

(Approved by A.I.C.T.E., New Delhi, & Permanently Affiliated to J.N.T.U.K., Kakinada) NAAC B++ Accredited Institute Cherukupally (Village), Near Tagarapuvalasa Bridge, Bhogapuram (Mandal), Vizianagaram -531162. www.aietta.ac.in, <u>principal@</u>aietta.ac.in

## 6.3.2

1

Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year.

#### Additional information

6.3.2Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of Professional bodies during the year.

| S.No | Name of teacher                          | Name of conference / workshop attended for which<br>financial support provided                        | Name of the<br>professional<br>bodyfor which<br>membership<br>fee isprovided | Amount<br>of support | Amount of<br>support<br>(in INR) | Page<br>No. |  |
|------|--|---|--|----------------------|----------------------------------|-------------|--|
|      | <b>2021 – 2022 (Total Faculty - 106)</b> |   |  |                      |                                  |             |  |
| 1    | Ramu Garugubilli                         | International Conference on Advances in Communications<br>Computing & Electronic Systems (ACCES-2022) |  | 1500                 | One Thousand<br>Five Hundred     | 9           |  |
| 2    | Sk. Sharieff                             | International Conference on Advances in Communications<br>Computing & Electronic Systems (ACCES-2022) |  | 1500                 | One Thousand<br>Five Hundred     | 10          |  |
| 3    | A M Venkata Praveen                      | International Conference on Advances in communications<br>Computing & Electronic Systems (ACCES-2022) |  | 1500                 | One Thousand<br>Five Hundred     | 11          |  |
| 4    | K Jaswanth                               | International Conference on Advances in Communications<br>Computing & Electronic Systems (ACCES-2022) |  | 1500                 | One Thousand<br>Five Hundred     | 12          |  |



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| 5  | K Mohan Pradeep      | International Conference on Advances in Communications<br>Computing & Electronic Systems (ACCES-2022) | <br>1500 | One Thousand<br>Five Hundred | 13 |
|----|----------------------|---|----------|------------------------------|----|
| 6  | V Pradeep Kumar      | International Conference on Advances in Communications<br>Computing & Electronic Systems (ACCES-2022) | <br>1500 | One Thousand<br>Five Hundred | 14 |
| 7  | Ramu Garugubilli     | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 15 |
| 8  | V Pradeep Kumar      | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 16 |
| 9  | K Mohan Pradeep      | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 17 |
| 10 | K Jaswanth           | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 18 |
| 11 | Sk. Sharieff         | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 19 |
| 12 | M Lakshmi Sramika    | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 20 |
| 13 | J Jagadish           | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 21 |
| 14 | B.Hari Krishna Yadav | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 22 |
| 15 | M Raghava Rao        | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 23 |
| 16 | Saran Tej Vulli      | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 24 |
| 17 | L Bhavani Shankar    | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems   | <br>200  | Two Hundred                  | 25 |



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| 18 | A C G Ramanjaneyulu    | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems          | <br>200 | Two Hundred  | 26 |
|----|------------------------|--|---------|--------------|----|
| 19 | Deepthi Kaza           | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems          | <br>200 | Two Hundred  | 27 |
| 20 | Parimala Kotla Radhika | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems          | <br>200 | Two Hundred  | 28 |
| 21 | Sk. Sharieff           | A Two day online FDP on Radiation Effects on Polymers<br>and Advances in Organic Optoelectronic Devices      | <br>200 | Two Hundred  | 29 |
| 22 | J Jagadish             | 7-day training program on Advanced Materials &<br>Manufacturing Methods for Automobile Applications          | <br>500 | Five Hundred | 30 |
| 23 |                        | A Two Day Online FDP on "Radiation Effects on<br>Polymers and Advances in Organic Optoelectronic<br>Devices" | <br>200 | Two Hundred  | 31 |
| 24 | A M Venkata Praveen    | Membership in "International Association of Academic<br>Plus corporate "                                     | <br>500 | Five Hundred | 32 |
| 25 |                        | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems          | <br>200 | Two Hundred  | 33 |
| 26 | P Santhosh Kumar       | International Conference on Advances in Communications<br>Computing & Electronic Systems (ACCES-2022)        | <br>500 | Five Hundred | 34 |
| 27 | Suribabu Koyya         | International Conference on Advances in Communications<br>Computing & Electronic Systems (ACCES-2022)        | <br>500 | Five Hundred | 35 |
| 28 | K.syamala              | A Five day FDP on "VLSI Design using EDA Tools"  | <br>500 | Five Hundred | 36 |
| 29 | K.Avinash Kumar        | A Five day FDP on "VLSI Design using EDA Tools"  | <br>500 | Five Hundred | 37 |
| 30 | K.Swetha               | A Five day FDP on "VLSI Design using EDA Tools"  | <br>500 | Five Hundred | 38 |
| 31 | S.Santhoshi Bhavani    | A Five day FDP on "VLSI Design using EDA Tools"  | <br>500 | Five Hundred | 39 |
| 32 | P.Saraswathi           | A Five day FDP on "VLSI Design using EDA Tools"  | <br>500 | Five Hundred | 40 |



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| 22 |                       | A Five day FDP on "VLSI Design using EDA Tools"  |         | Five Hundred    | 41 |
|----|-----------------------|--|---------|-----------------|----|
| 33 | Shalemu Raju matta    |  | <br>500 | 1 Ive Hundred   | 41 |
| 34 | G.Chinna Rao          | Five day e-workshop on Latex organized by the Department<br>of Mathematics, School of Science, GITAM Bengaluru<br>India. | <br>200 | Two Hundred     | 42 |
| 35 | G.Chinnayya           | Five day e-workshop on Latex organized by the Department<br>of Mathematics, School of Science, GITAM Bengaluru<br>India. | <br>200 | Two Hundred     | 43 |
| 36 | K.T.DanielMohan       | Five day e-workshop on Latex organized by the Department<br>of Mathematics, School of Science, GITAM Bengaluru<br>India. | <br>200 | Two Hundred     | 44 |
| 37 | G Chinnayya           | A Two day National Webinar on emerging Trends in<br>Mathematical Sciences and Engineering Applications                   | <br>100 | One Hundred     | 45 |
| 38 | Madda Mudedla Madhu   | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 46 |
| 39 | Ganja Lavanya Lakshmi | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 47 |
| 40 | Srinu Kotha           | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 48 |
| 41 | Raghu Maharana        | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 49 |
| 42 | K Sarika              | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 50 |
| 43 | Sunil Kumar Jena      | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 51 |
| 44 | P Rama Krishna        | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 52 |
| 45 | Venkata Naidu Bankuru | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                      | <br>200 | Two Hundred     | 53 |
| 46 | N Sakitha Sri         | Online FDP on Quantum Computing  | <br>500 | Five<br>Hundred | 54 |

