Time-efficient and low-cost solutions for disaster-broken zones

The world has witnessed natural disasters and wars that have affected millions of people by leaving behind a trail of destruction and despair. In the aftermath of a disaster, the most urgent needs are to provide shelter, food, water, sanitation, health care, and security to the affected population. However, these needs are often difficult to meet due to the lack of resources and infrastructure.

Therefore, there is a need for innovative solutions that can address the challenges of disaster response and recovery in a time-efficient and low-cost manner. Furthermore, preventing solutions to reduce the impact of future disasters are also important to increase society resilience. These solutions should be able to adapt to different contexts and scenarios, and leverage local capacities and resources.

The aim of this competition is to encourage and reward the development of such solutions by inviting individuals and teams from around the world to present their ideas for the recovery of disaster-broken zones.

Scope

The contest looks at new sustainable, low-cost, time-efficient solutions accounting for lifetime management for:

- Recycling from waste to rebuild;
- Assessing damaged structures and infrastructure;
- Reusing and repairing damaged structures and infrastructure;
- Shelters, blast-resistant, and special defensive structures;
- Preventive and innovative structural solutions for natural disasters (e.g.: improved ductility and seismic isolation, flood walls and drainage systems…).

Solutions combining different materials are eligible but reinforced concrete structures and infrastructure must play a key role for the proposed solutions.

Awards

- Presentation of 6 best proposals in a special session during a *fib* conference*;
- Free registration fee in a *fib* conference* for one representative of the 3 best projects;
- Announcement of the winner during in a *fib* conference*;
- Inclusion of proposals in a Special Issue (SI) of Structural Concrete Journal (The authors retain full ownership of their ideas and solutions. The *fib* organization does not claim any ownership or rights to the ideas presented in the articles.);
- Participation and winner certificates.

* To be decided between:

- *fib* ICCS – International Conference on Concrete Sustainability, 11-13 September 2024 in Guimarães, Portugal;
- *fib* Symposium 2024, 11-13 November 2024 in Christchurch, New Zealand.

Eligibility

- The competition is open to students, engineers, and researchers;
- Single or group candidates are eligible:
    - The maximum number of authors is 4;
    - At least one participant is under 35 years old.
- The proposal has to be amongst the topics mentioned in the Scope section;
- The submitted projects must be original works and might have been previously published or not.

Application process

Each application has to be submitted through the *fib* website and has to include the following documents:

    - A written report in English (min. 6 pages, max. 8 pages) that shold be submitted in digital format according to the Author Guidelines (Free Format submission)
- Video Presentation highlighting the main aspects of the work.

- The video should not be longer than 2 minutes;
- The video will be disseminated by *fib* social media.

All the files have to be uploaded in file-sharing service (e.g. WeTransfer). The link to the uploaded files has to be included in the application submission page.

All the files have to be submitted before the 1st of March 2024.

Selection process

The selection process and ordering of submitted applications to the contest are organized into the following phases:

- Phase 1: Check for conformity to the eligibility criteria and scope of the contest. Incomplete applications and applications that do not comply with eligibility criteria and scope are withdrawn from the contest. The applications that are admissible for the contest move to the selection phase 2.
- Phase 2: This phase aims to select the works that will be included in the Special issue and score the works based on the predefined selection criteria.

Jury

The Jury is chaired by Dr. Marta Del Zoppo (University of Naples Federico II, Italy), Eng. Rui Valente (University of Porto, Portugal) and Dr. Özgür Yurdakul (University of Pardubice, Czech Republic).

The Jury members are:

- *fib* senior members representing:
  - TG3.2 - Modeling of structural performance of existing concrete structures
  - TG3.3 - Existing Concrete Structures: Life Management, Testing and Structural Health Monitoring
  - TG4.7 - Structural Applications of Recycled Aggregate Concrete – Properties, Modeling, and Design
- YMG Chair;
- YMG Deputy Chair;

- Up to 10 members of the YMG (international and national level), to be defined by the YMG Chair.

Classification criteria

The classification given by the scientific panel is based on the following criteria:

- 25% - Sustainability and feasibility of the proposed solution;
- 25% - Novelty and impact of the work;
- 25% - Soundness and level of detail;
- 25% - Quality of video pitch communication.

Calendar

Phase	Beginning	End
Call	1st November 2023	1st March 2024
Selection	2nd March 2024	31st May 2024
Divulgation of Finalists	1st June 2024	
Presentations in the *fib* conference	To be decided	

Contacts

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