

Patron

Dr. C. Ladha Pooranam
Principal, Government Arts College for Women,
Nilakottai, Dindigul

Scientific Program Committee

Dr. N. Seenivasagan
Assistant Professor and Head,
Department of Mathematics

Dr. A. Muthukamatchi
Assistant Professor,
Department of Mathematics

Organising Committee Members

Mrs. M. Palaniammal
Mrs. M. Rajeshwari
Ms. N. Hema Shanthini
Mrs. S. P. Chitra
Mrs. M. Deepa Lakshmi

How to Reach

Location

Government Arts College for Women, Nilakottai is situated 3 kms towards Vathalagundu Road from Nilakottai town in Dindigul district of Tamilnadu. It is located between 10.17° North Latitudes 77.85° East Longitudes.

By Train

Dindigul Junction is the nearby main station to College which is at distance of 34 kms. Kodaikanal Road station is the nearest station at a distance of 14 kms. Only few trains will stop at this station.

By Bus

Government Arts College for Women, Nilakottai is well connected with National Highways. Many buses are available from Madurai-Arapalayam Bus Stand. Local buses are available from Dindigul Bus Stand. Connected buses are available from Vathalagundu and Ammayanaickanur.

“Education is the most powerful weapon to change the world”



REGISTRATION FORM

Full Name :
(in Block letters with initials at the end)

Gender :

Date of Birth (DD/MM/YYYY):

Course of Study :

Institution Name :

Institution Address :

Address for Correspondence :

City / Town :

State :

Pincode :

Contact Number :

Email Address :

M. Sc., Percentage in Mathematics (I Semester) :

B. Sc., Percentage in Mathematics :

B. Sc., Overall Percentage :

Signature :



DST - SERB Sponsored National Level Workshop on “Differential Equations and Dynamical Systems”

Date:

11.07.2022 - 15.07.2022

Venue:

Seminar Hall,
Government Arts College for Women,
Nilakottai, Dindigul, Tamilnadu.

Organised by

Department of Mathematics,
Government Arts College for Women,
Nilakottai, Dindigul, Tamilnadu - 624 202.

The Department of Mathematics, Government Arts College for Women, Nilakottai, is planning to organise a National Level Workshop on “Differential Equations and Dynamical Systems” during 11.07.2022 to 15.07.2022.

The Primary objective of this workshop is to develop abstract and logical thinking and the ability to pursue further research in “Differential Equations and Dynamical Systems”. This workshop will give hands-on experience in working out Mathematics and its wide implications and applications. The workshop would consist of lectures on some basic topics in Differential Equations and Dynamical Systems by experts from leading Institutions and intended to provide glimpses on Mathematical Biology and Neural Networks. The workshop is designed with problem solving and interactive sessions.

Topics:

- Preliminaries from Real Analysis
- First and second order linear equations
- General theory of IVP:
 - Sufficient condition for existence and uniqueness of solution
 - Dependence on the initial solution, Extensibility of solutions
 - Existence and uniqueness of a system of equations
- Linear systems and qualitative analysis:
 - The matrix exponential linear autonomous first order systems
 - Linear autonomous equations of order n and general linear first order systems
- Stability analysis:
 - Phase plane and phase portrait, Dynamical system, Equilibrium points and stability
- Series solutions:
 - Equations with analytic coefficients, Regular singular points
- Applications of Differential equations with Basic dynamics

Topics continued...

- Non-linear Differential Equations with numerical approaches
- The stable manifold theorem, Stability and Lyapunov functions, Saddles, Nodes, Foci and centers, Central manifold theory
- Gradient and Hamiltonian systems, Dynamical systems, Orbits and invariant sets, The Poincaré map, Stability of fixed points
- Stability via Lyapunov method, The Poincaré Bendixson theorem
- Introduction on mathematical models in epidemiology
- Introduction on neural networks

Important Dates

- Last date for submission of online application - **30.06.2022**
- Last date to receive printed application along with enclosures by post - **01.07.2022**
- Announcement of selected participants - **06.07.2022** (tentative)

Distuignised Speakers:

- **Dr. P. Veeramani**, Professor(Rtd.), Indian Institute of Technology Madras (IIT-Madras), Chennai
- **Dr. Raju K George**, Outstanding Professor, Dean (R&D and IPR), Indian Institute of Space Science and Technology (IIST), Trivandrum
- **Dr. Satyajit Roy**, Professor, Indian Institute of Technology Madras (IIT-Madras), Chennai
- **Dr. P. Balasubramaniam**, Professor, The Gandhigram Rural Institute (GRI), Gandhigram
- **Dr. M. Pitchaimani**, Associate Professor, Director & Head i/c, Ramanujan Institute for Advanced Study in Mathematics (RIASM), University of Madras, Chennai
- **Dr. M. Syed Ali**, Assistant Professor, Thiruvalluvar University, Vellore

Registration fee: *Exempted*

Pre-requisites : *Good Knowledge in Differential Equations.*

Eligibility : *Students who have completed I year M.Sc., / IV year Integrated M.Sc., Mathematics.*

Selection Procedure : *Atleast one participant will be selected based on merit from each College.*

Instructions and Amenities for Canditates

- Certificates will be provided for the candidates who attend the sessions
- No TA/DA will be provided to the participants
- All participants will be provided with workshop kit and working lunch
- Outstation participants will be provided with paid accommodation on demand
- **Click here** to apply online, **Click here** for bonafide certificate and **Click here** to view the tentative time table
- The candidates can also apply through our college website <http://www.gacwnlk.org/>

Enclosures:

- Printed application form.
- Attested photo copy of B.Sc., consolidated mark sheet.
- Attested photo copy of M.Sc., first semester mark sheet (If not, online result statement of marks with HOD's signature).
- Bonafide certificate from the Head of the Institution in the prescribed format.

Contact Info

Dr. S.P. Rajasekar,
Convener,
Department of Mathematics,
Government Arts College for Women,
Nilakottai, Dindigul – 624 202,
Mobile: +91 79044 95937