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|----|--------------------|--|---------|------------------|----|
| 47 | B Madhusudhana Rao | Online FDP on Quantum Computing  | <br>500 | Five<br>Hundred  | 55 |
| 48 | Y Ramesh Kumar     | Online FDP on Quantum Computing  | <br>500 | Five<br>Hundred  | 56 |
| 49 | P Satyananarayana  | Online FDP on Quantum Computing  | <br>500 | Five<br>Hundred  | 57 |
| 50 | S Kesava Rao       | One week FDP on Machine Learning based Applications  | <br>300 | Three<br>Hundred | 58 |
| 51 | K Mehar Prasad     | One week FDP on Machine Learning based Applications  | <br>300 | Three<br>Hundred | 59 |
| 52 | P Ravi Kumar       | One week FDP on Machine Learning based Applications  | <br>300 | Three<br>Hundred | 60 |
| 53 | VMurali Krishna    | One week FDP on Machine Learning based Applications  | <br>300 | Three<br>Hundred | 61 |
| 54 | M Jaya Ram         | Five Day online faculty development program on Emerging<br>Technologies in AI, Data Science and Cyber Security     | <br>300 | Three<br>Hundred | 62 |
| 55 | Ch Sravanthi       | Five Day online faculty development program on Emerging<br>Technologies in AI, Data Science and Cyber Security     | <br>300 | Three<br>Hundred | 63 |
| 56 | G K MahaLakshmi    | Five Day online faculty development program on Emerging<br>Technologies in AI, Data Science and Cyber Security     | <br>300 | Three<br>Hundred | 64 |
| 57 | H Deva Raj         | Five Day online faculty development program on Emerging<br>Technologies in AI, Data Science and Cyber Security     | <br>300 | Three<br>Hundred | 65 |
| 58 | P Monika           | Two Week International FDP on the ERA of change-<br>Recent Advancements of Machine Learning in terms of AI<br>&IoT | <br>500 | Five<br>Hundred  | 66 |
| 59 | A Swathi           | Two Week International FDP on the ERA of change-<br>Recent Advancements of Machine Learning in terms of AI<br>&IoT | <br>500 | Five<br>Hundred  | 67 |
| 60 | M Sangita          | Two Week International FDP on the ERA of change-<br>Recent Advancements of Machine Learning in terms of AI<br>&IoT | <br>500 | Five<br>Hundred  | 68 |



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| 61 | K Hymavathi       | Two Week International FDP on the ERA of change-<br>Recent Advancements of Machine Learning in terms of AI<br>&IoT | <br>500 | Five<br>Hundred  | 69 |
|----|-------------------|--|---------|------------------|----|
| 62 | Surendra Kumar Ch | Two Week FDP Effective Teaching Learning towards outcome based education   | <br>300 | Three<br>Hundred | 70 |
| 63 | TV Prasad         | Two Week FDP Effective Teaching Learning towards outcome based education   | <br>300 | Three<br>Hundred | 71 |
| 64 | V Sarada          | Two Week FDP Effective Teaching Learning towards outcome based education   | <br>300 | Three<br>Hundred | 72 |
| 65 | P Aruna           | Two Week FDP Effective Teaching Learning towards outcome based education   | <br>300 | Three<br>Hundred | 73 |
| 66 | P Anil Kumar      | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                | <br>200 | Two Hundred      | 74 |
| 67 | Dr. B Avinash Ben | One week online FDP on Artificial Intelligence/machine learning for mechanical engineering problems                | <br>200 | Two Hundred      | 75 |
| 68 | K Shyamala        | A Three day FDP on " Recent advances in IoT and Machine learning : Application and Hands-on"                       | <br>200 | Two Hundred      | 76 |
| 69 | G Bhanu Gupta     | A Three day FDP on " Recent advances in IoT and Machine learning : Application and Hands-on"                       | <br>200 | Two Hundred      | 77 |
| 70 | D Rahul           | A Three day FDP on " Recent advances in IoT and Machine learning : Application and Hands-on"                       | <br>200 | Two Hundred      | 78 |
| 71 | Akula Swathi      | A five days online FDP on "Applications of Machine<br>Learning"  | <br>500 | Five Hundred     | 79 |
| 72 | P Dinesh Chandra  | A five days online FDP on "Applications of Machine<br>Learning"  | <br>500 | Five Hundred     | 80 |
| 73 | P Lavanya         | A five days online FDP on "Applications of Machine<br>Learning"  | <br>500 | Five Hundred     | 81 |
| 74 | Ch Roopa Devi     | A five days online FDP on "Applications of Machine<br>Learning"  | <br>500 | Five Hundred     | 82 |
| 75 | G Jyothi          | A five days online FDP on "Applications of Machine<br>Learning"  | <br>500 | Five Hundred     | 83 |
| 76 | Ch Sridevi        | A five days online FDP on "Applications of Machine<br>Learning"  | <br>500 | Five Hundred     | 84 |

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| 77 | G Dharma raju     | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 85  |
|----|-------------------|--|---------|--------------|-----|
| 78 | K T D Mohan       | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 86  |
| 79 | A Vasudeva rao    | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 87  |
| 80 | G Anand           | One Week FDP on "Precast Structures-Oppurtunities and challenges in India" | <br>500 | Five Hundred | 88  |
| 81 | I Santhosh Kumar  | One Week FDP on "Precast Structures-Oppurtunities and challenges in India" | <br>500 | Five Hundred | 89  |
| 82 | R Venkatesh       | One Week FDP on "Precast Structures-Oppurtunities and challenges in India" | <br>500 | Five Hundred | 90  |
| 83 | R Rohith          | One Week FDP on "Precast Structures-Oppurtunities and challenges in India" | <br>500 | Five Hundred | 91  |
| 84 | P Pallavi         | One Week FDP on "Precast Structures-Oppurtunities and challenges in India" | <br>500 | Five Hundred | 92  |
| 85 | M Sumathi         | One Week FDP on "Precast Structures-Oppurtunities and challenges in India" | <br>500 | Five Hundred | 93  |
| 86 | P Satyananarayana | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 94  |
| 87 | S Kesava Rao      | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 95  |
| 88 | H Deva Raj        | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 96  |
| 89 | P Monika          | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 97  |
| 90 | Surendra Kumar Ch | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 98  |
| 91 | V Sarada          | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 99  |
| 92 | P Aruna           | A five days online FDP on "Applications of Machine<br>Learning"            | <br>500 | Five Hundred | 100 |

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| 93  | T V Prasad         | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 101 |
|-----|--------------------|---|----------|-----------------|-----|
| 94  | G Trinadha Rao     | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 102 |
| 95  | B Vineela          | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 103 |
| 96  | T Paramesh         | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 104 |
| 97  | S Prasad           | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 105 |
| 98  | B Ganesh           | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 106 |
| 99  | N V S Aravind      | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 107 |
| 100 | G Venkata Swamy    | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 108 |
| 101 | Y Ramesh Kumar     | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 109 |
| 102 | B Madhusudhana Rao | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 110 |
| 103 | P Ravi Kumar       | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 111 |
| 104 | K Mehar Prasad     | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 112 |
| 105 | Dr. A Bala Krishna | A five days online FDP on "Applications of Machine<br>Learning"   | <br>500  | Five Hundred    | 113 |
| 106 | R Swapna           | International Conference on Recent Trends in Metallurgy,<br>Materials Science and Manufacturing (Materials Today:<br>Proceedings) | <br>2000 | Two<br>Thousand | 114 |



## CERTIFICATE OF PARTICIPATION

This is to certify that Prof. / Dr. / Mr. / Mrs./Ms. RAMU GARUGUBILLI from Avanthi institute of engineering and Technology, Vishakapatnam, Andhra Pradesh, India. Participated / Presented paper entitled Evaporation characteristics influence on exhaust emissions of waste plastic oil petro diesel blends. in International Conference Advances in Communications, Computing & Electronic Systems (ACCES-2022), for the event during 6<sup>th</sup> - 7<sup>th</sup> May 2022, AIET, Vizianagaram, A.P., India.

