



# EXTENDED ABSTRACT



**InViCCAD 2025**  
1<sup>ST</sup> INTERNATIONAL VIRTUAL COMPETITION OF CREATIVE  
ARTS & INNOVATIVE DESIGN IN TEACHING & LEARNING



# Design Innovation Academic Show 2025



Organized by



Fakulti  
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Cawangan Kedah



اوسها تقوى موليا

Collaboration with



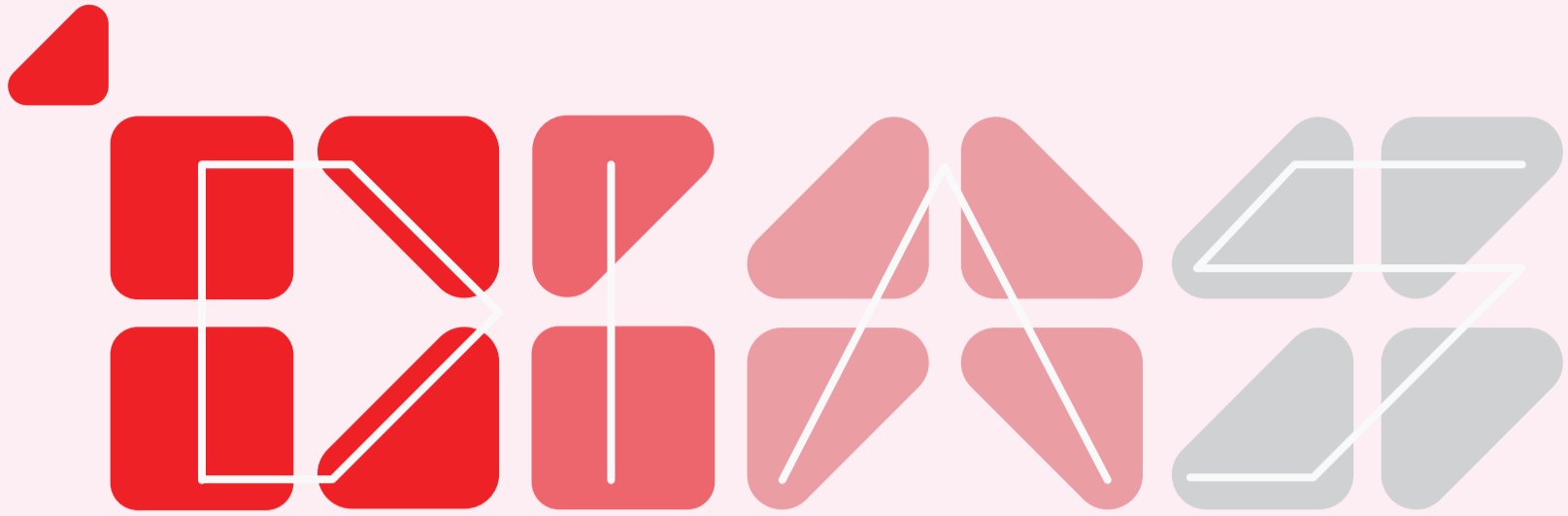
#perubahanluarbiasa  
#ADpilihanpertama



**EXTENDED  
ABSTRACT**

**Design  
Innovation  
Academic  
Show 2025**





DIAS 2025 (Design Innovation Academic Show) is all about "Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st Century Education." This vibrant program shines a spotlight on how creativity and innovation are reshaping modern education.

It consists of three key components. First up is the Mindareka Design Show, an exhibition that showcases students' final year projects and creative designs, giving them a chance to connect with industry professionals and the wider community. Next, we have the Northern Innovation Academic Tour (NIAT), which takes participants on an academic adventure to select institutions and innovation centers in the northern region, aimed at promoting knowledge sharing and building strong academic and professional networks.

Finally, there's the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID), a global competition that recognizes outstanding practices in teaching and learning by blending art, technology, and innovative design. But DIAS 2025 is more than just a talent showcase; it's a powerful platform for empowering both students and educators, while also strengthening collaborations between universities, creative industries, and global communities. With its inclusive and interdisciplinary approach, this initiative strives to spark relevant, competitive, and impactful ideas and innovations that truly benefit society and push the future of education forward.



