

NCDT 2023

1st National Conference on

Design Thinking: Trans-Disciplinary Challenges & Opportunities

Engineering

7-8, July, 2023

Andhra University

Volume 2

PROCEEDINGS

Organized by Dr. B.R. Ambedkar Chair, Andhra University
In Collaboration with Andhra University Trans-Disciplinary Research Hub

2023 1st National Conference on

Design Thinking: Trans-Disciplinary Challenges & Opportunities

Copyright and Reprint Permission: Abstracting from this book is allowed, provided proper credit is given to the original source. Libraries are authorized to make photocopies of articles in this volume that bear a code at the bottom of the page, exceeding the limit established by India's copyright law, for the private use of their patrons.

Copyright @ 2023 by Dr.B.R. Ambedkar Chair, Andhra University and Andhra University Trans-Disciplinary Research Hub. All rights reserved, including the right of reproduction in whole or in part in any form

Title: Design Thinking: Trans-Disciplinary Challenges & Opportunities in Engineering (Volume 2)

Editor: Prof. M. James Stephen, Dr. B.R. Ambedkar Chair Professor, Andhra University
& Dean, Trans-disciplinary Research Hub, Andhra University.

Co Editors: Prof. C.N.V. Satyanarayana Reddy, HoD, Department of Civil Engineering, A.U..
Prof. P Malikarjuna Rao, HoD, Department of Electrical Engineering, A.U.
Prof. N. Victor Babu, Department of Geo Engineering., A.U.

Personal use of the material in this book is permitted. However, any reprinting or republishing of this material for advertising or promotional purposes, creating new collective works for resale or redistribution to servers or lists, or reusing any copyrighted component of this work in other works requires prior permission.

Disclaimer

The authors are responsible for the contents published in this book. The Publisher, Editors and Editorial Representatives don't take any responsibility for the same in any manner. Errors, if any are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

ISBN: 978-93-5915-224-0



PREFACE

Dear Distinguished Delegates and Guests,

Welcome to "Design Thinking: Trans-disciplinary Opportunities and Challenges in Engineering," a captivating compilation that explores the intersection of design thinking and the ever-evolving landscape of engineering. As the editor of this book, I am delighted to present this collection of thought-provoking chapters that illuminate the boundless possibilities and complex challenges within this dynamic field.

Design thinking, with its human-centered approach and emphasis on problem-solving, has emerged as a powerful tool for innovation across various domains. In the context of engineering, it offers a fresh perspective on how we conceptualize, develop, and implement solutions to intricate problems. This book aims to explore the symbiotic relationship between various disciplines of engineering and uncovering new avenues for collaboration.

Within these pages, you will encounter a rich tapestry of insights, methodologies, and case studies that illustrate the transformative potential in engineering. Our esteemed contributors, comprising accomplished scholars, practitioners, and experts in their respective fields, have meticulously crafted chapters that delve into the practical applications, theoretical underpinnings, and emerging trends in this multidimensional landscape.

The chapters span a wide spectrum of themes, ranging from human-centered design approaches in engineering education to the integration of design thinking in sustainable engineering practices. Readers will explore the challenges and opportunities presented by trans-disciplinary collaborations, where the boundaries of traditional engineering disciplines intersect with diverse fields.

As an editor, I have witnessed the commitment and enthusiasm of the authors who have devoted their expertise and passion to this endeavor. Their contributions reflect a deep understanding of the subject matter and offer fresh perspectives that inspire us to push the boundaries of conventional thinking.

I would also like to express my gratitude to the anonymous peer reviewers, who diligently evaluated each chapter, providing invaluable feedback and ensuring the intellectual rigor and quality of this publication. Their expertise and discerning insights have greatly enriched the content and strengthened the scholarly foundation of this book.

Finally, I extend my sincere appreciation to the readers, who embark on this intellectual journey with us. It is through your engagement and open-mindedness that the true impact of this book will be realized. I encourage you to explore the diverse perspectives presented within these chapters, to embrace the challenges and opportunities they unveil, and to contemplate the profound implications for the future of engineering.