S & Goyal NLL5AM-CE000055

CITY University (Dr. S.B. Goyal)

(Dr. S.N.V. Ganesh)



**CITY University** (Dr. S.B. Goyal)

AIFT (Dr. S.N.V. Ganesh)



INTERNATIONAL CONFERENCE ON ADVANCES IN COMMUNICATIONS, COMPUTING & ELECTRONIC SYSTEMS (ACCES-2022)

## **CERTIFICATE OF PARTICIPATION**

This is to certify that Prof. / Dr. / Mr. / Mrs./Ms. Dr. A.M.VENKATA PRAVEEN from Avanthi Institute of Engineering and Technology Participated / Presented paper entitled "Study of consistency in multi-response optimization generated with GRA using Sensitivity Analysis in Orthogonal Turn-mill and Lathe processes under ecofriendly conditions" in International Conference Advances in Communications, Computing & Electronic Systems (ACCES-2022), for the event during 6<sup>th</sup> - 7<sup>th</sup> May 2022, AIET, Vizianagaram, A.P., India.

S B Goyal NLL5AM-CE000063

CITY University (Dr. S.B. Goyal) AIET

(Dr. S.N.V. Ganesh)



INTERNATIONAL CONFERENCE ON ADVANCES IN COMMUNICATIONS, COMPUTING & ELECTRONIC SYSTEMS (ACCES-2022)

## CERTIFICATE OF PARTICIPATION

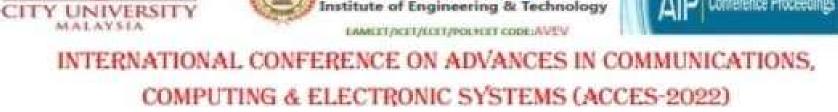
This is to certify that Prof. / Dr. / Mr. / Mrs./Ms. Kattula Jaswanth from Avanthi Institute of Engineering and Technology Participated / Presented paper entitled "Study of consistency in multi-response optimization generated with GRA using Sensitivity Analysis in Orthogonal Turn-mill and Lathe processes under ecofriendly conditions" in International Conference Advances in Communications, Computing & Electronic Systems (ACCES-2022), for the event during 6<sup>th</sup> - 7<sup>th</sup> May 2022, AIET, Vizianagaram, A.P., India.

S & Goyal NLL5AM-CE000065

CITY University (Dr. S.B. Goyal)

AIFT

(Dr. S.N.V. Ganesh)



Institute of Engineering & Technology

## CERTIFICATE OF PARTICIPATION

This is to certify that Prof. / Dr. / Mr. / Mrs./Ms. Kuncha Mohan Pradeep from Avanthi institute of engineering and Technology, Vishakapatnam, Andhra Pradesh, India Participated / Presented paper entitled Evaporation characteristics influence on exhaust emissions of waste plastic oil petro diesel blends, in International Conference Advances in Communications, Computing & Electronic Systems (ACCES-2022), for the event during 6th - 7th May 2022, AIET, Vizianagaram, A.P., India.

S & Goyal NLL5AM-CE000040

**CITY University** (Dr. S.B. Goyal)

AIFT (Dr. S.N.V. Ganesh)

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Conference Proceedings



INTERNATIONAL CONFERENCE ON ADVANCES IN COMMUNICATIONS, COMPUTING & ELECTRONIC SYSTEMS (ACCES-2022)

## CERTIFICATE OF PARTICIPATION

This is to certify that Prof. / Dr. / Mr. / Mrs./Ms. Vommi Pradeep Kumar from Avanthi institute of engineering and Technology, Vishakapatnam, Andhra Pradesh, India Participated / Presented paper entitled Evaporation characteristics influence on exhaust emissions of waste plastic oil petro diesel blends in International Conference Advances in Communications, Computing & Electronic Systems (ACCES-2022), for the event during 6<sup>th</sup> - 7<sup>th</sup> May 2022, AIET, Vizianagaram, A.P., India.

S & Goyal NLLSAM-CE000050

CITY University (Dr. S.B. Goyal)

(Dr. S.N.V. Ganesh)





Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India **CERTIFICATE OF PARTICIPATION** This certificate is presented to : K MOHAN PRADEEP for participating in a one week online FDP on "Artificial Intelligence/Machine Learning" for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering. 1 (10 Mr. B. Satya Krishna Dr. Ch. Hari Krishna Dr. G. Srinivasa Rao Dr. P. Srinivasa Raju Coordinator Convener & HOD **Vice Prinicipal** Principal

Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India **CERTIFICATE OF PARTICIPATION** This certificate is presented to : K JASWANTH for participating in a one week online FDP on "Artificial Intelligence/Machine Learning" for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering. 1.10 Mr. B. Satya Krishna Dr. Ch. Hari Krishna Dr. P. Srinivasa Raju Dr. G. Srinivasa Rao Coordinator Convener & HOD **Vice Prinicipal** Principal

Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India **CERTIFICATE OF PARTICIPATION** This certificate is presented to : Sk.HIDAYATULLA SHARIFF for participating in a one week online FDP on "Artificial Intelligence/Machine Learning" for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering. 1. (10 Mr. B. Satya Krishna Dr. Ch. Hari Krishna Dr. G. Srinivasa Rao Dr. P. Srinivasa Raju Coordinator **Vice Prinicipal** Convener & HOD Principal



Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India **CERTIFICATE OF PARTICIPATION** This certificate is presented to : J JAGADISH KUMAR for participating in a one week online FDP on "Artificial Intelligence/Machine Learning" for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering. 1.560 Mr. B. Satya Krishna Dr. Ch. Hari Krishna Dr. P. Srinivasa Raju Dr. G. Srinivasa Rao Coordinator Convener & HOD **Vice Prinicipal** Principal

















# NATIONAL LEVEL FACULTY DEVELOPMENT PROGRAMME

Certificate of Participation

This is to certify that <u>SHAIK HIDAYATULLA SHARIFF</u>, <u>Associate Professor</u> of <u>AVANTHI</u> <u>INSTITUTE OF ENGINEERING & TECHNOLOGY</u>, <u>VIZIANAGARAM</u> has actively participated and successfully completed A Two Day Online FDP on "*Radiation Effects on Polymers and Advances in Organic Optoelectronic Devices*" conducted on 2<sup>nd</sup>&3<sup>rd</sup>Feb, 2022.

