



VIT-AP
UNIVERSITY

Apply Knowledge. Improve Life!®

School of Advanced Sciences

NATIONAL WORKSHOP ON DATA SCIENCE AND ADVANCED COMPUTING (ONLINE)

Level-I: 13th to 14th March 2021 (For 10+2 & UG Level) &

Level-II: 19th to 21st March 2021 (For PG Level)



ENTRY FREE



**E-Certificate
for participation**

<https://forms.gle/SrGGUspucZBMRhtI9>

LEVEL-I: This level of the workshop mainly focuses on 10+2 and UG students. It is intended to give you a brief idea of data science and the roles of a data scientist in different sectors like Marketing, Banking, Operations, Insurance and Finance, Human Resources, Health care, Supply chain, R&D sectors, etc. Participants will get an opportunity to interact with many data scientists and statisticians from industry and academia worldwide.

LEVEL-II: This level of the workshop is proposed for PG (Mathematics and Statistics) students and will provide an overview of recent trends in emerging research areas in applied mathematics and advanced computing. This workshop will encourage the participants towards new research directions. It provides a wide opportunity for the participants to interact with experts from different parts of the world.

Speakers for LEVEL I: Introduction to Data Science and Computing (13-14 March 2021)

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Dr. Fiaz Shaik

Topic : Data science and Applications
Data Science Specialist
Eaton Centre for Intelligent Power, Pune, India



Dr. Angelo Coluccia

Topic : Detection of Small Drones: From Sensor Data Fusion to Deep Learning
Associate Professor
University of Salento, Italy



Mr. Akhil Gopinath

Topic : Computational Mathematics Using MATLAB
Education Technical Evangelist
Mathworks Inc, India



Dr. Anand Mukhopadhyay

Topic : Introduction to Statistical Methods with MATLAB
Education Technical Evangelist
Mathworks Inc, India



Prof. Indranil Mukhopadhyay

Topic : Data Science : Data to Information, and Information to Insight
Professor
Indian Statistical Institute, Kolkata, India



Prof. Challa Subrahmanya

Topic : Computing with Matrices
Professor
Indian Institute of Technology, Hyderabad, India



Mr. Naveen Kaveti

Topic : Behind the scenes of statistical models
Data Scientist
Intuit, Bangalore, India



Mr. Shivam gupta

Topic : Graph Neural Networks: How they are used in Microsoft Bing Ads...!!!
Data and Applied Scientist
Microsoft, India

Speakers for LEVEL II: Mathematics and Advanced Computing (19, 20, 21st March 2021)

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Prof. Y N Reddy

Topic : Need for Robust Numerical Methods
Professor
National Institute of Technology, Warangal, India



Dr. Kannan Srinathan

Topic : The ABCD of Cryptography
Assistant Professor
Indian Institute of Information Technology, Hyderabad, India



Dr. Goqo Sicelo

Topic : An improved spectral quasilinearisation method for square cavity flow problems
Assistant Professor
University of KwaZulu-Natal, South Africa



Dr. Yuriy V. Pershin

Topic : The rise of memristors
Associate Professor
University of South Carolina, USA



Prof. Pankaj Jain

Topic : Certain Inequalities on Various Function Spaces
Professor
South Asian University, SAARC, New Delhi Campus, India



Prof. D. Srinivasacharya

Topic : Symbolic Computing with Python
Professor
National Institute of Technology, Warangal, India



Dr. Yogeshwaran Dhandapani

Topic : An introduction to Percolation
Associate Professor
Indian Statistical Institute, Bangalore, India



Dr. Prosenjit Kundu

Topic : Synchronization in Networks of Sakaguchi-Kuramoto Oscillators
Visiting Assistant Professor
University at Buffalo (SUNY), USA



Dr. Sabaskar Jayaraj

Topic : Applications of Thomas Algorithm for Penta-Diagonal System
Assistant Manager
Kennametal India Limited, Bangalore, India



Dr. Angelo Coluccia

Topic : Detection Problems in Signal Processing and Data Science
Associate Professor
University of Salento, Italy



About Our University:

Consistently ranked among the top educational institutes in the country, the VIT group of institutions have had a proud tradition of pursuing knowledge and excellence. In keeping with this VIT tradition, the leadership at VIT-AP resonates a dynamic blend of academic initiative and industry partnership with a vision of creating one of the finest academic destinations in the world. With several years of educational, industrial, and administrative experience, VIT-AP is helmed by Dr. G. Viswanathan, Chancellor, founder of VIT group of institutions; along with the core group comprising Dr. Sekar Viswanathan, Vice-President; Dr. Sandhya Pentareddy, Executive Director; Dr. S. V. Kota Reddy, Vice-Chancellor; and Dr. C.L.V. Sivakumar, Registrar.

VIT-AP, offers several avenues to explore your interests, identify core competencies, and engage in an evolving lifecycle of education and growth. With flexible courses and a unique teaching-learning experience, state-of-the-art facilities, focus on continuous assessment and emphasis on practical learning, a student-oriented mentoring scheme, extra-curricular activities, several international collaborations, placement opportunities and much more, VIT-AP ensures that students are informed, inspired, and engaged in an enriching experience at the institute.