Prof. James Stephen Meka
Dr. B.R. Ambedkar Chair Professor
Andhra University

CONTENTS

Identifying Optimum Route for Connecting Vamsadhara and Nagavali Rivers Using Geospatial Technology <i>Yernagula Rajesh, Dr D Manasa, K Sridhar</i>	1
Strength Improvisation of M25 Concrete By Partial Replacement of Cement with Fly Ash & Coarse Aggregate with E-Waste <i>Karri Rajesh, Shiva Kumar Bandaru, Nageswararao</i>	8
Effect of Compression for Masonry Wall Built with Aac Blocks and Reinforced Welded Steel Wire Mesh <i>Ponnana Ramprasad, Pulletikurtijyotsna Devi</i>	16
A Crack Resistant Behaviour and Stress Strain Analysis of A Textile Reinforced Concrete <i>Payasam Chakradhar Prasad, P Jyotsna Devi</i>	32
Experimental Study on Smart Curing of Concrete in Different Curing Methods Using IoT <i>Anumolu Krishna Priya, Jyotsna Devi P</i>	39
Design of Plastic Pavement and Porous Pavement By Sustainable Use of Plastic Waste and Porous Concrete Blocks <i>Medisetty Durgaprasad, Siva Kumar B, Harish Erra</i>	48
An Experimental Study on Behaviour of Self-Healing Concrete using Bacillus Subtilis Bacteria By Various Mixing Methods <i>Belagam Raghava Maheedhar</i>	45
Experimental Study on Modular Waste Water Treatment <i>Pedada Gowthami</i>	62
Seismic Analysis of Rcc Structure with Dampers and Shear Wall <i>Kunta Gayatri Kiran, Dr Manasa Dwarampudi</i>	68
A System to Improve the Load Carrying Mechanism by Farmers <i>Venkat Lute, Modalavalasa Sandeep, Gonthina Madhuri</i>	78
Post Treatment of Waste Generated in India with Effective Outcome <i>Gonthina Madhuri, Polaki Jyothsna, L Venkat</i>	86
Agricultural Marketing in India (A Design Thinking Approach) <i>Manchikanti Srinivas, Yesaswini Bankuru, Sandhya Gandeti, Mohan Krishna Bommali</i>	95
Review Paper on Minimum Quantity Lubrication <i>Javvadi Eswara Manikanta, B Naga Raju</i>	103
Crash Box Modelling, Analysis and Development Using finite Element <i>Meraka Sreerama, SreeramaMeraka</i>	109
Design and Fabrication of Multi Spindle Grass Cutter <i>Venkata Jaya Tata Arun M, Rупpa Sagar, D Charles Stanley Smith</i>	117