Certificate id: QA3PHK-CE000339

1im

Mr. K. Satish Kumar CONVENER

Dr. K. Kumar<sup>1</sup> DEAN & HOD BSH

Dr. Prakash PRINCIPAL

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9001:2015





Viswambhara Educational Society VAAGDEVI COLLEGE OF ENGINEERING UGC AUTONOMOUS



# NATIONAL LEVEL FACULTY DEVELOPMENT PROGRAMME

Certificate of Participation

This is to certify that <u>A M V PRAVEEN</u>, <u>ASSOCIATE PROFESSOR</u> of <u>AVANTHI INSTITUTE OF</u> <u>ENGG. AND TECHNOLOGY</u> has actively participated and successfully completed A Two Day Online FDP on "*Radiation Effects on Polymers and Advances in Organic Optoelectronic Devices*" conducted

on 2<sup>nd</sup>&3<sup>rd</sup>Feb, 2022.

Certificate id: QA3PHK-CE000355

1:m

Mr. K. Satish Kumar CONVENER

Dr. K. Kumar DEAN & HOD BSH

chang

Dr. Prakash PRINCIPAL

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# AFFILIATE MEMBERSHIP CERTIFICATE

IAAC IS GLAD TO WELCOME Dr. A M VENKATA PRAVEEN AS A MEMBER OF 'INTERNATIONAL ASSOCIATION OF ACADEMIC PLUS CORPORATE' FOR ANNUAL MEMBERSHIP FOR AY-2022 WITH AN UNIQUE IDENTITY NUMBER

FRTJQC-CE002947

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Sichander SAI CHANDU.K **IPPESSIENT** 

S.lat DR. KISHORE.S **ISECRETARY** 

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AP Conference Proceedings

INTERNATIONAL CONFERENCE ON ADVANCES IN COMMUNICATIONS, COMPUTING & ELECTRONIC SYSTEMS (ACCES-2022)

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## CERTIFICATE OF PARTICIPATION

This is to certify that Prof. / Dr. / Mr. / Mrs./Ms. Santosh kumar pentakota from Avanthi institute of engineering and technology Participated / Presented paper entitled BER performance of various digital modulation schemes in three user NOMA using SIC under Rayleigh fading channel in International Conference Advances in Communications, Computing & Electronic Systems (ACCES-2022), for the event during 6<sup>th</sup> - 7<sup>th</sup> May 2022, AIET, Vizianagaram, A.P., India.

## NLL5AM-CE000134

S & Goyal **CITY University** 

CITY UNIVERSI

(Dr. S.B. Goyal)

(Dr. S.N.V. Ganesh)



AP Conference Proceedings

(Dr. S.N.V. Ganesh)

INTERNATIONAL CONFERENCE ON ADVANCES IN COMMUNICATIONS, COMPUTING & ELECTRONIC SYSTEMS (ACCES-2022)

## **CERTIFICATE OF PARTICIPATION**

This is to certify that Prof. / Dr. / Mr. / Mrs./Ms. SURIBABU KOYYA from Avanthi Institute of Engineering and Technology, Tagarapuvalasa, Vizianagaram Participated / Presented paper entitled Stastical Features Based Selfie Sign Language Recognition using ANN Classifier in International Conference Advances in Communications, Computing & Electronic Systems (ACCES-2022), for the event during 6<sup>th</sup> - 7<sup>th</sup> May 2022, AIET, Vizianagaram, A.P., India.

S & Goyal NLL5AM-CE000094 CITY University

(Dr. S.B. Goyal)

CITY UNIVERSIT



GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING(Autonomous) Approved by AICTE,New Delhi and Affiliated to JNTU-Kakinada Re-accredited by NAAC with "A" Grade with a CGPA of 3.47/4.00 Madhurawada, Visakhapatnam- 530048



# **Certificate of Participation**

# This is to certify that Mr K.SYAMALA of AVANTHIINSTITUTE OF ENGINEERING AND TECHNOLOGY) has participated in a five day online workshop on "VLSI Design Using EDA Tools", Organized by department of ECE, Gayatri Vidya Parishad College of Engineering Autonomous) in association with Apply Volt and IETE Visakhapatnam Centre during April 18<sup>th</sup> - 22<sup>nd</sup>, 2022.

1. Leclahani

Dr.V.Leela Rani Coordinator

Prof.N.Deepika Rani Convener & H.O.D,ECE

Prof.P.Rajesh Kumar Hon'Secretary, IETE Visakhapatnam Centre





### **Certificate of Participation**

### This is to certify that Mr <u>**KAVINASH KUMAR**</u> of <u>AVANTHIINSTITUTE OF ENGINEERING AND TECHNOLOGY</u> has participated in a five day online workshop on "VLSI Design Using EDA Tools", Organized by department of ECE, Gayatri Vidya Parishad College of Engineering Autonomous) in association with Apply Volt and IETE Visakhapatnam Centre during April 18<sup>th</sup> 22<sup>nd</sup> 2022.

1. Leelakani

Dr.V.Leela Rani Coordinator

Prof.N.Deepika Rani Convener & H.O.D,ECE



Prof.P.Rajesh Kumar Hon'Secretary, IETE Visakhapatnam Centre





### **Certificate of Participation**

### **K.SWETHA**

of <u>AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY</u>) has participated in a five day online workshop on "VLSI Design Using EDA Tools", Organized by department of ECE, Gayatri Vidya Parishad College of Engineering (Autonomous) in association with Apply Volt and IETE Visakhapatnam Centre during April 18  $^{th}$  - 22  $^{nd}$ , 2022.

19. Leclahani

This is to certify that Mr

Dr.V.Leela Rani Coordinator

Prof.N.Deepika Rani Convener & H.O.D.ECE

Prof.P.Rajesh Kumar Hon'Secretary, IETE Visakhapatnam Centre





### **Certificate of Participation**

#### This is to certify that Mr **S.SANTHOSHI BHAVANI** of <u>AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY</u>) has participated in a five day online workshop on "VLSI Design Using EDA Tools", Organized by department of ECE, Gayatri Vidya Parishad College of Engineering (Autonomous) in association with Apply Volt and IETE Visakhapatnam Centre during April 18<sup>th</sup> 22<sup>nd</sup> 2022.

19. Leclahani

Dr.V.Leela Rani Coordinator

Prof.N.Deepika Rani Convener & H.O.D,ECE



Prof.P.Rajesh Kumar Hon'Secretary, IETE Visakhapatnam Centre





### **Certificate of Participation**

This is to certify that Mr

#### **P.SARASWATHI**

of <u>AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY</u>) has participated in a five day online workshop on "VLSI Design Using EDA Tools", Organized by department of ECE, Gayatri Vidya Parishad College of Engineering Autonomous) in association with Apply Volt and IETE Visakhapatnam Centre during April 18<sup>th</sup> - 22<sup>nd</sup>, 2022.

19. Leclahani

Dr.V.Leela Rani Coordinator

Prof.N.Deepika Rani Convener & H.O.D.ECE

Prof.P.Rajesh Kumar Hon'Secretary, IETE Visakhapatnam Centre





### **Certificate of Participation**

This is to certify that Mr <u>SHALEMURAJUMATTA</u> of <u>AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY</u> has participated in a five day online workshop on "VLSI Design Using EDA Tools", Organized by department of ECE, Gayatri Vidya Parishad College of Engineering (Autonomous) in association with Apply Volt and IETE Visakhapatnam Centre during April 18<sup>th</sup> - 22<sup>nd</sup> 2022.