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**D**esign  
*Innovation*  
**A**cademic  
**S**how 2025



**Prof. Dr. Roshima Haji Said**  
Acting Rector  
UiTM Kedah Branch

# Rector's Message

I am delighted to extend my heartfelt congratulations to the College of Creative Arts, UiTM Kedah Branch, for bringing MINDAREKA 2024 - Unleashing Your Visual Creativity to fruition. The triumphs of past MINDAREKA editions undoubtedly fueled the organization of this year's event, making MINDAREKA 2024 a reality.

MINDAREKA 2024 - Unleashing Your Visual Creativity stands as a testament to the dedication of students at the College of Creative Arts, UiTM Kedah Branch, providing them with a platform to showcase their final art projects. Beyond serving as a space for the exploration of fresh, innovative, and entrepreneurial concepts, this exhibition is poised to connect aspiring talents with potential clients and employers.

I extend my sincere gratitude to all participants whose enthusiasm and support have contributed to the success of MINDAREKA 2024 - Unleashing Your Visual Creativity. Their unwavering belief and commitment have truly brought this event to life, marking it as a resounding triumph!





# Head of Faculty Message

It is an honour to introduce DIAS 2025 – Design Innovation Academic Show, held under the theme “Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st-Century Education.” This significant event reflects the faculty’s ongoing commitment to fostering a culture of innovation, critical thinking, and creative exploration among our students and academic community. As we navigate the complexities of the 21st century, it becomes increasingly clear that education must go beyond traditional boundaries to embrace multidisciplinary approaches that are both relevant and future-forward.

The three core components of DIAS 2025, Mindareka Design Show, Northern Innovation Academic Tour (NIAT), and the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID) which is serve as vital platforms to highlight the convergence of design, technology, and pedagogy. These initiatives not only empower our students to showcase their talents and ideas, but also create opportunities for engagement with industry leaders, academic peers, and global collaborators. The Mindareka Design Show celebrates student creativity and innovation through compelling final year projects. NIAT fosters knowledge sharing and institutional partnerships through academic visits and exchanges, while InViCCAID offers international recognition for excellence in integrating art and design into teaching and learning.

I would like to express my deepest appreciation to the organising committee, faculty members, students, and strategic partners who have worked tirelessly to bring this programme to life. Your dedication and collaborative spirit have made DIAS 2025 a reality and a reflection of our shared vision for transformative education. It is my hope that this platform will continue to inspire meaningful dialogue, cultivate groundbreaking ideas, and spark a new wave of innovation that enriches both education and society.



**Mohamat Najib Mat Noor**  
Head of Faculty  
Faculty of Arts & Design  
UiTM Kedah Branch





***Industrial  
Design  
(Bachelor)***





## RAISENA | SIT-TO-STAND SUPPORT FRAME

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### ABSTRACT

This study investigates the design of a **Raisena** aimed at assisting elderly individuals, particularly those with mobility impairments, such as arthritis or post-surgery recovery, in safely transitioning from sitting to standing. The primary challenges addressed include **instability**, **discomfort**, and **lack of adjustability** in existing devices. The proposed design integrates **ergonomic handles**, **adjustable height settings**, and **non-slip feet** to enhance comfort, stability, and safety during use. A user-centered design approach was employed, involving feedback from elderly users to refine the frame's functionality and usability. Key findings from user testing emphasized the need for **adjustability** to fit various body types and seating arrangements, improved **ergonomics** to reduce joint strain, and a stable base to ensure safety on different floor types. The results indicate that the proposed **Raisena** effectively addresses these issues, improving user confidence and independence. This research contributes to the field of **assistive technology** by offering a practical, user-friendly solution for elderly mobility challenges.

**Keywords:** Sit-to-Stand Support Frame, elderly, mobility impairments, arthritis, ergonomic design, adjustability, stability, assistive technology, user-centered design.