Fabrication and Evaluation of Mechanical Properties of Natural Fiber Reinforced Composite <i>Ruppa Sagar, M V J T Arun, D Charles Stanley Smith</i>	121
A Comprehensive Examination of Polymer Composites Reinforced with Lignocellulose Fibers From Borassus Flabellifer: A Review <i>Bala Nagesh Dukkupati, B Govinda Rao, Venkata Siva Teja Putti</i>	130
A Review on Thermal Analysis of Friction Stir Welding <i>Muzeer Shaik, A B Koteswar Rao</i>	140
A Comparative Survey of Metal Matrix Composites and Polymer Matrix Composites: Properties, Manufacturing and Applications <i>Aripaka Jyothi, D Divya Chandrika, K Joseph Noel</i>	151
Survey on Design and Fatigue Analysis of Multi Cylinder Engine and Its Structural Components: Novel Approach <i>Dogga Divya Chandrika, A Jyothi, K Joseph Noel</i>	158
Sensor Based Sound System To Prevent The Entry of Animals into the Fields <i>M Mohan Jagadeesh Kumar, Murali Krishna Yamala, Vishnu Vardhan R</i>	168
Comprehensive Review on Hard Turning Cutting Parameters <i>M Malleswara Rao, Seetharama Rao Y, Narayana Rao K</i>	174
Fabrication of Frictionless Braking System <i>K Raj Kumar, A Jyothi</i>	183
Design Thinking in Trans-disciplinary and inter Communication, Research & Amp; Co-Work Environment for Complex Problem Solving <i>Yadluri Ravi Kishore</i>	189
A Brief Study on Light Weight Metals and Its Effects <i>Sirapu Sirisha, Nandure Narayan Rao, Jacob Finny</i>	195
Identifying and Determining The Significance of Features Through Machine Learning Models for Vibration Signals <i>Lakshmi Kanth Chintalapati, NVN indra Kiran</i>	203
Tyre Performance Prediction through Finite Element Analysis <i>M Venkata Subhash, A Syam Sundar</i>	211
Experimental investigations on VCR Engine Fueled with Waste Cooking Oil <i>Sk R S Mahaboob Ali, B Naga Raju, Ch RamaBhadri Raju</i>	219
Design of Microstrip Monopole Antenna for Wideband Applications <i>Gayala Vijaya Kumar, N Bala Subrahmanyam, Rama Krishna M</i>	227
Comparision of Non-Linear Methods for Impulse Noise Removal in Images <i>Prudhvi Raj Budumuru, Kalva Sri Rama Krishna</i>	235
A Comparative Analysis of Fft and Wavelet Based OFDM in Terms of BER Performance Using Different Modulation and Relaying Techniques <i>Namburi Durga Naga Lakshmi, B Vijaya Lakshmi</i>	240

Antenna Beamforming Techniques in Millimeter Wave Mimo Systems <i>Cheepuri V V S Srinivas, B Vijaya Lakshmi</i>	249
Discriminating Analysis of Natural and Computer Generated Images Using CNN <i>Durgachandramouli Yenugu, Venkata Ramana Kammampati</i>	258
A Review on High Gain Superstrate Antennas for Satellite Applications <i>Maddirala Vijaya Lakshmi Bhavani, G Manmadhrao</i>	263
Analysis of Substrate Impact on Multi-Band Stacked Patch Antennas <i>Parisa Bosebabu, P A Nageswara Rao</i>	271
A Study of Performance Improvement Methods for Cavity Backed Siw Slot Antennas <i>Anil Kumar Katta, Praveen Babu Choppala</i>	276
Deep Learning-Based Image Denoising for Medical Images: A Convolutional Neural Network Approach <i>Srinivasa Rao G, Praveen Babu Choppala, James Stephen Meka</i>	284
A Complete Performance of NC FET and Comb FET for CMOS Circuit Applications beyond 3nm Node A <i>Jagadeesh Babu Bokka, Bhaskara Venkata Jagannadham Doddi</i>	294
A Study on Bayesian Filters for State Estimation <i>U N Subhadra Devi, Praveen B Choppala</i>	304
A Resilient Algorithm for Audio Watermarking <i>Alikani Vijaya Durga, Ganesh Laveti</i>	313
Compact Dual inverted Psi Shape Patch Antenna for Wlan and C-Band Applications <i>P Kusuma Vani, Appala Nageswara Rao Palasetti, Mahesh Babu Kota</i>	320
Microstrip Patch Antenna for 5g Applications: Review <i>Rajesh Katragadda, P A Nageswara Rao</i>	328
Design of High Efficient Monopole and Dipole Antenna for L-Band Application <i>Biswaranjan Barik, P V Dileep Bhumireddi</i>	334
A Systematic Review on Non Orthogonal Multiple Access Techniques <i>Kothapalli Ramesh Chandra, Somasekhar Borugadda</i>	341
Identification of Leukemia From Medical Images Using Labview <i>S V S N Murthy, P Murali Krishna Prasad</i>	348
Design of A 2-Element Wide Band Mimo Antenna At Sub-6 Ghz for 5G Applications <i>Idrish Shaik, Krishna Veni Sahukara</i>	358
Power Consumption Analysis of 6T, 7T, 8T and 9T SRAM Cell Topologies Using 180nm, 130nm, 90nm and 45nm Technology Nodes <i>Venkatesh Seerapu, Krishna Veni Sahukara</i>	366
Design and Parametric Analysis of A Split-Ring Resonator for Terahertz Applications <i>Swathi Dasi, ManmadhaRao G</i>	375