Dr.V.Leela Rani Coordinator

10. KellaRani

Prof.N.Deepika Rani Convener & H.O.D.ECE

Prof.P.Rajesh Kumar Hon'Secretary, IETE Visakhapatnam Centre

GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT (GITAM) DEPARTMENT OF MATHEMATICS SCHOOL OF SCIENCE, GITAM, BENGALURU, INDIA

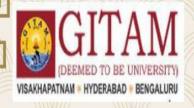
Certificate of Participation

This is to certify that Golagani Chinna Rao, Assistant Professor, Department of Mathematics from Avanthi Institute of Engineering & Technology, India has participated in the Five Days e-Workshop on LaTeX, organized by the Department of Mathematics, School of Science, GITAM, Bengaluru, India, held from 5th to 9th July 2021.

B. Jeen Dr. B. Venkateswarlu Convenor

Prof. Atul Kumar

Principal



GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT (GITAM) DEPARTMENT OF MATHEMATICS SCHOOL OF SCIENCE, GITAM, BENGALURU, INDIA

Certificate of Participation

This is to certify that *Mr Gondu chinnayya*, *Asst professor*, *Department of Mathematics* from *Avanthi Engineering college*, *India* has participated in the *Five Days e-Workshop on LaTeX*, organized by the Department of Mathematics, School of Science, GITAM, Bengaluru, India, held from 5th to 9th July 2021.

B. Jeen Dr. B. Venkateswarlu Convenor

Prof. Atul Kumar Principal GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT (GITAM) DEPARTMENT OF MATHEMATICS SCHOOL OF SCIENCE, GITAM, BENGALURU, INDIA

Certificate of Participation

This is to certify that *K T Daniel Mohan*, *Assistant Professor*, *Department of Mathematics Department* from *Avanthi Institute of Engineering and Technology*, *India* has participated in the *Five Days e-Workshop on LaTeX*, organized by the Department of Mathematics, School of Science, GITAM, Bengaluru, India, held from 5th to 9th July 2021.

B. Jeen Dr. B. Venkateswarlu

Convenor

Prof. Atul Kumar Principal

|                          | KAVI NANNAYA UNIVE   |  |
|--------------------------|--|--|
| Emerging Trends          | A Two-Day National Webinar on<br>in Mathematical Sciences and Engineerin<br>6 & 7 January, 2021                                      | ng Applications  |
|                          | Certificate of Participation   |  |
| This is to certify that_ | GONDU.CHINNAYYA  |  |
| rom                      | Avanthi engineering and technology   | has  |
| COMM                     | National Webinar on "Emerging Trends in Ma   | thematical Sciences  |
| attended the Two-Day     |  |  |
|                          | lications (NEMSEA 2021)", held on 6th & 7th Jar  | nuary 2021 organized   |
| and Engineering App      | <b>lications (NEMSEA 2021)"</b> , held on 6 <sup>th</sup> & 7 <sup>th</sup> Jar<br>Science and Humanities, University College of Eng | and the second of the second sec |
| and Engineering App      |  |  |

VISHNU

Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India

# **CERTIFICATE OF PARTICIPATION**

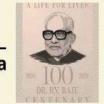
This certificate is presented to :

# VAMSI MUDEDLA MADHU

for participating in a one week online FDP on "Artificial Intelligence/Machine Learning for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering.

il-slei

Mr. B. Satya Krishna Dr. Ch. Hari Krishna Coordinator Convener & HOD



4.3.1.

Dr. P. Srinivasa Raju Vice Prinicipal

Dr. G. Srinivasa Rao Principal

VISHNU

Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India

# **CERTIFICATE OF PARTICIPATION**

This certificate is presented to :

# GANJA LAVANYA LAKSHMI

for participating in a one week online FDP on "Artificial Intelligence/Machine Learning for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering.

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Mr. B. Satya Krishna Dr. Ch. Hari Krishna Coordinator Convener & HOD



Dr. P. Srinivasa Raju Vice Prinicipal

Dr. G. Srinivasa Rao Principal

Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India

# **CERTIFICATE OF PARTICIPATION**

This certificate is presented to :

## SRINU KOTHA

for participating in a one week online FDP on "Artificial Intelligence/Machine Learning" for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering.

1.50

Mr. B. Satya Krishna Dr. Ch. Hari Krishna Coordinator

Convener & HOD

Dr. P. Srinivasa Raju **Vice Prinicipal** 

Dr. G. Srinivasa Rao Principal

Shri Vishnu Engineering College for Women (Autonomous & NAAC 'A' Grade) (Approved by AICTE & Permanently Affiliated to JNTUK) Vishnupur, Bhimavaram-534202, West Godavari District, Andhra Pradesh, India

# **CERTIFICATE OF PARTICIPATION**

This certificate is presented to :

# RAGHU MAHARANA

for participating in a one week online FDP on "Artificial Intelligence/Machine Learning" for Mechanical Engineering Problems" during 21st -26th March 2022 organized by the Department of Mechanical Engineering.

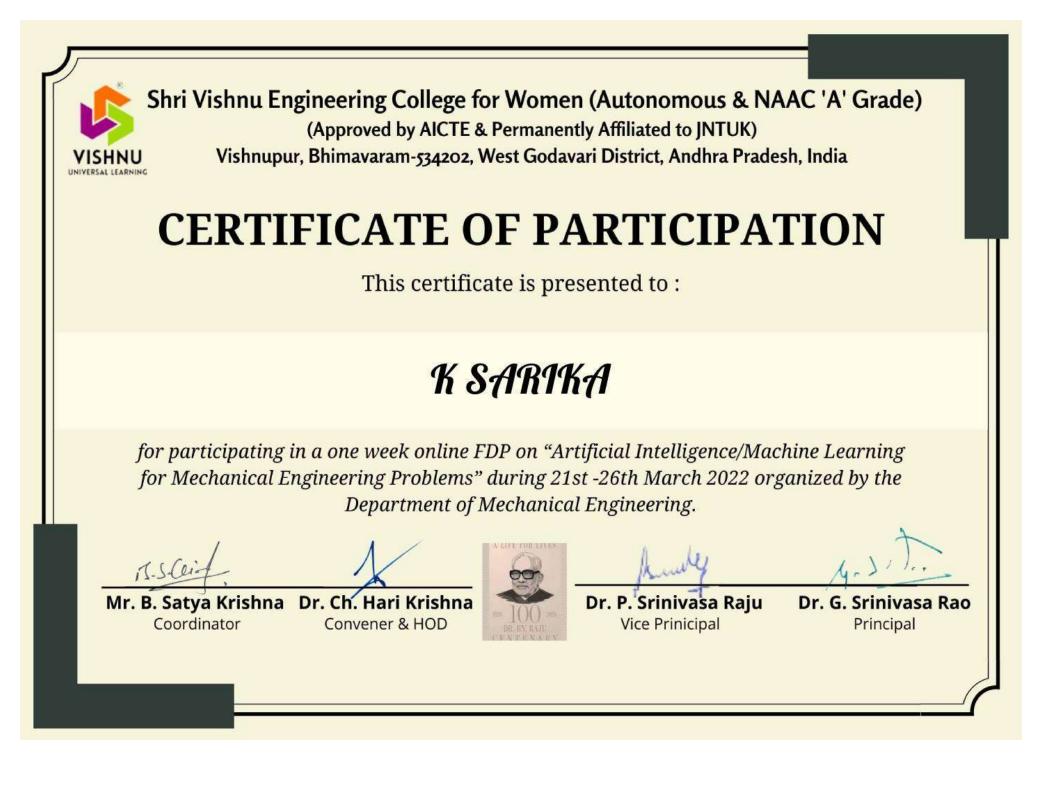
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Mr. B. Satya Krishna Dr. Ch. Hari Krishna Coordinator

