

INTRODUCTION.

Modeling or Mathematical modeling of physical phenomena has been a key tool for advances in materials science and engineering for many centuries. With an aim to design materials with tailor-made properties in a simple approach in minimum effort, material waste there is a need to take help of computational approaches like machine learning and/or artificial neural networks in the world of materials that span the whole range science and engineering. In the era of Internet of everything, Machine learning is one of the key approaches to develop the next generation materials development in a greener way.

Hence for the researchers, students who deal with synthesis of novel sustainable materials addressing the current global issues like energy, environment, and health there it is highly essential to have some awareness, hands-on training on role of tools like machine learning in design and development of a wide range of materials. This perhaps is the right kind of workshop dealing with the fundamentals of machine learning and materials design using it.

Thus, in this workshop, experts in Science and Engineering and very good experience of designing materials structures with mathematical tools including machine learning will deliver very informative talks and with some hands on training wherever relevant.

In one-week a participant will have the opportunity to learn the following:

- Design aspects of materials
- The methodology algorithms for ML;
- Materials design with Machine learning;
- Hands-on experience

Resource Persons.

Dr. V. Subramanyam as Professor in Department of Physics, IIT Madras.

Dr. R. Jayaganthan is Professor of Engineering Design, IIT Madras.

Dr. Divya Nayar Assistant Professor, Materials Science and Engineering IIT Delhi.

Dr. Ankit Jain, Assistant Professor, Department of Mechanical Engineering, IIT Bombay.

Who Can Attend The Workshop?

Students and Faculty of Science and Engineering with basic knowledge of coding in C or C++ , Mat lab.

Registration Fees.

All participants must pay an Amount of Rs **1000/- (Rs 500 refundable after completion of the workshop)p**

Contact for more Information.

Dr. P. V. Rajeswari (Dept. of Physics)

Contact: +91 9441574580

Dr. M. Rama Rajeswari (Dept. of Chemistry)

Contact: +91 9885937902

Dept of Physics

Department of Physics at GVP College of Engineering was established in the year 1996. Presently there are 7 faculty in Physics department, out of which 6 faculty are PhD holders. In association with the centre for Nanoscience and Technology, founded in 2010 in the Physics department, the faculty members are engaged in diverse research areas and are currently supervising research scholars, some B.Tech. and M.Tech. projects

Organizing Committee.

Chief Patron

Prof. Dr. Ing. P. S. Rao, President, GVP

Patrons:

Sri D. Dakshina Murthy, Vice-President, GVP

Prof. K.P.R. Sastry, Vice-President, GVP

Prof. P. Somaraju, Secretary, GVP

Prof. P.V. Sarma, Member, Secretary, GVPCDPGC(A)

Chairman:

Prof. A. B. Koteswara Rao, Principal

Event Organizer:

Dr. P. V. Rajeswari, Department of Physics

Dr. M Rama Rajeswari, Department of Chemistry

Coordinating Committee:

- Dr. Sumanta Kumar Tripathy, HoD, Dept. of Physics
- Dr. T Manikya Sastri, HoD, Dept. Of Chemistry



Venue.

Departments of Physics
Computer Science and Engineering
Gayatri Vidya Parishad College of Engineering
3.47/4.00 Madhurawada, Visakhapatnam.

Course topics

- Materials Design by
Prof. V. Subramanian, IITM, Madras
- Materials Design and Machine Learning
Prof. R. Jayaganthan, IITM, Madras
Prof G. Phani Kumar, IITM, Madras
- Materials Design and Machine Learning
Dr. Divya Nayar, IITD, Delhi
Dr. Ankit Jain, IITB, Bombay

About the Institution

The Gayatri Vidya Parishad College of Engineering has a 5000 strong contingent of students pursuing quality and skill oriented education. The college is established by 'Gayatri Vidya Parishad' (GVP), a non-profitable organization comprising of noted educationists and eminent philanthropists who have a missionary zeal to provide quality technical education. The college is one of the most- preferred self-financing engineering colleges in Andhra Pradesh and at present offers 10 B.Tech. Programs, 9 M.Tech. and one MCA Program approved by AICTE.

The college has brought in many initiatives for the benefit of students with autonomous status granted by UGC in 2009 and extended up to 2025. The institute has been reaccredited second time by NAAC with 'A' grade with CGPA of 3.47/4.0. All the eligible seven B.Tech. programs are accredited by NBA at least twice. The institute received funds to the tune of Rs. 5 Crores under Technical Education Quality Improvement Program (TEQIP), S.C-1.2. The college received Rs. 12 Crores from funding organizations AICTE / DST / NBHM / ARB etc. towards 45 R&D project.

Department of Chemistry

The department of chemistry was established in the year of 1996 with well established laboratories and instrumentation. It offers various chemistry courses catering the needs of the core engineering disciplines. The faculty are active in the research field of inorganic reaction mechanism, bioactive materials and drug synthesis, They have completed many funded projects, have many peer reviewed journal publication and published two patents.

GVP-LIAS

Gayatri Vidya Parishad Professor V. Lakshmikantham institute for advanced studies (GVP-LIAS) in association with other department of the institution organized four international conferences titled, "Recent Advances in Mathematical Sciences and Applications (RAMSA)" in 2009, 2013 2017 and 2021. GVP-LIAS boasts of hosting a good number of distinguished Mathematicians, Scientists and Researchers from various parts of the country and from abroad.

Our Vision

To establish a Research Centre where the main purpose of its members is to conduct and foster original cutting edge research in areas of mathematical and computational sciences useful in solving real-world problems via interdisciplinary approach for the benefit of the mankind.

Our Mission

To make the institute an international research centre in Nonlinear Studies pervading Mathematical/Computational Sciences, capable of instilling self-confidence and research temperament among faculty and students culminating in original research publications & monographs in application areas of immediate importance like Cyber Security and Big Data, Computational Error and Complexity of Algorithms.



Gayatri Vidya Parishad College of Engineering (Autonomous)

(Approved by AICTE, Affiliated to Andhra University)
Accredited by NAAC with 'A' grade with CGPA of
3.47/4.00 Madhurawada, Visakhapatnam

ONE WEEK NATIONAL WORKSHOP

On

Machine Learning and Materials Design (MLMD)

(15th Jan 24 to 21st Jan 24)

Organized by

Departments of Physics
Department of Chemistry

in association with

Gayatri Vidya Parishad
Prof. V. Lakshmikantham Institute
for Advanced Studies (GVP-LIAS)