Data Analysis Using Machine Learning for Predicting Heart Disease <i>Earli Manemma, Surya Prakasa Rao Reddi</i>	381
Performance Comparison of Sorted Weighting Lookahead Particle Filter and Minimalistic Resampling Particle Filter <i>Ramakrishna Gurajala, Praveen B Choppala</i>	393
Frequency Scanning Antennas (Fsas) -A Review <i>A S Keerthi Nayai, G Manmadha Rao</i>	398
Soil Classification Using Gabor Convolutional Neural Network <i>Gera Vijaya Nirmala, Praveen B Choppala, Rajesh Kumar P</i>	407
A Review of Deep Learning in Medical Image Analysis <i>Raju Egala, M V S Sairam</i>	417
A Systematic Review on Characteristics of Mimo Antenna with Isolation Enhancement Techniques and Soft Computing Approaches <i>Nagarjuna Tanikonda, Praveen Babu Choppala, Chilakala Sudhamani</i>	423
Integrated intelligent Saline Stand for Remote Healthcare <i>Srinivas Sabbavarapu, , B Somasekhar, M V V Tejas</i>	441
Panic Button-Safety Redefined for the Aged <i>Ramana Babu Challapall, Saraswathi kommu, M Siva Krishna babu</i>	452
Polyhouse Control Using IoT <i>G Manikanta, Praveen Babu Choppala, Lavanya Reddi</i>	459
Object Detection Using Esp32 Camera <i>Praveena Bai Desavathu, Somasekhar Borugadda, Praveena bai</i>	465
Remote Message Circular System Using Embedded Electronics <i>P Suvarna Raju, Kandregula Yasho Bhargavi, P Lakshmi kiranmai</i>	473
Geo-Fencing in Vehicles using Arduino <i>Vaddadi Nirmala, Praveenbabu Choppala, MohammedAshik</i>	478
Advanced Driver Drowsiness Detection Approach <i>D B V Jagannadham, Jagadeesh Babu Bokka, Venkata Sai Narayana D</i>	484
A Survey on 5G and Millimeter-Wave for Vehicular Communication <i>Chavvakula Janaki Devi, Madhu Manikya Kumar Make</i>	490
IoT Based Windows Automation <i>Mohammedashik, Ganeda Kuladeep, Agam Devaki</i>	499
Performance Analysis of Frequency Selective Surfaces As Spatial Filters <i>N Deepika Rani, P R Sri Satya, Pratik Mondal</i>	503
Implementation of Pixel Based Copy Move forgery Detection and Image Splicing Using Ransac Algorithm <i>Kowju Gayatri, B Biswal</i>	508

