

JULY-AUGUST 2023

E-PATRIKA

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



SHRI
RAMSWAROOP
MEMORIAL
UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

OUR VISION

To build our students to be among the top technocrats in the country, reshaping society in a more modern way.

OUR MISSION

To develop, circulate, and use computer science knowledge, including in interdisciplinary fields that broaden its application and benefit humanity; to teach students to be successful, moral, and effective problem-solvers and lifelong learners who will improve the economic well-being of our region and country and who are equipped to take on the challenging challenges of the 21st century.

IN THIS EDITION

(COVERS ALL THE
HIGHLIGHTS FROM
THE MONTH OF
JULY-AUGUST)

**“THE ADVANCEMENT OF
TECHNOLOGY IS BASED ON
MAKING IT FIT IN SO THAT YOU
DON'T REALLY EVEN NOTICE IT, SO
IT'S PART OF EVERYDAY LIFE.”**

BILL GATES

CO-FOUNDER OF MICROSOFT.

- OUR PATRONS
 - FACULTY COLUMN
 - STUDENT COORDINATORS
 - PROGRAMS OFFERED BY THE DEPARTMENT
 - NOVATHON FINALIST
 - DECORATION
 - STUDENT FELICITATION
 - UMANG DAUD
 - PATENTS



SRMU

OUR **PATRONS**

DEDICATED TO THOSE SOULS WITHOUT
WHOM WE WOULDN'T HAVE BEEN
LIVING THE SAME SRMU LIFE.



SHRI PANKAJ AGARWAL
Hon. CHANCELLOR



SHRIMATI POOJA AGARWAL
Hon. PRO CHANCELLOR



PROF.(DR.)D.K.SHARMA
Hon. VICE CHANCELLOR



DR. NEERJA JINDAL
Hon. REGISTRAR

THE FACULTY COLUMN

FACULTY COLUMN



Dr.Satya Bhushan Verma
Head Of Department



Er. Vishal Bhatt
Assistant Professor



Er. Neeraj Kumar
Assistant Professor



Er. Anupam Singh
Assistant Professor



Er. Nitin Goel
Assistant Professor



Er. Neelesh Mishra
Assistant Professor



Er. Sunny Kumar
Assistant Professor



Er. Neeta Bhushal Verma
Assistant Professor



Er. Aditya Pratap Singh
Assistant Professor



Er. Prabha Singh
Assistant Professor



Er. Avantika
Assistant Professor



Er. Sakshi Singh
Assistant Professor



Er. Gunjan Mishra
Assistant Professor



Er. Abhilasha Mandal
Assistant Professor



Er. Atifa Parveen
Assistant Professor



Er. Ijtaba Saleem Khan
Assistant Professor



Er. Arpita Vishwakarma
Assistant Professor

STUDENT CO-ORDINATORS



Ayush Kumar Shukla
Btech. CS
II Year



Sneha Saxena
Btech. CS
II Year



Khushi Agarwal
Btech. CS
II Year



Andri Mohan
Btech. CS
II Year

Programs Offered By The Department

COURSES	DURATION
B.TECH IN COMPUTER SCIENCE & ENGINEERING	4 YEARS
B.TECH. IN CSE IN DATA SCIENCE AND AI	4 YEARS
B.TECH IN CSE IN CLOUD COMPUTING AND AI	4 YEARS
B.TECH IN CSE IN CYBER SECURITY	4 YEARS
B.TECH IN CSE IN BLOCKCHAIN	4 YEARS
B.TECH IN COMPUTER SCIENCE & ENGINEERING LATERAL ENTRY	3 YEARS
B.TECH + MBA IN COMPUTER SCIENCE ENGINEERING	5 YEARS
B.TECH+M.TECH. IN COMPUTER SCIENCE ENGINEERING	5 YEARS
M.TECH. IN COMPUTER SCIENCE ENGINEERING	2 YEARS
M.TECH.IN CSE (PART TIME)	3 YEARS
M.TECH IN DATA SCIENCE	2 YEARS
PHD COMPUTER SCIENCE & ENGINEERING	3 YEARS

ACHIEVEMENTS

Accelerate Vigyaan



DR. Satya bhushan Verma participated and delivered a lecture and hands on topic on "Image Processing in MATLAB on 18th July,2023" this was organised by CSIR-AMPRI, Bhopal from 26th june-23rd july this year and under SERB sponsored VRITIKA.