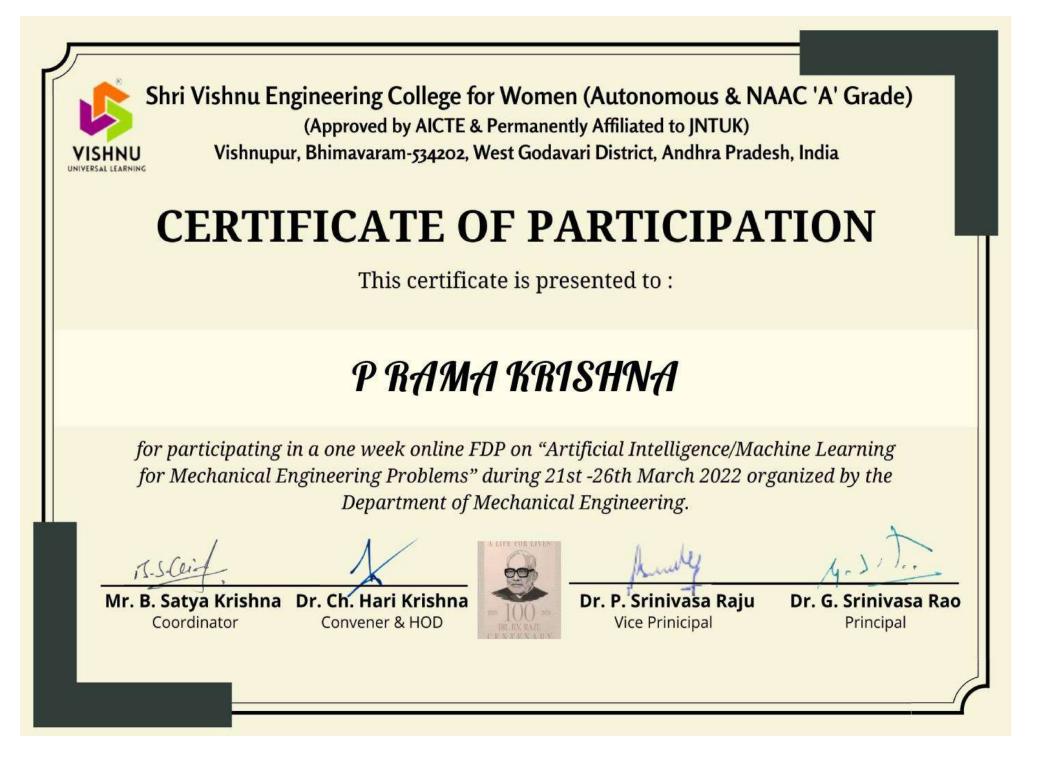
Convener & HOD

Dr. P. Srinivasa Raju **Vice Prinicipal** 

Dr. G. Srinivasa Rao Principal



















**Electronics & ICT Academies** MNIT Jaipur, NIT Patna, IIITDM Jabalpur & IIT Guwahati **Online Faculty Development Programme on** 

### Quantum Computing

### September 27 - October 08, 2021 Digital India CERTIFICATE Power To Empower

This is to certify that ......N Sakitha Sri ..... of ..... Avanthi Institute of Engineering and Technology..... has successfully completed, online Faculty Development Programme on Quantum Computing jointly organized by Electronics & ICT Academies and facilitated by IBM India, held from September 27th - October 08th, 2021. This programme is endorsed by AICTE/UGC.













**Electronics & ICT Academies** MNIT Jaipur, NIT Patna, IIITDM Jabalpur & IIT Guwahati **Online Faculty Development Programme on** 

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| NER<br>NER | TE, New Delhi                      |                                 | REYAS INSTITUTE OF E<br>Affiliated to JNTUH Hyder<br>(Accredite                            | SREYAS                |
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| This is to certify that Dr./ Mr./M           | Irs./Ms                  | K Meher Prasad   |                       |
| from Avant                                   | hi Institute of Engine   | eering & Technology  | has                   |
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| ayana Reddy | Dr. 5. Sai Satyanan<br>Principa | of. B. Sreenivasu<br>Convenor<br>HOD-ECE                         |  | Dr. Sandeep I<br>Coordinate<br>Professor of |

|  | TUTE OF ENGINEERING AN<br>JNTUH Hyderabad, Approved by AIC<br>(Accredited by NBA & NAAC)                  | TE, New Delhi   | NBR      |
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| METER 2 Production Are Sciences        | Certificate of Participation  |   |          |
| This is to certify that Dr./ Mr./Mrs./ | Ms. V Mura  | li Krishna  |          |
| from Avanthi I                         | Institute of Engineering & T  | echnology   | has      |
| Organized by Department of             | aculty Development Program on Ma<br>Electronics and Communication<br>lerabad during the 31" May to 06" Ju | Engineering, Sreyas In                                  | Level    |
| B                                      | Born  | Bolemen   | -        |
| Dr. Sandeep Kumar                      | Prof. B. Sreenivasu<br>Convenor<br>HOD-ECE  | Dr. 5. Sai Satyanaraya<br>Principal<br>Professor of CSI | na Reddy |



EMERGING TECHNOLOGIES IN ARTIFICIAL INTELLIGENCE, DATA SCIENCE AND CYBER SECURITY

17-21 JULY, 2021

Organised By Amity Institute of Information Technology Amity University Rajasthan

### CERTIFICATE OF PARTICIPATION

This is to certify that <u>M Jayaram</u> participated in the five-day online faculty development program on Emerging Technologies in Artificial Intelligence, Data Science and Cyber Security held at Amity Institute of Information Technology, Amity University Rajasthan, Jaipur, India.

Mr. Amit Hirawat FDP Co-Ordinator Amity University Rajasthan

Mr. Sameer Saxena FDP Co-Ordinator Amity University Rajasthan



EMERGING TECHNOLOGIES IN ARTIFICIAL INTELLIGENCE, DATA SCIENCE AND CYBER SECURITY

17-21 JULY, 2021

Organised By Amity Institute of Information Technology Amity University Rajasthan

### CERTIFICATE OF PARTICIPATION

This is to certify that <u>Ch Sravanthi</u> participated in the five-day online faculty development program on Emerging Technologies in Artificial Intelligence, Data Science and Cyber Security held at Amity Institute of Information Technology, Amity University Rajasthan, Jaipur, India.