Optimal interconnection of Connecting Weights of an Artificial Neural Network Using Simple Particle Swarm Optimization Technique <i>Chandra Sekhara Rao Menda, D Vijaya Kumar</i>	524
Frequency Deviation By Considering Optimal Power Flow <i>Vemulapalli Harika, Deepak Chowdary Duvvada</i>	527
Integrated Battery Charging Circuit and Model Predictive Current Controller for Hybrid Electric Vehicles <i>Ramesh Adigarla, Ch Varaha Narasimha Raja</i>	531
Design and Construction of AC+DC Multi-Output Type Switched Mode Power Supply <i>Nandyala Siva Nagendra, Dr Anand Gondesi, P Srividya Devi</i>	539
Design of Five-Level inverter with TDK Based Single Stage Controller for Grid Connected Pv System <i>Varahala Dora Petla, T Srinivasa Rao</i>	545
An Optimized Model for Enhancing Power Density of Surface-Mounted Permanent Magnet BLDC Motors <i>Abdul Kalam Shaik, T Narasimhulu</i>	561
MRAS Based Control of Grid-Connected VSC HVDC with Flywheel Energy Storage System for offshore Wind Farms <i>J V Pavan Chand, K Narasimha Rao</i>	569
A Literature Review of High Gain DC-DC Converters <i>Perumallapalli Krishna, Devendra Potnuru</i>	580
A Review of High Voltage Gain Non-Isolated DC-DC Converters for Solar Photovoltaic System Built Dc Micro Grids <i>G Jayalaxmi, R V S L Kumari</i>	588
A Review on Various Advanced Solar -Cells for Improving Supply Voltage in Power Systems <i>Sai Pallavi Akkiseti, K Rama Sudha</i>	595
A Fuzzy Based Dual Source inverter for integrated HES Systems <i>Boyanasetti Venkata Sai Thrinath, Edwin Vijay Kumar Dokiburra</i>	599
DC-DC Reboost Luo Converter for a Grid-Connected Photovoltaic System <i>Sivaprasad Kollati, Satish Kumar Gudey</i>	611
Electric Vehicles integration on Distribution Grid Issues and Methods To Mitigate Impact of EV on Power Quality: A Review <i>K Sri Lakshmi Lavanya, Chilukoti Varaha Narasimha Raja</i>	621
Solar Panel Monitoring and Fault Identification Using Raspberry Pi Pico <i>Imran Abdul, Venkata Krishna Bhanu Chennapragada</i>	629
Smart Grid Technologies: A Comprehensive Review and Future Prospects <i>Seerapu Varalakshmi, J Vijay Kumar</i>	634
Designing a Test Bench to Evaluate Performance of Single Phase Cascaded Multilevel inverters <i>Vaibhavee J, Phani Kumar K S V, Venkateshwarlu Sonnati</i>	642

Design and Performance of PV System <i>Mammula Venkatesh, Anand Gondesi</i>	652
Six Hat Strategy for Faster Decisions and Thinking <i>Kavirayani Srikanth, Sushma Chandra Dwadasi</i>	664
New Aspects in Reduction of Discrete Time SISO interval Systems Retaining Impulse Energy <i>Nagalla Sowjanya, D Vijaya Kumar</i>	671
Energy Management System for Electric Vehicle <i>Harish Sesham, J Vijaya Kumar</i>	677
Enhancing Position Acquisition From NMEA Data Using A GNSS Receiver <i>Chilla Ganesh, Siva Ganesh Golla, Poojith Siva Rama Krishna Aravapalli</i>	688
Virtual instrumentation Based Co-Simulation of Solar PV inverter <i>V V Appalanaidu Menda, O V S R Varaprasad</i>	699
Electrical Vehicular Design and Possibilities for Reduction of Accidents By Better Battery Management <i>Kavirayani Srikanth, Ravi Kumar Penganti</i>	703
Bidding for Optimal Strategies in A Pool-Based Electricity Market Using An Artificial Bee Colony Algorithm <i>M Sudheer Kumar, Vijaya Kumar J, Sri Lakshmi Davuluri</i>	708
Load forecasting Using Machine Learning Techniques A Review <i>Saka Rajitha, R V S Lakshmi Kumari</i>	717
Control Strategies for Electric Vehicle Station Charging <i>Satish Kumar Veerelli, Attada Jyothsna, Kondru Sunil Kumar</i>	727
Latest Trends in Electrical Vehicle (EV) Charging and Technological Advancements <i>Ethalapaka Kiran Kumar, Attada Jyothsna, Sri Latha Eti</i>	736
Grid interconnection of Alternative Energy Sources at the Distribution Level with Power Quality Improvement <i>Galla Nagaraju, G Rajarao</i>	744
A Comprehensive Review of Charging Methods for Electrical Vehicles <i>Vemana U P Lavanya, Dr Joshua Arumbakan, Srinivas Rayudu</i>	752
Operation and Control of Domestic Smart Grid Technology <i>Vuram Raji, Swarupa Pinninti, Ethalapaka kiran kumar</i>	757
Design of Ev Charging Station with Pwm Rectifier To Overcome The Power Quality Issues <i>Jyothsna Attada, Sri Latha Eti, Ethalapaka Kiran Kumar</i>	768
Application of A Third-Order Lcl Filter in Battery Chargers for Electric Vehicles <i>Sri Latha Eti, Jyothsna Attada, Raji Vuram</i>	780
Integrated Model Predictive Control for V2g Reactive Power Operation of Electric Vehicles <i>Poojith Siva Rama Krishna Aravapalli, Dr Chekka Ravi Kumar, Chilla Ganesh</i>	789

