	18UECS0196	6309829984	III Year
64	Nagasanthosh	14624	18UECS0442	9133239460	III Year
65	M.Kavya	12168	18UECS0549	9381154599	III Year
66	Prokshith	12140	18UECS0610	9515567781	III Year
67	Meesala Panisry	13402	18UECS0522	6304201757	III Year
68	Devarapalli prathima	14712	18UECS0223	9010601357	III Year
69	LAVANURU MAHESH	12331	18UECS0457	6302365371	III Year
70	Rasamsetti Bhavani neelakanteswara rao	9459	17UECS0641	9398516667	IV Year
71	JUPALLY SAI KUMAR	13830	19UECS0396	9676749112	II Year
72	B.Venkata Subhasri	14490	19UECS0137	8688053309	II Year
73	B. Sesha sai	14382	18UECS0157	9133843602	III Year
74	K.Mallika Madhuri	12456	18UECS0365	7730036999	III Year
75	Pamarthi Bala Trinadh Ganesh	14911	18UECS0628	9666579948	III Year
76	M. Manoj	14659	18UECS0504	9701761251	III Year
77	THOTTEMPUDI LAKSHMAN	14933	18UECS0862	9705873089	III Year

119	Poli Saikumar Reddy	9474	17UECS0594	9949487381	IV Year
120	KACHAM ABHINAY	14734	18UECS0342	9849984404	III Year
121	Gurudev M	10207	17UECS0450	8106843519	IV Year
122	SHAHEEN NAIYER	15231	19UECS0882	9121643831	II Year
123	ANGITI NAVEEN REDDY	14741	18UECS0059	9502097232	III Year
124	GUTHA MOUNIKA	11497	19UECS0360	8688107823	II Year
125	KOTA ESWAR NARASIMHA PRASAD	12195	18UECS0424	9866517747	III Year
126	MANDADI ADARSH	14699	18UECS0495	8978273696	III Year
127	Lakshmi yashvanthi	12200	18UECS0741	9618297451	III Year
128	CHANDRA SHEKAR YALLA	12385	18UECS0942	8978073194	III Year
129	Sikha Priyanka	10382	17UECS0716	6374460858	IV Year
130	Bishal Saha	11313	18UECD0005	9647525258	III Year
131	K mehar Chaitanya	14751	18UECS0423	8919092889	III Year
132	K Prudhvi	14930	18UECS0397	7729839892	III Year
133	PEERAMPALLI PRASHANTH	12518	18UECS0653	6303553798	III Year
134	Avula Prathap Reddy	12887	18UECS0097	6302327706	III Year
135	C Suresh Babu	8633	17UECS0149	9492806027	IV Year
136	Asha Latha Reddy Bhavanam	12476	18UECS0975	6305561456	III Year
137	P SREENIVASULU	14279	18UECS0639	9652870105	III Year
138	Ghantasala saiprathyusha	12194	18UECS0278	6303321129	III Year
139	Y V RAKESH REDDY	11631	18UECS0946	6303839848	III Year
140	Anja Naga Venkata Bhaskar Lakshman	8986	17UECS0069	9398084312	IV Year
141	A Siva Sai Gopinath Reddy	12149	18UECS0081	9963225658	III Year
142	SINGU MADHUPAL	14719	18UECS0808	9381224284	III Year
143	GULLIPALLI JAGADISH	13252	18UECS0293	6303250329	III Year
144	NAGULA SATHWIK REDDY	14358	18UECS0566	9704105538	III Year
145	ANNAPANENI TARAKARAM	14300	18UECS0069	9494943887	III Year
146	SASIKANTH AMIRISETTI	9371	17UECS0045	7730914026	IV Year
147	D SAISRIRAMREDDY	12184	18UECS0248	9010880535	III Year
148	Sikendra kumar	9982	17UECN0054	8340483704	IV Year
149	Sreaya sn	15594	19UECS0442	8309811445	II Year
150	KAMANI VENKATA KEERTHI	14545	18UECS0354	9030217739	III Year
151	Anshuman Raj	12952	19UECS0063	6204158450	II Year
152	KOYYA GIRISH KUMAR	14233	18UECS0278	6303299720	III Year
153	A Santhosh reddy	14740	18UECS0060	9951417293	III Year
154	POLINA NITHISH KUMAR	9405	17UECS0595	9515161921	IV Year
155	BOPPANA SAIKIRAN	14700	18UECS0149	6303457994	III Year
156	MIDHUN CHAKRAVARTHY KANDIMALLA	8949	17UECS0310	9705556041	IV Year
157	VISHAL KUMAR	10371	17UECS0810	8825176397	IV Year
158	M Jacinth Blessy	14997	18UECS0491	6300844865	III Year

441	Neeraj	15593	19UECS0219	9908599902	II Year
442	P. Gireesh	15513	dt20207419240	8309489320	II Year
443	P.S Yuktha	12689	19UECS1096	8825493879	II Year
444	suri setty Tarun kumar	12642	19UECS0946	9100747033	II Year
445	KARAKA SHASHIDHAR REDDY	14303	18UECS0363	7997036270	III Year
446	D vikas	14408	18UECS0927	7449262417	III Year
447	Nukala Saikrishna	14402	18UECD0002	9676077400	III Year
448	K.Lakshmi Narayana	12138	18UECS0357	9959893723	III Year
449	vanteru rajasekhar reddy	13515	19UECS1026	8688862793	II Year
450	RASINTI REKHA	15947	19UECS0831	6302211769	II Year
451	Ravi Teja	12894	18UECS0667	8340963989	III Year
452	Prasannanjaneyulu	12250	18UECS0686	6303169836	III Year
453	k.satya lahari	14917	18UECS0436	8142741114	III Year
454	Rohit Kumar	15145	19UECS0845	8102267304	II Year
455	Mayurakshya Paul	11580	19UECS0597	7896303208	II Year
456	Shourjya Hazra	11921	19UECS0907	7679530903	II Year
457	Yarra Sai Varun	14468	19UECS1079	7093973072	II Year
458	THORLAPATTI MANOJ GANDHI	13016	19UECS0979	9133646843	II Year
459	P. Mohana Krishna	14522	19UECS0706	8688995868	II Year
460	M.VIKAS GOUD	15326	19UECS0633	9652641687	II Year
461	G sirichandana	13106	19UECS0327	9347970065	II Year
462	PAGOLU SANDHYA RANI	14708	18UECS0620	7382747663	III Year
463	Saurav Kumar Gupta	11817	19UECS0878	9334275209	II Year
464	Ritik Pandey	15465	19UECS0844	6202600797	II Year
465	M Karthik	14769	18UECS0371	9440538883	III Year
466	Kamalapuramshaik mahammad saif	12473	18UECS0352	7095946361	III Year
467	Mupparaju Kavya sree	13548	19UECS0635	8008860488	II Year

CERTIFICATE OF PARTICIPATION



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

This is to certify that Mr. / Ms. _____ of
_____ has actively participated
in the **Bio-Inspired Optimization Algorithms For Artificial Neural Networks** held on **20-11-2020** at Vel Tech
Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi, Chennai.

Prof.Dr.A.T.Ravichandran
Dean Academics

Dr.E.Kannan
Registrar

Prof.S.Salivahanan
Vice Chancellor