



Skill Development : Soft Computing Techniques for Design Of Experiments

Date : 12 July 2019

Resource Person Details : Dr. S. S. Mohapatra

No. of Participation : 16 number of faculty participated

Detailed report of the activity:

A Workshop on "Soft Computing Techniques for Design Of Experiments" is organized on ,12 July 2019 by department of Mechanical Engineering.

Venue: **Central Computing Lab(CRC-02)** Time:**10 A.M. to 5 P.M**

Resource person: Dr.S.S.Mohapatro Professor, Mechanical Engineering NIT,Rourkela

Objectives:

1. To give a brief introductory platform on Soft computing techniques for design of experiments using Taguchi Method.
2. To teach the basics of Taguchi, Grey Taguchi and hybrid Taguchi using Design expert and MiniTab soft wares
3. To solve statistical problems through design of experiment and Mini Tab software.

Out come:

1. Able to know about parameters involved in the design of experiments.
2. Able to solve the statistical problems and analyzing the same
3. Able to know how to use Taguchi approach in Design expert and MiniTab soft wares.

A workshop was organized by Mechanical engineering Branch, School of Engineering and Technology Paralakhemundi dated on 12.7.2018 on " Soft Computing Techniques for Design Of Experiments ". This programme was coordinated by Dr. P.S rao, Professor in Department of Mechanical Engineering and was facilitated by the resource person Dr.S.S.Mahapatra ,Professor in Mechanical Engineering Branch,NIT Rourkela.

workshop aims on Statistical Analysis through application of Taguchi, Grey Taguchi and Hybrid Taguchi method using MINITAB. DOE is the design of Experiments that aims to describe or explain the variation of information under conditions that are hypothesized to reflect the variation. Computational Intelligence is a set of nature-inspired computational methodologies and approaches to address complex real-world problems to mathematical or traditional modeling.

Software: Design of Experiments Statistical analysis software which automates calculations and the creation of graphs, allowing the user to focus more on the analysis of data and the interpretation of results.

First half of the day started with theory session of What is design of experiments using Orthogonal array concept , Compounding effect in Design of experiment ,Full factorial design method, fractional factorial method ,Taught Method,Response surface Methodology method Statistical problem solving using design expert and Minitab Using Taguchi Method. Analysis of graphs and tables were covered in the FDP through interactive and practice modes. Second half of the day is a practice session using Design experts and MiniTab using some typical problems. The entire interactive lecture sessions were conducted in CSREM Conference hall followed by the respective practice sessions in Unity laboratory. Related study materials were prepared and distributed among all participants.



Session-1 Inauguration by registrar Dr. Anita Patra in the workshop on “Soft Computing Techniques for Design of Experiments”



Dr.S.S.Mahapatra taking the session



Workshop on Soft Computing Techniques for Design of Experiments

DATE: 12.07.2019

Venue: Central Computing Lab(CRC-02)

Time: 10 AM to 5PM

Resource Person

Dr. S.S. Mohapatra
Professor in Mechanical Engineering
Branch, NIT Rourkela

Organised by:

**Centurion University of Technology and
Management**

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Brochure of the Programme

List of Students & Faculty Attendance:



**CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT
PARALAKHEMUNDI**

FDP ON "SOFT COMPUTING TECHNIQUES FOR DESIGN OF EXPERIMENTS"

Date: 12.07.2019

NAME	FULL SIGNATURE
SoET	
1. Mr. K.Santosh (CSE)	<i>[Signature]</i>
2. Mr. Rajesh Kumar Mishra(ECE)	<i>[Signature]</i>
3. Mr. Anjan Kumar Sahoo(EEE)	<i>[Signature]</i>
4. Mr. Santosh Patro(MECH)	Santosh Patro
5. Mr. P.Suman(MECH)	
6. Mr. D.Raghuveer(MECH)	<i>[Signature]</i>
7. Mr. Satyabrata Nayak(MECH)	Satyabrata Nayak
8. Mr. Sukant Nayak(MECH)	<i>[Signature]</i>
9. Mrs. G.Sridevi(MECH)	G. Sridevi
10. Mr. Sujit Kumar Mishra(MECH)	<i>[Signature]</i>
11. Mr. Surya(MECH)	<i>[Signature]</i>
12. Dr. M.Vijay(PCH)	<i>[Signature]</i>
SoABE	
13. Ms. Rashmi Yadav(Ag)	<i>[Signature]</i>
14. Mr. Sanjay Sial(Ag)	<i>[Signature]</i>
SoAS	
15. Dr. Debasish Swain	<i>[Signature]</i>
16. Mr. RAJESH CVS, Srinivasa Institute of Engineering & Technology	CVS Rajal

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Prabhat K. Pattnaik
FDP Coordinator

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Dr. Prasanta Ku. Mohanty
Dean Academic