Data Centre Efficiency Journal



**INTERNATIOANL
JOURNAL OF INNOVATIVE
TECHNOLOGY AND
EXPLORING
ENGINEERING(IJITEE)
PUBLISHED A JOURNAL ON
DATA CENTRE EFFICIENCY ENHANCEMENT BY METRICS ORIENTED
APPROACH TO REVAMP GREEN CLOUD COMPUTING CONCEPT
WHICH IS THE HARD WORK OF HON. SHRI SATYA BHUSHAN VERMA
ALONG WITH HON. SAUMITRA VATSAL.
IN THIS JOURNAL, IT IS BEST DESCRIBED HOW TO THINK AND SAVE THE
ENVIRONMENT ALONG WITH ADVANCING IN THE FIELDS OF COMPUTER
SCIENCE AND ESPECIALLY CLOUD COMPUTING.**

International Journal of Innovative Technology and Exploring Engineering (IJITEE)
ISSN: 2278-3875 (Online), Volume-12 Issue-8, July 2023

Data Centre Efficiency Enhancement by Metrics Oriented Approach to Revamp Green Cloud Computing Concept

Saumitra Vatsal, Satya Bhushan Verma

Abstract: Cloud computing inherits sharing of data from pool of resources existing in data centres when ever demanded. The basic requirement for this purpose is proficiency of the data centre for fulfillment of this coveted objective. The pursuit of energy-efficient peak performance level is challenged by a simultaneous increase of energy consumption. The energy-efficient metrics contribute a major role for attainment of desired objective of safeguarding the environment. These metrics address the enhancement of the system's proficiency. An increased energy-efficiency results into reduced consumption of energy resources since these energy resources are mostly non-renewable in nature and are the main source of carbon and heat emissions from operational data centres. As a matter of fact, any individual metric is not capable of achieving enhanced energy-efficient performance in a data centre. Therefore a collective utilization of selected metrics pertaining to power, performance and network traffic can improve the energy-efficient capability of data centre communication systems. The testing platform for such metrics is based on certain architectures which include D Cell, 8 Cube, Hyper Cube and Fat tree interconnect architectures.

Keywords: Cloud Computing, Green Cloud Computing, Energy Efficiency, Metrics

L. INTRODUCTION

Cloud based computing presently is reckoned as fundamental for IT operations globally, as it has emerged so prominently that it is successfully replacing traditional business models. It has enabled access to a plethora of software available online along with services by virtue of an environment which is deemed to be of virtual nature, curtailing the investment requirement for raising IT infrastructure. It requires only a connectivity enabled IT infrastructure which certainly demands an investment of lesser magnitude. The mode of involved functioning is based on "pay-as-you-go" concept which empowers to focus directly on core business and to utilize internet related IT services for assuring fully justified payment, on demand basis.

Manuscript received on 15 April 2023 | Revised Manuscript received on 17 June 2023 | Manuscript Accepted on 15 July 2023 | Manuscript published on 30 July 2023.

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Dr. Satya Bhushan Verma, Department of Computer Science and Engineering, Shri Ramswaroop Memorial University, Bhopal (U.P.), India. ORCID ID: [0002-8256-2709](https://orcid.org/0002-8256-2709)

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INDUCTION 2K23



THE INDUCTION PROGRAM FOR 1ST-YEAR FRESHERS AT SHRI RAMSWAROOP MEMORIAL UNIVERSITY, SCHEDULED FOR THE 16TH, 17TH, AND 18TH OF AUGUST 2023, PROMISES TO BE AN EXHILARATING AND WELCOMING EXPERIENCE FOR THE NEWEST MEMBERS OF THE UNIVERSITY COMMUNITY.

