

# **NCDT 2023**

## **1<sup>st</sup> National Conference on**

### **Design Thinking: Trans-Disciplinary Challenges & Opportunities**

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Volume 1

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# **PROCEEDINGS**

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

# 2023 1<sup>st</sup> National Conference on

## Design Thinking: Trans-Disciplinary Challenges & Opportunities

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

Co Editors: Prof. K. Venkata Rao, HoD, Department of CS & SE, Andhra University.

Prof. Kunjam Nageswara Rao, HoD, Department of I.T. & C.A, A.U.

Dr. P.Sanyasi Naidu, Department of CS & SE, Andhra University.

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## 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

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