

# e - Proceedings



## Proceeding for International Undergraduates Get Together 2024 (IUGeT 2024)

"Undergraduates' Digital Engagement Towards Global Ingenuity"



Co-organiser:

INSPIRED 2024. Office of Research, Industrial Linkages, Community & Alumni (PJIMA), UiTM Perak Branch

Bauchemic (Malaysia) Sdn Bhd

Universitas Sebelas Maret

Universitas Tridinanti (UNANTI)

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### **Vortech Recliner**

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#### ABSTRACT

In this project, our paramount goal is to meticulously craft furniture that not only grants users a sanctuary of comfort for unwinding in recreational settings but also champions the cause of environmental sustainability. Harnessing the timeless allure and ecological virtues of wood as our primary material, we intertwine its natural elegance with the seamless integration of state-of-the-art technology, attuned to the pulse of contemporary trends. Through the discerning selection of technologically advanced materials imbued with eco-conscious principles, we navigate the delicate balance between modernity and ecological stewardship, ensuring that each piece of furniture serves as a testament to our commitment to safeguarding the planet's future. As a result, every meticulously designed furniture ensemble harmonizes the rustic charm of wood with the innovative edge of technology, fostering environmental sustainability while enveloping users in a realm of aesthetic allure and unparalleled comfort.

KEYWORDS: Unity, fusion, vibrant, eco-friendly technology, attractive

#### **DESIGN DESCRIPTION**

The Vortech Recliner is a chair designed based on the vortex concept, with the name derived from the word "vortex" and combined with technology. The vortex concept refers to a visual technique where elements such as lines or shapes are arranged in a way to draw attention to a central focal point, creating a sense of movement and dynamism, and directing the viewer's gaze in a swirling or rotating motion. This concept also embodies the value of unity, akin to the environment within a university where students unite for success, as reflected in the Malay proverb "Strength lies in its unity". Technology is also implemented with the use of solar power to illuminate the chair at night, ensuring sustainability. A blue color scheme is chosen to represent the vortex concept, enhancing the chair's attractiveness and visual appeal. Sensitivity to rainfall distribution in Malaysia is incorporated by adding a small reservoir to store essential supplies planted within the furniture, showcasing thoughtful design elements that cater to practical needs while maintaining aesthetic integrity. This holistic approach integrates cutting-edge technology with environmental consciousness, creating a furniture piece that not only captivates with its design but also contributes to a sustainable future.

#### NOVELTY AND UNIQUENESS

In today's world, humans need to be aware of their surrounding environment to maximize the use of available resources with long-term cost-effectiveness and maintenance that needs to be maintained. By integrating electricity from solar energy, we can realize that we can use it fully without incurring expensive costs in the long run. Another sensitivity that can be fully utilized is collecting rainwater for use by the plants planted on the furniture. In conclusion, sensitivity to the climate in our surroundings should be utilized as the basis for preserving the environment.



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Figure 1: Vortech Recliner

#### **BENEFITS TO MANKIND**

The designed furniture implicates awareness of various aspects, especially towards reducing the usage of energy that can harm the environment. Therefore, the use of solar energy is implemented due to the surrounding site's condition, which receives sufficient sunlight to generate electricity, particularly for the lights on the furniture. Additionally, the rainwater collection area indicates sensitivity to areas with relatively high rainfall, allowing water to be gathered to support plants without the need for irrigation. In terms of social aspects, the furniture is designed with two types of seating positions where people can sit normally or in a relaxed (lazy) position. This provides a variety of seating options for users, according to their desired comfort level.

#### **COMMERCIAL POTENTIAL**

Diversity in products is heavily emphasized in today's market because society now seeks optimal convenience. By offering various functions, the commercial value of a product can be enhanced. The Vortech Recliner enables the public to sit in two different positions according to their comfort preferences. The resulting design also adds significant aesthetic value to this furniture, making it more appealing to users. With awareness of the surrounding environment, this furniture provides a special touch by fully utilizing adaptable functions based on the current climate.

#### CONCLUSION

As a whole, the created design has implemented the green concept of furniture by utilizing the surrounding environment to provide specific functions. Beyond that, the design also possesses its aesthetic value, incorporating spatial organization (centralized) and several ordering principles within the design. This indirectly creates a fusion within the design form, aligning with the project's theme of requiring fusion in the design of the chair. By integrating elements of nature and functionally utilizing them, the furniture not only promotes sustainability but also showcases the harmonious relationship between human-made structures and the natural world. Moreover, the deliberate arrangement of elements within the design enhances its visual appeal and functionality, ensuring that it stands out as a unique and innovative piece in both form and function.



#### ACKNOWLEDGEMENT

I am grateful to God for completing the given assignment. Not to be forgotten are the lecturers who guided me in creating a design that meets the desired criteria. Without guidance, it's difficult for students to succeed in achieving what they want to do to meet the requirements. Also, not to forget the organizers who have created this competition; it is indeed useful in critical thinking to solve existing problems and create multi-purpose furniture.

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Sekian, terima kasih.

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Saya yang menjalankan amanah,

Setuju.

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