Three-Phase, Two-Stage, Grid-Connected Solar Pv System Using An Anfis-Based Maximum Power Point Tracking (Mppt) Controller <i>Thadiparthi Vara Naga Mani Kumar</i>	799
Diamond Shaped Stacked Patch Antenna for Wlan Applications <i>Kollabathula Suresh Kumar</i>	810
Iot Based Smart Assistance Gloves for Paralyzed People <i>Kammampati Venkata Ramana</i>	814
SAGU-Net: An Automated Tool for Brain Tumour Segmentation From MR Images <i>K Sangeet Kumar</i>	822
Analysis and Comparative Study of Bidirectional Quasi Z-Source DC-DC Converters for Solar-integrated Standalone Systems <i>Bokam Divakar</i>	829
Dynamic Cost Effective Optimal Scheduling of Distributed Generators Using Teaching Learning Based Optimization for Renewable Energy Sources <i>Swarupa Pinninti</i>	834

COMMITTEES

CHIEF PATRON

Prof. P.V.G.D. Prasad Reddy, Hon'ble Vice-Chancellor, Andhra University

PATRONS

Prof. K. Samatha, Rector, Andhra University.

Prof. V. Krishna Mohan, Registrar, Andhra University.

CONVENOR & GENERAL CHAIR

Prof. Meka James Stephen, Dr.B.R.Ambedkar Chair Professor, Dean, A.U. TDR-HUB, A.U.

CO-CONVENORS

Prof. K.Venkat Rao, HoD, Department of CS&SE, Andhra University.

ADVISORY BOARD

Prof. G. Sasibhusana Rao, Principal, AUCE

Prof. K. Srinivasa Rao, Principal, College of Science and Technology, A.U.

Prof. Y. Rajendra Prasad, Principal, College of Pharmaceutical Sciences, A.U.

Prof. A. Narasimha Rao, Principal, College of Arts and Commerce, A.U.

Prof. V Vijay Lakshmi, Principal, College of Law, A.U.

Prof. S.K. Bhatti, Principal, AUCEW

Prof. T. Shobha Sri, Principal, IASE

Prof. K. Visweswara Rao, Director, School of Distance Education, A.U.

DISTINGUISHED CHAIRS

Prof. N. Kishore Babu, Dean, Academic Affairs, A.U.

Prof. C.N.V. Satyanarayana Reddy, Dean, C.D.C., A.U.

Prof. K. Basavaiah, Dean, Research & Development, A.U.

Prof. D.V.R.Murthy, Dean, P.G. and Professional Work, A.U.

Prof. T.Raghava Rao, Dean, Confidential Exams, A.U.

Prof. E.N.Dhananjay Rao, Dean, International Affairs, A.U.

Prof. Vazeer Mahmood, Dean, Engineering Works, A.U.

Prof. T Sharon Raju, Dean, Platinum Jubilee Guest House, A.U.

Prof. Ch.V.V.S. Bhaskar Reddy, Honorary Director, Computer Centre, A.U.

Prof. P. Venkateswarlu, Honorary Librarian, Dr. V.S.K. Library, A.U.