AS PART OF THIS ENGAGING ORIENTATION, STUDENTS CAN LOOK FORWARD TO A RANGE OF EXCITING EVENTS AND ACTIVITIES. ONE OF THE HIGHLIGHTS INCLUDES CAPTIVATING NUKKAD DANCE PERFORMANCES AND MELODIOUS SINGING RENDITIONS BY THEIR SENIORS. THESE PERFORMANCES NOT ONLY SERVE AS A DELIGHTFUL ENTERTAINMENT BUT ALSO FOSTER A SENSE OF UNITY AND CAMARADERIE AMONG THE STUDENTS.

INDUCTION PROGRAM IS DESIGNED TO NOT ONLY ACQUAINT NEWCOMERS WITH THE ACADEMIC ASPECTS OF UNIVERSITY LIFE BUT ALSO TO CREATE LASTING BONDS AND CHERISHED MEMORIES, ENSURING THAT THEY EMBARK ON THEIR EDUCATIONAL JOURNEY WITH CONFIDENCE AND ENTHUSIASM.

Virtual Machine Migration

9/21/23, 9:49 AM Virtual machine migration based algorithmic approach for safeguarding environmental sustainability by renewable energy usa...

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Springer Home | Published 20 December 2022 | Article

Virtual machine migration based algorithmic approach for safeguarding environmental sustainability by renewable energy usage maximization in Cloud data centres

Satya Bhushan Verma | Saumitra Vatsal | International Journal of Information Technology (IJIT)

10 Accesses | Metrics

Abstract

Data centres are reckoned as global connectivity hubs for networking. Cloud computing has emerged as a paradigm of paramount importance for fulfillment of need of networking which is expanding at an enormous magnitude. One of the main aim of this objective is that data centres are regarded and their scaling is under steady transition into enhanced environmental pollution. The energy efficient services contribute a major role for attainment of fixed objective of safeguarding the environment. These metrics address the enhancement of system's productivity, efficiency and energy-efficiency results into reduced consumption of energy resources since these energy resources are mostly non-renewable in nature and are the main source of carbon and heat emissions from operational data centres. As a matter of fact, any individual service is not capable of achieving enhanced energy-efficient performance in a data centre. Therefore a collective utilization of selected metrics pertaining to power, performance and network traffic can be prove the energy-efficient capability of data centre communication systems. The server related energy saving is the right choice solution for improving data centre related carbon emissions. The issue of maximization of green energy usage along with issue of operating cost minimization and reduced carbon emissions can be sensibly addressed by judiciously executing virtual machine migration. Thus dynamic virtual machine migration stands out as a promising solution for optimized resource utilisation with enhanced energy consumption and carbon footprint together.

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Availability of data

Datasets used in the research work are duly mentioned in the reference list.

References

1. Anilakumar M, Visw A, Griffiths K, Joseph AD, Kuta RH, Knowles A, Lee G, Paterson DA, Robbie A, Risten I et al (2022) Above the clouds: a Berkeley view of cloud computing. Technical report UCB/ECS-2022-048, ERLS Department, University of California, Berkeley

<https://link.springer.com/article/10.1007/s41870-023-01478-2>

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ANOTHER WORK OF SHRI SATYA BHUSHAN VERMA ALONG WITH SHRI SAUMITRA VATSAL WAS INDULGED IN ANOTHER GREAT WORK WHICH IS VIRTUAL MACHINE MIGRATION BASED ALGORITHMIC APPROACH FOR SAFEGUARDING ENVIRONMENTAL SUSTAINABILITY BY RENEWABLE ENERGY RESOURCE USAGE MAXIMISATION IN CLOUD DATA CENTRES.

