

**Fiscal Year 2023**

## **Grant Application Information**

**Nohmura Foundation for Membrane  
Structure's Technology**

# Nohmura Foundation for Membrane Structure's Technology

## Outline of Foundation

1. Location: Kikawa-Higashi 4-8-4  
Yodogawa-ku, Osaka-shi  
Tel: (06) 6306 - 3163  
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2. President NOUMURA, Yuuki

3. Date of Foundation 26. February 1992

4. Endowment 900 000 000 Yen

5. Background of Foundation:

Progress in scientific technology has been brought about in part by the development of new materials. The Foundation was established to aid research into such new materials. In particular, the Foundation was established to promote research in membrane materials, to promote the research and development of membrane structure's technology and to promote international exchange related to membrane research and development. The Foundation's work is proposed and financed by Taiyo Kogyo Corporation.

6. Objective

The Foundation's objective is to contribute to the development of scientific technology and social economics by providing grants for research and development on membrane structure's technology and international exchange related to membrane research and development.

7. Outline of Tasks

- (1) To provide grants for the research and development on membrane structure's technology.
- (2) To provide grants for scientific societies or study groups on membrane structure's technology.
- (3) To provide grants for international exchange activities related to membrane structure's technology.
- (4) To provide grants for other tasks required to achieve the objective of this foundation.

8. Competent Authorities: Cabinet Office, Government of Japan

## **The Purpose of Foundation**

Technology is the only tool to maintain and improve the global environment that determines our future. Membrane structure's technology is one of the new areas that contributes to the development of technology. Recently, it has been remarkably improved especially in architecture and other specific areas. Moreover, membrane structure's technology is expanding its variety of purposes, from its original use on the ground to new uses under water, in soil, and in space.

The global population was 3 billion in 1960, but it exceeded 8 billion in 2025. It is said that it will become 10 billion around 2085. Technology should be effectively used for the sake of the earth and to enable the continued existence of mankind. In this respect, membrane structures have the advantage of requiring less material than other structures, and they have potential uses in almost all areas, such as space development, the sea, engineering, and agriculture. However, membrane structure's technology currently does not take full advantage of its benefits. We believe that membrane structures have much more potential to contribute to specific projects, such as forestation of deserts, the development of cold areas, the maintenance of undersea environment, space development, solar energy utilization, natural resource saving, and recycling.

At present, research on membrane structures has not been sufficiently advanced. In Japan, only a small number of researchers are individually engaged in this area. In order to bring out the potentiality of membrane structures, more advanced research should be promoted, from basic study to applied technologies. This includes research on membrane materials, the nature and characteristics of materials, analytical methods in membrane stress, and feasibility studies on structures. Furthermore, intellectual exchange among researchers in other countries as well as in Japan is indispensable for the advancement of membrane structures and membrane structure's technology.

We established this incorporated foundation to propel the advancement of membrane structure's technology and contribute to the development of society in technological and economic areas, by supporting research and development activities on membrane structure's technology and supporting international exchange.

## **The target Membrane Structure's Technology for this grant program**

The membrane structure's technology that the Foundation is promoting and promoting includes new membrane materials used in membrane structures, technologies related to new functions, performance and applications of membrane materials, and technologies related to buildings, structures and workpieces made using membrane materials (Architecture, Marine and Civil Engineering, Aeronautics and Space, Logistics, Ships, etc.).

Membrane structure's technology is already being used in various fields. For example, membrane structures represented by the Tokyo Dome are in the field of construction technology, and there are a wide variety of fields, including marine and civil engineering technology fields for marine pollution prevention membranes called silt protectors and soil improvement membranes used in the sea, meteorology, aviation and space technology fields for membranes for balloons and airships, logistics fields for powder and liquid containers called flexible containers made of membranes, and marine and automotive technology fields, as well as other potential uses.

In order to further expand the use of membrane structures buildings and other membrane structures, as well as to make them safer and more rational, it is expected that research will be conducted on the mechanical properties and analysis methods of membrane surfaces, membrane processing methods, membrane construction methods, fire prevention performance, environmental performance (thermal, sound, etc.), design, environmental impact, etc.

In addition to understanding the properties of current membrane materials, the need to evaluate environmental impact throughout the life cycle has been emphasized in recent years, in addition to the research and development of more durable membrane materials and those that perform new or better functions against heat, sound, light, wind, snow, tidal currents, waves, soil, etc.

We consider various kinds of research that contribute to the spread and development of membrane structure's technologies to be eligible for grant funding.

# Grant Application Information for Target Researchers

## Nohmura Foundation for Membrane Structure's Technology

The Foundation provides full or partial research funds for researchers or research organizations that are carrying out research activities in the field of membrane structure's technology based on the following criteria.

### Description

#### 1. Target for the grant

The Foundation provides grants to researchers or research organizations that carry out research in the field of membrane structure's technology (The research and development period must be within 2 years.). The grant shall be used to:

- (1) Support the research and development related to new membrane materials, new functions and performance of membrane materials, applications, and recycling.
- (2) Support the research and development related to mechanical properties of membrane surfaces, new processing methods, frame construction methods, analysis methods, etc.
- (3) Support the research and development related to new applications of membrane structure buildings and other membrane structures, fire protection performance, environmental performance (thermal, sound, etc.), design, environmental impact, etc.
- (4) Support academic meetings or study groups working on membrane structures.
- (5) Support international exchange related to membrane structures.
- (6) Support other tasks required to achieve the objectives of the Foundation.

#### 2. Qualification of applicants

- (1) Researchers or research organizations that belong to official research bodies, such as universities or research institutes.  
However, applicants should not receive grants for the same research from other foundations.
- (2) In principle, those who have received the grant from the Foundation in the previous fiscal year should have completed a report on the results of their research work.

#### 3. Amount of grant and eligible expenses

- (1) The amount of the grant for one research project is up to 2,000,000yen
- (2) The eligible research expenses for this grant include normal costs required for research activities, excluding personnel costs for researchers.  
However, the grant can cover a reward for personnel who are temporarily hired specifically for the research project.

4. Application method  
Fill out the application form, and submit it to the Foundation office.
5. Application period  
From July 1, 2023 to August 31, 2023
6. Selection method  
The Foundation's Selection Committee will convene and decide recipients.  
Written notification will be sent out at the end of December 2023
7. Reporting duty  
The researchers who receive the grant have an obligation to submit an interim report in one year, and a written summary of their research results within 6 months after the completion of the research activity to the Foundation. (3 copies should be submitted)
8. Others
  - 1) The Foundation retains the right to publish the total or partial contents of research conducted by the grant recipient, in printing or other forms.
  - 2) When research results are presented in learned societies or equivalent places, it should be indicated that the research work is supported by the Foundation.
  - 3) Application forms are not returnable.
9. Foundation office  
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