PROMINENT CHAIRS

Dr. I. Vijaya Babu, Principal, Dr. V. S. Krishna Govt. Degree and PG College (A)

Prof. Ch.Madhusudhana Rao, Principal, Mrs. AVN College

Dr. S. Shobha Rani, Principal, Visakha Govt. Degree,College

Prof. A.B. Koteswara Rao, Principal, GVPCE(A)

Prof. K. Sri Rama Krishna, Principal, ANITS

Prof. R.K. Goswami, Principal, GVPCEW

Dr.(Sr.) Shyji.P.D., Principal, St. Joseph's College (A)

Dr. Joshua Arumbakan, Principal, WISTM

Dr. Prasanna Kumar, Principal, SVPEC
Dr. D Deepak Chowdary, Principal, LBCE
Prof. S. Rajani, Principal, GVP Degree & PG College (A)

CORE COMMITTEE

Dr. A. Krishnamanjari Pawar, Dept. of Pharmacy, E.C. Member, A.U.
Dr. Veerraju Govada, HoD, Dept. of Political Science, A.U.
Dr. S. Paul Douglas, Assoc. Professor, Dept. of Chemistry.
Dr. N. Solomon Benny, HoD, Dept. of English, A.U.
Dr. T. Vinutha, Asst. Professor, Dept. of Mathematics, AU
Dr. K. Pallavi, Asst. Professor, College of Law, A.U.
Dr. Victor Babu, Department of Geo-Engineering, A.U.
Dr. Raja Manikyam, Dept. of English, A.U.
Dr. P.Sanyasi Naidu, Dept. of CS&SE, A.U.

ORGANIZING CHAIRS

Dr. K. Narasimha Raju, GVPCE(A)
Dr. V. Sudheer, Dr. V. S. Krishna Govt. Degree and PG College
Dr. M. Ramakrishna Murthy, ANITS
Dr. K. Jaya Rao, WISTM
Dr. P. Devendra, GVPCEW
Dr. P. Umamaheswara Rao, Dr. V. S. Krishna Govt. Degree and PG College
Dr. Ch. Appala Naidu, GVPCE(A)
Dr. Jagadeesh, WISTM
Dr. D. Rajya Lakshmi, St. Joseph College.
Dr. Y. Anuradha, GVPCE
Dr. G. Rajashekhar, Dr. V. S. Krishna Govt. Degree and PG College
Dr. M.S.R. Seshagiri, GVPCDPGC(A)
Dr. P Muruga Pandiyan, ANITS
Prof. B.V. Shiva Kumar, WISTM
Dr. G. Srinivasa Rao, Dr. V. S. Krishna Govt. Degree and PG College.
Dr. P.A. Nageswara Rao, GVPCDPGC(A)
Dr. N. Sharmili, GVPCEW
Dr. Y. Bheemshankar Rao, ANITS
Dr. K. Nikitha, Dr. V. S. Krishna Govt. Degree and PG College
Dr. B. Rajesh Babu, GVPCEW
Dr. N. Satyanarayana, ANITS
Dr. Sanjay K. Darvekar, GVPCE
Dr. T. Samuel David Raj, Dr. V. S. Krishna Govt. Degree and PG College
Dr. P.Srinivasa Rao, GVPCEW
Dr. Ch. Vishnu Murthy, Dr. V. S. Krishna Govt. Degree and PG College.
Dr. J. Bhaskara Rao, GVPCE
Prof. K.V. Kiran, WISTM
Dr. Jana Bhaskara Rao, ANITS
Dr. P.R. Vani, Dr. V. S. Krishna Govt. Degree and PG College
Dr. M. Prasanth Kumar, ANITS
Dr. J. Vikranth, ANITS
Dr. D.N.D. Harini, GVPCE(A)

Dr. Viswanadham Sangeeta, ANITS

Dr. P. Krishna Subba Rao, GVP

Prof. K. Joseph Noel, WISTM

PUBLICATION CHAIRS

Dr. Sathish Mohan Botsa, Director, Bio Enviro Chemical Solution

Dr. Ch. Praveen Babu, Dept. of ECE, WISTM

Dr. Birendra Biswal, Professor, Dean R&D, GVPCE(A)

NCDT 2023

1st National Conference on

Design Thinking: Trans-Disciplinary Challenges & Opportunities