THIS WORK WAS PUBLISHED IN THE SPRINGER LINK E MAGAZINE AND IS ABOUT THE REDUCTION OF CARBON EMISSIONS AND ESTABLISHMENT OF VIRTUAL MACHINE

T²I BBDNIIT



BBDNIIT

**BABU BANARASI DAS
NORTHERN INDIA INSTITUTE OF TECHNOLOGY, LUCKNOW**

Affiliated to Dr. A.P.J. Abdul Kalam Technical University (AKTU College Code : 056)

Approved by All India Council of Technical Education(AICTE)



Five Days Online Faculty Development Programme (FDP)

Organized by the Departments of Electronics & Communication Engg. and Electrical Engg. on
"Trends in Technological Intelligence 2023 (T²I-2023)"

CERTIFICATE OF PARTICIPATION

This is to certify that

GUNJAN MISHRA

from SHRI RAMSWAROOP MEMORIAL UNIVERSITY, BARABANKI has successfully attended Five Days Online Faculty Development Programme(FDP) on "Trends in Technological Intelligence 2023 (T²I-2023)" organized by the Departments of Electronics & Communication Engineering and Electrical Engineering, BBDNIIT from August 21 to 25, 2023.


Prof. Sanjay Kr. Sharma
Convener - T²I-2023


Dr. V. K. Singh
Chief Convener - T²I-2023



Date: August 25, 2023

ID : BBDNIIT000064

IN THE MONTH OF AUGUST FROM 21ST TO 25TH, A FIVE DAYS ONLINE FACULTY PROGRAM WAS ORGANISED BY THE DECE OF BBDNIIT,LUCKNOW

THE MAIN MOTIF OF THIS CONFERENCE WAS TO DISCUSS UPON THE IMPORTANT TOPIC OF TRENDS IN TECHNOLOGICAL INTELLIGENCE IN WHICH

DR.GUNJAN MISHRA OF SHRI RAMSWAROOP MEMORIAL UNIVERSITY HAS ATTENDED AND PROVIDED VALUABLE INFORMATION FOR THE BETTERMENT OF THE SOCIETY IN TECHNOLOGY

AATMNIRBHAR CONFERENCE

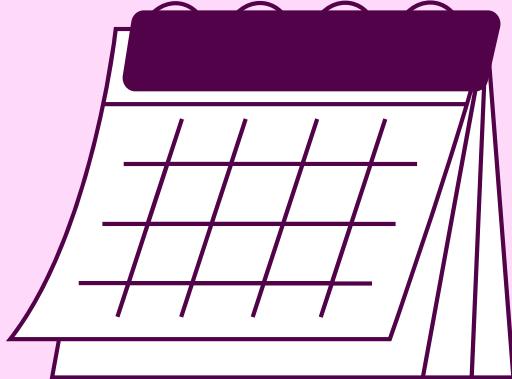


ON SUNDAY, 13TH OF AUGUST 2023, THE AATMNIRBHAR BHARAT NATIONAL ACHIEVERS AWARDS & EDUCATORS CONFERENCE WAS ORGANISED BY MAHARISHI UNIVERSITY OF IT AT HOTEL TAJ MAHAL PALACE, LUCKNOW.

ONE OF THE ACHIEVERS AND BEST EDUCATOR OF SRMU, SHRI SATYABHUSHAN VERMA PRESENTED HIS DELIGHTFUL SPEECH AND ENLIGHTENED EVERYONE PRESENT THERE.

HE WAS AWARDED WITH A CERTIFICATE AND A MOMENTO FOR HIS WORDS AND ACHIEVEMENTS.

