

ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) ON

“Nature-Inspired Algorithms for Engineering Optimization Problems”

(29th April - 9th May 2024)

Organized by

E & ICT Academy, NIT Warangal

in association with

Department of Information Technology

KES’s Rajarambapu Institute of Technology, Rajaramnagar

(An Empowered Autonomous Institution affiliated to Shivaji University)

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)



Preamble:

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy's role is to offer Faculty Development Programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

About FDP:

This FDP provides a comprehensive overview of nature-inspired optimization algorithms and their applications in engineering optimization problems. Beginning with an introduction to the concept of nature-inspired optimization, the FDP delves into specific algorithms such as genetic algorithms, particle swarm optimization, ant colony optimization, ABC algorithm, cuckoo search algorithm, Whale optimization algorithm, Firefly Algorithm, and their respective methodologies. Additionally, it explores the concept of hybrid and other optimization algorithms, highlighting their effectiveness in tackling complex engineering problems. The FDP concludes with a discussion on recent advances in optimization algorithms, emphasizing ongoing research and innovations in the field. Overall, this FDP offers valuable insights into the diverse range of nature-inspired algorithms and their potential for addressing challenging engineering optimization tasks.

The participants will be trained with hands-on approach to have an in-depth insight into the domain of optimization techniques and expose them to future scope.

Prerequisites:

To learn large language models, one should have knowledge of programming, especially in Python, machine learning and deep learning basics.

Major Course Contents:

- **Introduction to Nature-Inspired Optimization Algorithms**
- **genetic algorithm**
- **particle swarm optimization**
- **ant colony optimization**
- **ABC algorithm**
- **cuckoo search algorithm**
- **Whale optimization algorithm**
- **Firefly Algorithm**
- **Hybrid and other optimization algorithms**
- **Recent advances in optimization algorithms**

Faculty conducting this programme:

The programme will be conducted by the faculty members from NIT Warangal; Academicians in the concerned field from IITs/NITs/IIITs are invited to deliver lectures in the programme. Speakers from industries are also expected to deliver as part of the course.

Registration Fee: Rs. 1000/-

Participants need to pay the Registration Fee Online using the following details

Online Transfer Details
Account Name: Electronics & ICT Academy NITW
Account No: 62423775910
IFSC: SBIN0020149
Bank and Branch: State Bank of India, NIT (REC) Warangal

How to apply:

Participants are required to fill the online registration form by clicking on the following link:

<https://forms.gle/PfdGNVA/xvEc6k8n8>

Selection Criteria:

Selection will be done based on first-come-first-serve basis to a maximum number of 60 (sixty). Additionally, 10 participants from industry are allowed to participate. The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the DD will be sent back. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

Important dates:

Last date (Application & DD)	22.04.2024
Selection List by E- mail	23.04.2024
Duration	29.04.2024 to 09.05.2024

About NIT Warangal:

National Institute of Technology, Warangal is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as a premier Institute imparting technical education of a very high standard leading to the B. Tech Degrees in various branches of engineering, M.Tech. and Ph.D programmes in various specializations. All B. Tech and M. Tech programmes of NIT Warangal are NBA accredited.

About RIT:

Rajarambapu Institute of Technology, Rajaramnagar was started in 1983. Located near Islampur, 7 kms away from Peth Naka of Pune-Bangalore highway, RIT has a green beautiful campus of 17 hectares and buildings on it measuring 54,000 sq.m. RIT has emerged as a leading technological Institute in Western Maharashtra through its dedicated and disciplined approach to provide quality technical education. RIT, Islampur is an Empowered Autonomous institute affiliated to Shivaji University, Kolhapur, Maharashtra and approved by AICTE, New Delhi. The institute is NAAC accredited with "A+" grade, and runs programmes accredited by NBA, New Delhi.

ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) ON

“Nature-Inspired Algorithms for Engineering Optimization Problems”

(29th April - 9th May 2024)

Organized by

E & ICT Academy, NIT Warangal

in association with

Department of Information Technology

KES’s Rajarambapu Institute of Technology, Rajaramnagar

(An Empowered Autonomous Institution affiliated to Shivaji University)

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)



1. Name :
2. Designation :
3. Institution :
4. Email :
5. Mobile No :
- 6.

Reference No :
Amount :
Bank :
Date :

7. Address for Correspondance:

8. Educational Qualification:

9. Subjects taught so far:

10. No. of refresher courses/workshops attended:

11. Experience (in years):

Teaching: Research: Industry:

12. Do you belong to SC/ST: YES /NO
(If yes, please specify and attach a copy of caste certificate to claim the concession)

Declaration

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the coordinator in case, I am unable to attend the course.

SPONSORSHIP CERTIFICATE

Dr. /Mr. /Ms. is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on “**Natural Inspired Algorithms for Engineering Optimization Problems**”, organized by Electronics & ICT Academy, NIT Warangal and RIT, Islampur during 29th April to 09th May 2024.

Address for correspondence

(Post your application form)

Prof. Akshay Homkar

Assistant Professor

Department of Computer Science and Information Technology, KES’s Rajarambapu Institute of Technology, Rajaramnagar, Islampur, Tal-Walva, Dist- Sangli, State- Maharashtra, Pin - 415414

It is requested to all the delegates, after completion of application form, all the payment details, screenshot of the payment and scanned application form has to be uploaded in the following online registration link.

<https://forms.gle/PfdGNVAVxvEc6k8n8>

For more details about Electronics & ICT Academy, NIT, Warangal please visit: <https://nitw.ac.in/eict>

For more enquiries about FDP, please contact:

Prof. Akshay Homkar

Mobile: 8275278587

Email: akshay.homkar@ritindia.edu

Date

Signature of the Applicant

Coordinators

Dr. T. Ramakrishnu,

Dept. of CSE, NIT Warangal
NATIONAL INSTITUTE OF TECHNOLOGY
WARANGAL – 506 004 (Telangana State)
Email: trk@nitw.ac.in
Mobile: 0966876842

Prof. Akshay Homkar

Dept. of IT, RIT, Islampur
KES’s Rajarambapu Institute of Technology,
Rajaramnagar, Islampur, Tal-Walva, Dist- Sangli, State-
Maharashtra, Pin - 415414
Email: akshay.homkar@ritindia.edu
Mobile: 08275278587