Mr. Amit Hirawat FDP Co-Ordinator Amity University Rajasthan

Mr. Sameer Saxena FDP Co-Ordinator Amity University Rajasthan



EMERGING TECHNOLOGIES IN ARTIFICIAL INTELLIGENCE, DATA SCIENCE AND CYBER SECURITY

17-21 JULY, 2021

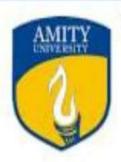
Organised By Amity Institute of Information Technology Amity University Rajasthan

### CERTIFICATE OF PARTICIPATION

This is to certify that <u>G Kanaka Maha Lakshmi</u> participated in the five-day online faculty development program on Emerging Technologies in Artificial Intelligence, Data Science and Cyber Security held at Amity Institute of Information Technology, Amity University Rajasthan, Jaipur, India.

Mr. Amit Hirawat FDP Co-Ordinator Amity University Rajasthan

Mr. Sameer Saxena FDP Co-Ordinator Amity University Rajasthan



EMERGING TECHNOLOGIES IN ARTIFICIAL INTELLIGENCE, DATA SCIENCE AND CYBER SECURITY

17-21 JULY, 2021

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Mr. Amit Hirawat FDP Co-Ordinator Amity University Rajasthan

Mr. Sameer Saxena FDP Co-Ordinator Amity University Rajasthan



#### SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM CAMPUS

#### COLLEGE OF SCIENCE AND HUMANITIES (A place for Transformation) Department of Computer Science & Applications

#### Certificate of Participation

This is to certify that <u>P Monika</u> Avanthi Institute of Engineering & Technology has attended TWO WEEK INTERNATIONAL FACULTY DEVELOPMENT PROGRAMME ON THE ERA OF CHANGE - RECENT ADVANCEMENTS OF MACHINE LEARNING IN TERMS OF AI & IOT organised by Department of Computer Science and Applications, SRM Institute of Science and Technology, Ramapuram,

Chennai from 12.07.2021 to 25.07.2021 in Online Mode.

Dr. J. Dhilipan Convener & VP-Admin(S&H) Dr. C. Sundar PRINCIPAL(S&H)



#### SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM CAMPUS COLLEGE OF SCIENCE AND HUMANITIES (A place for Transformation)

#### Department of Computer Science & Applications

#### Certificate of Participation

This is to certify that <u>A Swathi</u> Avanthi Institute of Engineering & Technology has attended TWO WEEK INTERNATIONAL FACULTY DEVELOPMENT PROGRAMME ON THE ERA OF CHANGE - RECENT ADVANCEMENTS OF MACHINE LEARNING IN TERMS OF AI & IOT organised by Department of Computer Science and Applications, SRM Institute of Science and Technology, Ramapuram,

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Dr. J. Dhilipan Convener & VP-Admin(S&H) Dr. C. Sundar PRINCIPAL(S&H)



### SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM CAMPUS

#### COLLEGE OF SCIENCE AND HUMANITIES (A place for Transformation) Department of Computer Science & Applications

#### Certificate of Participation

This is to certify that <u>M Sangita</u> Avanthi Institute of Engineering & Technology has attended TWO WEEK INTERNATIONAL FACULTY DEVELOPMENT PROGRAMME ON THE ERA OF CHANGE - RECENT ADVANCEMENTS OF MACHINE LEARNING IN TERMS OF AI & IOT organised by Department of Computer Science and Applications, SRM Institute of Science and Technology, Ramapuram,

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Dr. J. Dhilipan Convener & VP-Admin(S&H) Dr. C. Sundar PRINCIPAL(S&H)



#### SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM CAMPUS COLLEGE OF SCIENCE AND HUMANITIES (A place for Transformation) Department of Computer Science & Applications

#### Certificate of Participation

This is to certify that <u>K Hymavathi</u> Avanthi Institute of Engineering & Technology has attended TWO WEEK INTERNATIONAL FACULTY DEVELOPMENT PROGRAMME ON THE ERA OF CHANGE - RECENT ADVANCEMENTS OF MACHINE LEARNING IN TERMS OF AI & IOT organised by Department of Computer Science and Applications, SRM Institute of Science and Technology, Ramapuram,

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Dr. J. Dhilipan Convener & VP-Admin(S&H) Dr. C. Sundar PRINCIPAL(S&H)









#### Department of Computer Science and Engineering & Department of Artificial Intelligence and Data Science

AICTE Sponsored Online Two Week Faculty Development Program

"Effective Learning Towards Outcome Based Education"

Phase - III

#### **CERTIFICATE OF PARTICIPATION**

This is to certify that Dr. /Mr. /Ms. /Miss. Surendra Kumar Ch Assistant Professor

#### of Avanthi Institute of Engineering & Technology

has participated AICTE Sponsored online two week faculty development program Phase-III on "Effective

Teaching Learning Towards Outcome Based Education" during 14.06.2021 to 26.06.2021 organized by Depart-

ment of Computer Science and Engineering and Department of Artificial Intelligence and Data Science.

Dr. V P.Gladia Pashparathi Conrelinator Dr.R.Sagamar HOD











#### Department of Computer Science and Engineering & Department of Artificial Intelligence and Data Science

**AICTE Sponsored Online Two Week Faculty Development Program** 

"Effective Learning Towards Outcome Based Education"

Phase - III

#### **CERTIFICATE OF PARTICIPATION**

This is to certify that Dr. /Mr. /Ms. /Miss. T.V. Prasad Assistant Professor

of Avanthi Institute of Engineering & Technology

has participated AICTE Sponsored online two week faculty development program Phase-III on "Effective Teaching Learning Towards Outcome Based Education" during 14.06.2021 to 26.06.2021 organized by Depart-

ment of Computer Science and Engineering and Department of Artificial Intelligence and Data Science.

Dr. V.P.Gladis Pushparathi Consciences Dr.R. Sugarmar HOD









Principal



#### Department of Computer Science and Engineering & Department of Artificial Intelligence and Data Science

AICTE Sponsored Online Two Week Faculty Development Program

"Effective Learning Towards Outcome Based Education"

Phase - III

#### **CERTIFICATE OF PARTICIPATION**

This is to certify that Dr. /Mr. /Ms. /Miss. V.SaradaAssistant Professor

of Avanthi Institute of Engineering & Technology

Dr.V.P.Gladia Pauloparathi Consciences

has participated AICTE Sponsored online two week faculty development program Phase-III on "Effective Teaching Learning Towards Outcome Based Education" during 14.06.2021 to 26.06.2021 organized by Depart-

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1100







Flor M. Name

محله تخت حالت

Principal



## Department of Computer Science and Engineering & Department of Artificial Intelligence and Data Science

AICTE Sponsored Online Two Week Faculty Development Program

"Effective Learning Towards Outcome Based Education"