DEPARTMENTAL CALENDAR



Date	July	August	September	October	November	December	January	February	March	April	May	June
1	Load Chart	Class Commencement	New Students Induction Programme/Internal Test-I	Internal Test-II			Sunday					End Term Examination (Theory & Practical)
2	F.O.P*	Registration	New Students Induction Programme/Internal Test-I	Sunday		End Term Examination (Theory & Practical)	Result Moderation Time Table/End Term Examination		Sunday			
3	Sunday	Registration	New Students Induction Programme/Internal Test-I	SRAC/TA-1(First Year)	Internal Test-III		Result /FDP					Sunday
4	D.A.	Daily Attendance	Sunday	SRAC			Sunday	Result /FDP				
5	F.D.P	Daily Attendance	Placement Meeting			FDP/Course Plan/End Term Examination	Sunday	Sunday				End Term Examination (Theory & Practical)
6	F.D.P./New V.C.O.D. Selections	Meeting with new faculties	TA-1		Sunday	FDP/Course Plan/End Term Examination						
7	F.D.P./New V.C.O.D. Selections	Sunday	VAC Brochure	CC Mark	Elective Report 2nd (IT/Final Year) Admission	FDP/Course Plan/End Term Examination						Sunday
8	F.D.P./New V.C.O.D. Selections	Workshop Brochure	VAC Registration	Review Meeting (Dharshar)	Conference/2nd IT/Final Year	Sunday						End Term Examination (Theory & Practical)
9	Library Books		CC Mark	Sunday	Conference/2nd IT/Final Year	New Session/End Term Examination						
10	Sunday	Student Faculty Achievements	Guest Lecture	Release Conference Brochure	Student Faculty Achievements/2nd (IT/Final Year)	End Term Examination (Practical & Theory) First Year						Sunday
11	Infra Follow Up			Sunday	Student Faculty Achievements	Sunday	End Term Examination (Practical & Theory) First Year					
12	Faculty Interviews	Mass Bulk Report	Student Faculty Achievements	Feedback	Dept Meeting/2nd (IT/Final Year)	Examination	Sunday	Sunday				
13	Faculty Interviews	Fee Defaulter Notification	Value Added Course	Feedback	Sunday	End Term Examination (Practical & Theory) First Year						
14	Result Moderation	Sunday	Value Added Course	Industry Visit	Remedial Classes/Fee Defaulters	End Term Examination (Practical & Theory) First Year						Sunday
15	Result Moderation	Sunday	Value Added Course Course/Class Commencement First Year	Industry Visit	Remedial Classes	Sunday						
16	ERP Tagging/Dharshar	SRMU Connect	Value Added Course	Sunday	Remedial Classes	Internal Test-I	Internal Test-II					
17	Sunday	Wish Card Report/SRMU Connect	VAC/Non Reporting Students/Last Date Academic Registration in The Dashboard	Elective Choice Filing	Lab Quiz	End with Examination (Theory & Practical/Finalization)						End Term Examination (Theory & Practical)
18	Summer Break	SRMU Connect	Sunday	Conference Plan	Lab Quiz/Finalization of Internal Evaluation	Sunday						Sunday
19	Summer Break	SRMU Connect	Fee Defaulter Notifications	TA-3/Feedback	Lab Quiz/Internal Finalization	Sunday	Sunday	Sunday				
20	Summer Break	IT-1 Scheduler/SRMU Connect	Mass Bulk Report	Lab Monitoring	Sunday	End Term Examination (Theory & Practical/First Year)	Internal Test-I					
21	Summer Break	Sunday	TA-2/Lab Monitoring	Class Coordinator Meeting	Sunday	Chart/End Term Examination (Theory & Practical)						Sunday
22	Summer Break	Fee Defaulter Notification/SRMU Connect	Conference Plan Approval	Placement Meeting	Evaluation	Sunday						
23	Summer Break	Class Coordinator Meeting/SRMU Connect	IT Question papers	Sunday	End Term Examination (Theory & Practical)	MGPA/Student Interviews/End Term						End Term Examination (Theory & Practical)
24	Sunday	TA-1/Lab Monitoring/SRMU Connect	Dept Meeting/First Notification to the Non- Reporting Students			MGPA						
25	Time-Table	IT Question papers/SRMU Connect	Sunday		Sunday		Internal Test-II					
26	Infra Follow Up	Dept Monitoring/SRMU Connect										
27	Course Files	SRMU Connect										
28	Course Plans	Sunday										
29	Committees											
30	Dept Meeting	Internal Test-I										

"I'M SO ORGANIZED. I NEVER SCREW UP. I'VE DONE IT MAYBE TWICE BEFORE. I CHECK MY CALENDAR SEVEN TIMES A DAY."

- ANNA PAQUIN