The ability to transition from sitting to standing is a fundamental activity of daily life that becomes increasingly difficult for elderly individuals, especially those with conditions such as **arthritis**, **rheumatoid arthritis**, or those recovering from surgery. The lack of adequate assistive devices that combine **adjustability**, **stability**, and **ergonomics** contributes to these difficulties. Existing products often fail to meet the needs of users, resulting in increased risk of **falls**, **discomfort**, and **reduced mobility**. This study aims to design a **Sit-to-Stand Support Frame** that integrates features to reduce these challenges, promoting independence and improving quality of life for elderly users.

## MATERIALS AND METHODS



Figure 1.1 The picture of final body structure

The standing aid frame uses durable polymer tubing for a lightweight yet strong structure. It features adjustable height and width to accommodate various users. Ergonomically designed handles offer a secure grip, minimizing discomfort for individuals with arthritis. The base includes non-slip feet for stability on any surface. The tool-free mechanism allows easy adjustments, ensuring user convenience. The frame is compact, foldable for portability, and designed for strength and durability. The sleek finish blends well with home decor. The design prioritizes ease of use, stability, and ergonomic comfort, making it ideal for elderly individuals or those with mobility impairments.

The **Raisena** standing aid frame draws inspiration from simple, practical designs aimed at supporting elderly individuals with mobility challenges. The frame uses lightweight yet durable polymer tubing, offering both strength and ease of adjustment. It features ergonomic handles designed to reduce wrist strain and ensure a secure grip, especially for those with arthritis. The base incorporates anti-slip feet, ensuring stability on various surfaces. The frame's height and width are adjustable to accommodate different users. The tool-free mechanism allows for easy customization. The sleek, modern design is both functional and visually appealing, enhancing user confidence and independence.

## CONCLUSION & RECOMMENDATION

In conclusion, the **Raisena** standing aid frame integrates functionality, comfort, and sustainability. The frame is made from durable polymer tubing, providing a lightweight yet strong structure. Its ergonomic handles ensure a secure grip, perfect for individuals with mobility impairments, while the non-slip feet offer stability on various surfaces. The tool-free, adjustable design allows users to personalize the frame's height and width easily. The compact and foldable frame ensures portability and convenience. Ideal for elderly individuals, the frame combines modern design with practical features, improving mobility and independence. Future iterations could explore additional eco-friendly materials for enhanced sustainability.



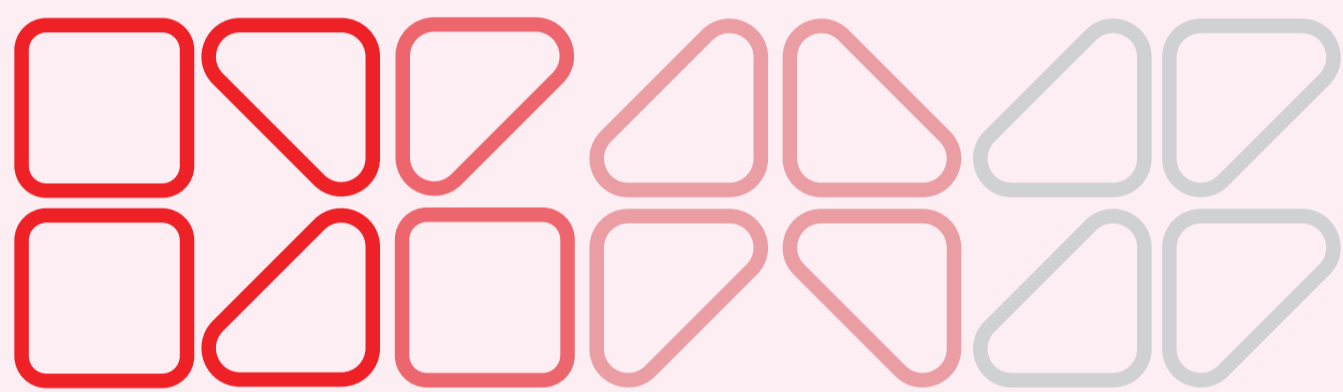
Figure 1.3 The picture of Environment RAISENA)



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# DMS



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