About Our School:

The School of Advanced Sciences (SAS) is one of the seven Schools of VIT-AP University and it houses the Departments of Mathematics, Physics, and Chemistry. Here students are taught how to think critically through project-based learning (PBL) and not merely what to think. Students are encouraged to question, explore, and research throughout their studies, ranging across the various discipline of sciences. Our school aims at providing a solid foundation in natural Sciences, projecting the recent scientific and technological developments to the graduate, postgraduate, and PhD students. We aspire to be a valuable contributor towards the nation's growth and development by producing highly skilled professionals and by engaging in cutting-edge research. SAS earnestly pursues a vision of providing local, regional, national and International leadership in the research and technology development. We believe in quality of education and research with ethical and professional standards for better tomorrow. Here, students make their choices based on their preferences and requirements that equips them with a balance of logical-thinking and problem-solving skills which are essential to tackle today & tomorrow's professional challenges.

Research:

Research is at the heart of SAS's vision towards becoming an internationally recognized center of knowledge and learning. The spectrum of research activities at SAS is extensive and distinct. Our faculty and scholars are keen not just to find technological solutions to problems but also to expand human knowledge and understanding.

Currently, the school has over 20 Research Scholars pursuing a Ph.D. degree. The faculty members have contributed to academic research publishing and have successfully published research papers in over 85 journals and book chapters. SAS encourages faculties for collaborative research with faculties from foreign universities and presents their findings on international platforms.

The school has 23 registered faculties under the Research Grant in Engineering, Management, and Science (RGEMS), an initiative to motivate research that can lead to R&D projects. Undergraduate Research (URE) pursuits are encouraged by the school as well. In collaboration with the faculty, undergraduate students of engineering do active research, which leads to journal publications.



Programmes Offered:

Dual Degree Programme

B.Sc. & M.Sc. Data Science
(with exit option B.Sc. Data Science)

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PG Programme

M. Sc. Data Science
M. Sc. Physics
M. Sc. Chemistry

Ph.D. Programme

Mathematics, Physics, Chemistry

<http://vitap.ac.in/school-of-advanced-sciences/>



Department of Mathematics

Department of Mathematics offers two programmes: Dual Degree Programme B.Sc. & M.Sc. Data Science (with exit option B.Sc. Data Science) and M.Sc. Data Science. The department further offers, more than 20 different courses for UG and PG programmes from other Schools. Courses in Mathematics are taught by incorporating technology into classroom teaching using a right blend of traditional teaching tools and computer algebra systems (CAS) such as MATLAB and R Programming. Use of MATLAB in teaching-learning process establishes Student-centric learning environment where the students are taught Mathematics through experimentation, visualisation and discovery. Further, the department specializes in the following research areas:

Nonlinear Dynamical System, Modelling of Memory Devices, Integral Transform, Operator Theory, Hydrodynamics Stability, Thermal Convection, Elasto Hydrodynamic, Algebraic Coding Theory, Cryptography, Fractal, MHD Boundary Layers, Perturbation Methods, Stochastic Differential Equation, Approximation Using Linear Positive Operators, Fluid Dynamics, Nonlinear Mathematical Programming Problem, Solute Transport Modelling, Graph B-Coloring, Cosmology and more.

Department of Physics

Department of Physics offers an M.Sc. programme with specialization in frontline areas of modern day technology. Further, the department provides more than 10 different courses for UG and PG programmes from other Schools. The passion for basic and engineering sciences that stem from Physics are favoured by the students. The students devote practical hours at the labs sedimenting their basics in physics, and upgrading their knowhow on latest technologies.

The department is actively engaged in research in the following fields: Nanomaterials, Transparent Conducting Materials for Optoelectronic Applications, Photovoltaics, Sensors, Composite Materials, Coatings, Condensed Matter and Biological Physics.

Department of Chemistry

Department of Chemistry offers an M.Sc. programme, along with offering 7 courses for the UG and PG programmes from other Schools. The environmental chemistry laboratory is planned to have advanced analytical instruments and laboratory process equipment for project-based hands-on training to the students in fresh water and effluent water analysis, soil testing methods, air pollution studies, etc. This exposure from doing live experiments would enhance the students' understanding about environmental studies.

The department engages in research in the fields of Materials & Nano Science, Homogeneous Catalysis, Supramolecular Inorganic Chemistry, Spectroscopy, Coordination Chemistry, Molecular Machines, Organic synthesis, among many other areas.



Facilities : SAS has well equipped labs with state of the art equipment and facilities that are essential for research and learning in the advancement of the sciences.

Physics Laboratories: The laboratories under the department provides practical experience to students through experiments on fundamental concepts and current technological applications such as Solar cells, Light Emitting Diodes, Optical fibres etc.

Chemistry Laboratories: The chemistry laboratory is equipped with modern analytical instruments, advanced process equipment, a range of special glassware and chemicals. They provide hands-on skill training with systematic analytical competence for the budding engineers. Also, the laboratory supports the students and research scholars for their chemical analyses needed in engineering project works or research.

Reach Us : Beside AP Secretariat, Near Vijayawada, Andhra Pradesh - 522237, INDIA

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