Phase - III

#### **CERTIFICATE OF PARTICIPATION**

This is to certify that Dr. /Mr. /Ms. /Miss. Payala Aruna Assistant Professor

of Avanthi Institute of Engineering & Technology

Dr.V.P.Gladia Pashparathi

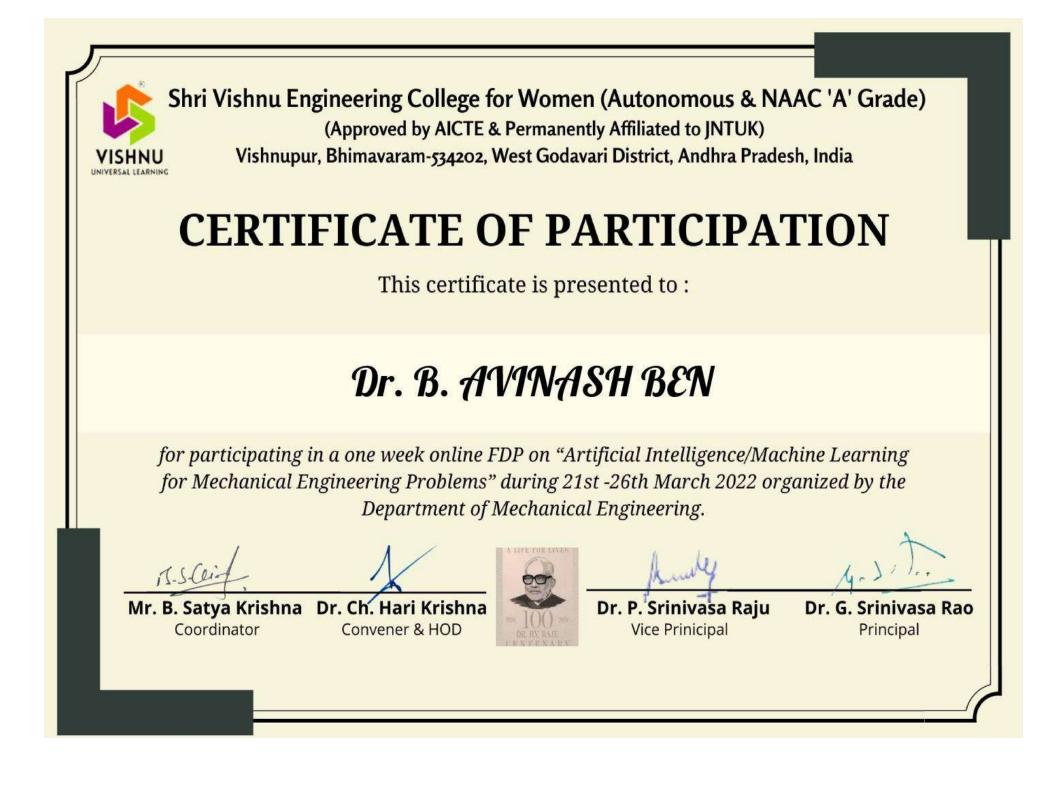
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has participated AICTE Sponsored online two week faculty development program Phase-III on "Effective Teaching Learning Towards Outcome Based Education" during 14.06.2021 to 26.06.2021 organized by Department of Computer Science and Engineering and Department of Artificial Intelligence and Data Science.

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#### Enhanced physical properties of ZEO thin films for device applications

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#### ABSTRACT

Transparent conducting Eu doped ZnO thin films are deposited on glass substrates by spray pyrolysis technique. The effect of Eu doping on surface morphology, structural and electrical properties of ZnO thin films are studied. The structural analysis reveal that the films are crystallized in the wurtzite phase with preferred orientation along (002) plane. EDX and elemental mapping results establish the presence and distribution of Eu, Zn and O for the ZEO thin films. The Hall measurement results demonstrate that the Eu doped ZnO (ZEO) films have n-type conduction. The n-type ZEO thin films with comparatively low resistivity of  $2.93 \times 10^{-3} \Omega$  cm and relatively high carrier concentration of  $5.18 \times 10^{19}$  cm<sup>-3</sup> are obtained at doping level of 2 at.%. The mobility values of ZEO thin films decrease from 28.4 cm<sup>2</sup> V<sup>-1</sup>s<sup>-1</sup> to 1.02 cm<sup>2</sup> V<sup>-1</sup>s<sup>-1</sup> with increase of dopant concentration.

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#### 1. Introduction

Rare earth (RE)-doped semiconductors have been intensively studied for their potential use in optoelectronic devices like visible (blue, green, and red) and infrared luminescent devices [1–3]. Zinc oxide (ZnO) is a II-VI semiconductor with a hexagonal wurtzite structure. Further, it is an inexpensive *n*-type semiconductor with a wide band gap of 3.37 eV [4,5]. This property makes it good candidate as host materials for the visible and infrared emission of various rare-earth ions. On the other hand, rare-earth ions are good luminescence centers due to their narrow and intense emission lines originating from 4f intrashell transition [6]. Moreover, rareearth complexes have the ability to absorb light at shorter wavelength and emit at a longer wavelength [7,8]. Due to this reason, trivalent rare earth ions (RE<sup>3+</sup>) doped ZnO have been studied extensively during the last two decades. Eu<sup>3+</sup> is one of the trivalent rare earth ions which have been doped in ZnO to achieve efficient luminescent and transparent conducting oxide (TCO) properties [6,9].

When Eu is incorporated into the ZnO lattice, Eu<sup>3+</sup> replaces Zn<sup>2+</sup> ion in the ZnO crystal lattice resulting in free electrons that contribute to the electric conduction. So, the increase in the electrical conductivity is due to the presence of free carriers introduced by

\* Corresponding author. E-mail address: santhoshmc@nitt.edu (M.C. Santhosh Kumar). Eu dopant. Eu doped ZnO (ZnO:Eu) thin films have been deposited by spray pyrolysis technique [10]. The grown films have been characterized by various characterizing techniques. This chapter investigates to study the effect of Eu dopant concentration on the structural, electrical properties and chemical composition of ZnO thin films. Recently Hasabeldaim et al. [11] studied structural, optical and photoluminescence properties of Eu doped ZnO thin filme prepared by spin coating. Sundaram et al. [12] described preparation of Eu-doped Cu<sub>2</sub>O thin films using different concentrations by SILAR and their Heterojunction property with ZnO.

#### 2. Materials and methods

For depositing the europium doped ZnO thin films,  $Zn(CH_3COO)_2 \cdot 2H_2O$  and  $Eu(NO_3)_3 \cdot 6H_2O$  are chosen as the sources of zinc and europium, respectively, for monodoped ZnO films, the spray solution is prepared with 0.1 M  $Zn(CH_3COO)_2 \cdot 2H_2O$  (Sigma-Aldrich, 99.5%, Germany) and  $Eu(NO_3)_3 \cdot 6H_2O$  (Sigma-Aldrich, 99.9%, Germany) in the 100 ml mixture of deionized water and ethanol (Merck, 99.9%, Germany) at room temperature. A small amount of acetic acid (Merck, 99.9%, Germany) is added into the solution to avoid forming milky precipitate of hydroxides. The europium concentration is varied from 1 to 10 at.% and the total concentration of the solution is maintained at 0.1 M. The spray nozzle is at a distance of 10 cm from the substrate during deposition [10,13]. The spray deposition is carried out at a

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